
Innovations in Agricultural and Biological Engineering

FOOD TECHNOLOGY

Applied Research and
Production Techniques

Edited by

Murlidhar Meghwal, PhD

Megh R. Goyal, PhD, PE

Mital J. Kaneria, PhD

AAP | APPLE
ACADEMIC
PRESS

CONTENTS

<i>List of Contributors</i>	<i>vii</i>
<i>List of Abbreviations</i>	<i>xi</i>
<i>List of Symbols</i>	<i>xv</i>
<i>Foreword by T. K. Goswami</i>	<i>xvii</i>
<i>Foreword by G. S. Dave</i>	<i>xix</i>
<i>Preface 1 by Murlidhar Meghwal</i>	<i>xxi</i>
<i>Preface 2 by Megh R. Goyal and Mital J. Kaneria</i>	<i>xxiii</i>
<i>Warning/Disclaimer</i>	<i>xxvii</i>
<i>About the Editor</i>	<i>xxix</i>
<i>About Senior Editor-in-Chief</i>	<i>xxxi</i>
<i>About Co-Editor</i>	<i>xxxii</i>
<i>Book Endorsements</i>	<i>xxxiii</i>
<i>Other Books by Apple Academic Press, Inc.</i>	<i>xxxiv</i>
<i>Editorial</i>	<i>xxxvii</i>

PART I: GOOD MANUFACTURING PRACTICES AND RESEARCH IN FOOD TECHNOLOGY..... 1

- 1. Good Manufacturing Practices for Food Processing Industries:
Principles and Practical Applications..... 3**
Murlidhar Meghwal, Uday Heddurshetti, and Ravikumar Biradar
- 2. Research Planning and Funding Agencies: Focus on
Food Engineering 29**
Murlidhar Meghwal, Soumitra Banerjee, B. L. Dhananjaya,
Rachit Anu, Uday Heddurshetti, and Ravi Kumar Biradar

PART II: LATEST FOOD TECHNOLOGIES 51

- 3. Food Industry: Use of Plastics in the Twenty-First Century 53**
Ewelina Basiak
- 4. Thermal Processing in Food Technology: Latest Trends..... 63**
Mahuya Hom Choudhury

5.	Non-Destructive Technique of Soft X-Ray for Evaluation of Internal Quality of Agricultural Produce.....	99
	D. V. Chidanand, C. K. Sunil, and Ashish Rawson	
PART III: ROLE OF ANTIOXIDANTS IN FOODS		123
6.	<i>In Vitro</i> Antioxidant Efficacy: Selected Medicinal Plants of Gujarat.....	125
	Pooja Moteriya, Jalpa Ram, Mital J. Kaneria, and Sumitra Chanda	
7.	Antioxidant Activities of Some Marine Algae: Case Study from India	147
	K. D. Rakholiya, J. T. Patel, V. D. Vora, G. S. Sutaria, R. M. Patel, R. A. Dave, and Mital J. Kaneria	
8.	Omega-3 Pufa from Fish Oil: Silver-Based Solvent Extraction.....	163
	Kirubanandan Shanmugam	
9.	Anti-Oxidant and Anti-Bacterial Characteristics of Extracts: <i>Terminalia Chebula</i> and <i>Terminalia bellerica</i>.....	213
	Harsha Patel, Hemali Padalia, Mital J. Kaneria, Yogesh Vaghasiya, and Sumitra Chanda	
PART IV: ANTIMICROBIAL ACTIVITIES IN FOOD.....		233
10.	<i>In Vitro</i> Antimicrobial Activity: <i>Salvadora</i> Species.....	235
	Jagruti Sonagara, Kalpna D. Rakholiya, Hemali Padalia, Sumitra Chanda, and Mital J. Kaneria	
11.	Antimicrobial Properties of Leaf Extract: <i>Polyalthia longifolia</i> var. <i>Pendula</i> Under <i>In-Vitro</i> Conditions	253
	Kalpna D. Rakholiya, Yogesh Baravalia, and Sumitra Chanda	
PART V: ACTIVE CONSTITUENTS OF FOODS.....		271
12.	Isolation, Validation and Characterization of Major Bioactive Constituents from Mango Ripe Seed.....	273
	Kalpna D. Rakholiya, Mital J. Kaneria, and Sumitra V. Chanda	
13.	Isolation and Characterization of Lycopene from Tomato and Its Biological Activity.....	313
	Yogesh K. Baravalia, Komal V. Pokar, Khyati C. Bhojani, and Shailesh B. Gondaliya	
14.	Food Processing using Microbial Control System: Shea Butter.....	331
	Ofeoriste D. Esiegbuya and F. I. Okungbowa	
	<i>Index</i>	349