1. Record Nr. UNINA9910717421503321

Autore	Shen Cangliang
Titolo	Food Microbiology Laboratory for the Food Science Student : A Practical Approach / / by Cangliang Shen, Yifan Zhang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	3-031-26197-6
Edizione	[2nd ed. 2023.]
Descrizione fisica	1 online resource (XVIII, 160 p. 62 illus., 60 illus. in color.)
Disciplina	664.001579
Soggetti	Food - Microbiology Food science Industrial microbiology Food Microbiology Food Science Industrial Microbiology Microbiologia dels aliments Alimentació Biotecnologia alimentària Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Food Microbiology Laboratory Safety and Notebook Record -- Staining Technology and Bright-field Microscope Use -- Enumeration of Bacteria in Broth Suspension by Spread and Pour Plating -- Isolation of Foodborne pathogens on Selective, Differentiate and Enrich Medium by Streak-plating -- Enumeration of Aerobic plate counts, Coliforms and Escherichia coli of Organic Fruit Juice on Petri-film -- Enumeration and identification of Staphylococcus aureus in Chicken Salads -- Enumeration and identification Listeria monocytogenes on ready-to-eat (RTE) frankfurters -- Isolation and identification of Salmonella and Campylobacter spp. on broiler carcasses -- Thermal inactivation of Escherichia coli O157:H7 in Non-intact reconstructed beef patties -- Thermal inactivation of Escherichia coli O157:H7 in mechanically tenderized beef steaks and color measurements -- Evaluate

antimicrobial activity of chlorine water on apples and measurement of free chlorine concentrations -- Evaluate cross-contamination of Salmonella on tomatoes in wash water using most probable number (MPN) technique -- Cultivation of Anaerobic Bacteria in Canned Food -- Observation and enumeration of Molds from Spoiled Bread -- DNA Extraction and Purity Determination of Foodborne Pathogens -- Practice of Multiplex PCR to identify bacteria in bacterial solutions -- PCR Identification of Listeria monocytogenes in Deli Meat -- Cheese Making and Characterization -- Wine and Sauerkraut Making and Characterization -- Introduction of oral presentation and job interview preparation -- Appendix- Samples of Food Microbiology Lab Course Syllabus. .

Sommario/riassunto

This book is designed to give students an understanding of the role of microorganisms in food processing and preservation; the relation of microorganisms to food spoilage, foodborne illness, and intoxication; general food processing and quality control; the role of microorganisms in health promotion; and federal food processing regulations. The listed laboratory exercises are aimed to provide a hands-on-opportunity for the student to practice and observe the principles of food microbiology. Students will be able to familiarize themselves with the techniques used to research, regulate, prevent and control the microorganisms in food and understand the function of beneficial microorganism during food manufacturing process.