Preface

In order to help food science students understand the relationship between microorganisms and food products, it is important to develop a food microbiology laboratory textbook. Currently, a very limited amount of food microbiology laboratory manuals is commercially available, which makes it difficult for students to have a useful food microbiology laboratory manual with them. The aim of this book is to supply the food microbiology lab course instructor with a useful lab manual to teach this course and food science students and food microbiologists who will be working in the food industry with a readable and easily understood and followed laboratory manual. This book is designed to give students an understanding of the role of microorganisms in food processing and preservation; relation of microorganisms to food contamination, foodborne illness, and intoxication; general food processing and quality control; 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 especially enumeration, isolation, and identification of microorganisms in foods. Students will familiarize themselves with techniques used to research, regulate, prevent, and control microorganisms in food and understand the function of beneficial microorganisms during the food manufacturing process. This book includes almost all pictures of each step of lab work, and all the pictures are coming from real lab practice and lab results. This lab manual is typically fit for small land-grant institutions that teach food microbiology lab classes and for non-land-grant universities who plan to develop a food science course curriculum.

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