

Preface to the Fourth Edition

The first edition of this book was published in 1958. At that time, W.C. Frazier suggested that the purpose of *Food Microbiology* was to condense into a volume of modest size, the basics of food microbiology, together with illustrations of these principles, in such a form that the book could serve as a college textbook or as an aid to workers in fields related to the food industry. Furthermore, each of the main subjects treated in this book is worthy of a separate volume, but limitations of space do not permit the inclusion of all the material that specialists, in their enthusiasm for their fields, might wish to see. W.C. Frazier tried to avoid giving undue attention to any single phase of food microbiology, and he included a limited amount of food technology so that the reader had a basic understanding of the processing of some foods.

The second edition was printed in 1967 and contained considerably more information that had become available on the microbial content of foods and on their preservation and spoilage. Several changes were made at that time in the arrangement of the material.

Revision of the second edition began in 1976, and the third edition was published in 1978. Since that time, thousands of papers have been published in the area of food microbiology, and new techniques in food processing have evolved. Promising methods, such as the irradiation of foods, were not permitted when the third edition was published, and the chapter on irradiation was deleted from that edition. Now there has been renewed interest in the irradiation process, and Chapter 10, "Irradiation of Foods," has been rewritten and reincorporated into the text.

Food Microbiology has been on a long revision cycle: 1957, 1968, 1978 and 1988, and therefore, what is added or changed must stand the test of time. Adding "contemporary" references must be done carefully to ensure that the book is not dated by current opinions, particularly in controversial areas. An example is the current concern regarding *Listeria monocytogenes* and the adequacy of milk pasteurization. As the text was being revised, a limited number of reports on the heat resistance of *L. monocytogenes* was available. Obviously, not all the questions regarding its heat resistance nor the adequacy of the minimum times and temperatures established for pasteurization had been answered.

Bergey's Manual of Determinative Bacteriology (8th edition) was published just prior to the release of the third edition of *Food Microbiology*. Many of the bacterial names familiar to the food microbiologist had been renamed or declared invalid species. An appendix was included in the third edition of *Food Microbiology* which described the current status of the names of these organisms. Names that were no longer accepted were marked with an asterisk in the text and were discussed in the appendix. We have continued this practice in the fourth edition. Recently, *Bergey's Manual of Systematic Bacteriology*, Volumes 1 and 2 have been published. Again, there have been changes in nomenclature and changes in taxonomy. We continue to

cite the organisms as they originally appear in the literature. The asterisks are used to help food microbiologists make the transition to the new names.

We regret that we are unable to give acknowledgment and thanks to all the people whose reports have been the basis for many of the facts and tables presented in this edition. We have attempted to use and refer to major papers or review articles, which can be a source of additional references in a given area.

Several individuals were asked to make comments on the book prior to this revision, and others reviewed and commented on individual chapters or sections following revision. We express our thanks to the following individuals for their time, criticisms, and suggestions: Alan Kempton, Thomas J. Montville, Barbara Dill, and Richard Kinsley, Jr.

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