

HANDBOOK OF FOOD SCIENCE, TECHNOLOGY, AND ENGINEERING

Volume 3

Edited by
Y. H. HUI

Associate Editors

E. Castell-Perez, L. M. Cunha, I. Guerrero-Legarreta,
H. H. Liang, Y. M. Lo, D. L. Marshall, W. K. Nip,
F. Shahidi, F. Sherkat, R. J. Winger, K. L. Yam



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Volume 3

The **Handbook of Food Science, Technology, and Engineering, Four Volume Set** is a single source guide to the latest advances available in food science, technology, and engineering. It presents this information in a thorough, straightforward manner and contains contributions provided by international experts from industry, government, and academia.

Volume Three, Food Engineering and Food Processing is divided into nine parts to facilitate comprehension and accessibility. *Food Processing* discusses units of operation, while the following part, *Food Drying*, presents topics that consider dehydrated vegetables, drying tropical fruits, drying pears, and freeze drying. *Thermal Processing* reviews principles and applications and explains heat transfer, temperature time, thermal processing of foods modeling, and the engineering aspects of deep-fat frying. *Freezing* reviews principles and covers the microwave and frozen foods, components, the quality and shelf life of meat, frozen storage, and frozen dough. *New Technology* details issues such as minimal processing food, MAP, ohmic and inductive heating, ultra sound and ultra light, irradiation, and nanotechnology. *Packaging* presents the new technologies that are available as well as discussions on plastics, paper, frozen foods, thermal processing, and edible films and coatings. *Ingredient Technology* focuses on five major concepts and products: spices, sweet flavors, emulsion, gums, and pectin. *Modeling* features kinetics, experimental design, and model building. Finally, *Waste Management* describes water, poultry, and meat waste.

Each volume in the *Handbook of Food Science, Technology, and Engineering* series contains approximately 1000 pages of scientific and technical data, making it an authoritative reference that is unique in its depth and breadth of scope.

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