

Contents

Contributors, vii

Preface, xi

1. Bakery Products: Science and Technology, 3
H.-M. Lai and T.-C. Lin

Part I. Flours

2. Wheat Flour Classification, 69
O. M. Lukow
3. Wheat Flour of the Third Millennium, 87
L. De Bry
4. Gluten, 97
K. Khan and G. Nygard
5. Rye 109
K.-H. Liukkonen, R.-L. Heiniö, M. Salmenkallio-Marttila, K. Autio, K. Katina, and K. Poutanen
6. Rice 123
C. M. Rosell and M. Gdmez

Part II. Major Baking Ingredients

7. Sweeteners, 137
W.-K. Nip
8. Eggs, 161
V. Kiosseoglou and A. Paraskevopoulou
9. Yeast, 173
P. Gélinas
10. Fat Replacers, 193
V. Oreopoulou
11. Water, 211
C. Chieh
12. Functional Additives, 233
I. De Leyn

Part III. Principles of Baking

13. Mixing, Dough Making, and Dough Makeup, 245
N. Haegens

14. Fermentation, 261
C.-H. Yang
15. Baking, 273
M.-H. Chang
16. Sensory Attributes of Bakery Products, 285
R.-L. Heinio

Part IV. Bread

17. Manufacture, 301
W. Zhou and N. Therdthai
18. Quality Control, 319
S. S. Sahi and K. Little
19. Enzymes in Breadmaking, 337
H. Goesaert, K. Gebruers, C. M. Courtin, K. Brijs, and J. A. Delcour
20. Sourdough, 365
A. Diowksz and W. Ambroziak
21. Frozen Dough, 381
P. D. Ribotta, A. E. León, and M. C. Añón

Part V. Special Products

22. Cake Manufacture, 393
F. D. Conforti
23. Cracker Manufacture, 411
T. Yoneya and W.-K. Nip
24. Nonenzymatic Browning for Cookies, Crackers, and Biscuits, 433
M. Villamiel
25. Specialities from All Over the World, 443
N. Haegens
26. Dietetic Bakery Products, 455
S. Chan
27. Gluten-Free Cereal-Based Products, 471
E. K. Arendt and M. M. Moore
28. Muffins and Bagels, 497
N. Cross
29. Pretzel Production and Quality Control, 519
K. Seetharaman
30. Italian Bakery, 527
M. A. Pagani, M. Lucisano, and M. Mariotti