



HANDBOOK of Fruit and Vegetable Flavors

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The demand for new flavors continues to rise. Today's consumers want interesting, healthy, pleasurable, and exciting taste experiences, creating new challenges for today's food and flavor scientists. Fortunately, they can turn to this comprehensive reference on the flavor science and technology of fruits, vegetables, spices, and oils for guidance on everything from basic science to new technologies to commercialization.

Handbook of Fruit and Vegetable Flavors is divided into two sections. The first section, dedicated to fruit flavor, is organized into five parts:

- Part I: Biology, Chemistry, and Physiochemistry
- Part II: Biotechnology
- Part III: Analytic Methodology and Chemical Characterizations
- Part IV: Flavors for Fruit Commodities
- Part V: Flavors of Selected Dried Fruits

The second section, dedicated to vegetable flavor, is divided into two parts, covering biology, chemistry, physiochemistry, and biotechnology in the first part and flavor for vegetable commodities in the second part. Both the fruit flavor and vegetable flavor sections provide detailed coverage of such important topics as processing, extraction, flavor biosynthesis, and genetic engineering. Moreover, readers will find important details on regulations and requirements governing flavor additives as well as sanitation and safety in flavor manufacturing.

Each of the chapters has been written by one or more leading experts in food and flavor science. The authors represent more than ten countries, giving food and flavor scientists a unique global perspective on the latest flavor science, technology, and applications.

Y. H. HUI, PhD, is the Senior Scientist at Science Technology System and has been the author and editor of many books in the field of food science and technology.

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Summary: "Acting as chemical messengers for olfactory cells, food flavor materials are organic compounds that give off a strong, typically pleasant smells. Handbook of Fruit and Vegetable Flavors explores the flavor science and technology of fruits and vegetables, spices, and oils by first introducing specific flavors and their commercialization, then detailing the technical aspects, including biology, biotechnology, chemistry, physiochemistry, processing, analysis, extraction, commodities, and requirements for application as food additives. With chapter authors representing more than ten different countries, this handy reference provides a comprehensive view of this evolving science." – Provided by publisher.

Summary: "This book provides a comprehensive reference on the flavor science and technology of fruits and vegetables, spices, and oils. Beginning with an introduction on the specific flavors and their commercialization, the book then details the technical aspects including biology, biotechnology, chemistry, physiochemistry, processing, analysis, extraction, commodities, and requirements for application as food additives. Regulatory considerations are discussed in relation to sanitation and safety in a flavor manufacturing establishment" – Provided by publisher.

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PREFACE

For the last 50 years, our knowledge of the science and technology of food flavors has increased tremendously. To distribute the information, publishers have released many professional reference books on the subject. In general, most of the books have some discussion on the flavors of fruits and vegetables, though several of them specifically address these two important groups of food commodities. Information on the flavors of fruits and vegetables is essential to the work of government, academia, and industry. This book is an updated reference treatise on the flavors of fruits and vegetables. It includes 55 chapters, with 31 on the flavor of fruits and 24 on that of vegetables, covering the following topics:

- biology, chemistry, and biochemistry
- biotechnology and genetic engineering
- analytical methodology
- processing technology
- fresh and processed commodities
- products derived from processed fruits and vegetables
- regulatory consideration

There are several professional books on the subject matter and the preference for any particular one depends on the needs of the users. Although many topics are included in this volume, we do not claim that the coverage is comprehensive.

This work is the result of the combined efforts of more than 70 individuals from industry, government and academia worldwide. They represent the expertise of professionals from 18 countries including Belgium, Brazil, China, Canada, Croatia, Cuba, France, India, Indonesia, Israel, Italy, Japan, Kuwait, Malaysia, Mexico, Portugal, Spain, Turkey, and the United States. The editorial team consists of 12 established experts in the flavors or processing of fruits and vegetables. Each contributor or editor was responsible for researching and reviewing subjects of immense depth, breadth, and complexity. Care and attention were paramount to ensure technical accuracy for each topic. In sum, this volume is unique in many respects. It is our sincere hope and belief that it will serve as an essential reference on the flavors of major plant foods.

We wish to thank all the contributors for sharing their expertise throughout our journey. We also thank the reviewers for giving their valuable comments leading to

improvements in the contents of each chapter. In addition, we thank members of the production team at John Wiley and Sons for their time, effort, advice, and expertise. All these professionals are the ones who made this book possible. You are the best judge of the quality of their work and we trust that you will benefit from the fruits of their labor.

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