PART I: Specific Toxicants Related to Processing Technology.

1 Introduction to Food Process Toxicants

2 Thermal Treatment.

2.1 Acrylamide

2.2 Acrolein

2.3 Heterocyclic Aromatic Amines

2.4 Hazards of Dietary Furan

2.5 Hydroxymethylfurfural (HMF) and Related Compounds

2.6 Chloropropanols and Chloroesters

2.7 Maillard Reaction of Proteins and Advanced Glycation End Products (AGEs) in Food

2.8 Polyaromatic Hydrocarbons

3 Fermentation.

3.1 Ethyl Carbamate (Urethane)

3.2 Biogenic Amines

4 Preservation.

4.1 N-Nitrosamines, Including N-Nitrosoaminoacids and Potential Further Nonvolatiles

4.2 Food Irradiation

4.3 Benzene

5 High Hydrostatic Pressure

6 Alkali and/or Acid Treatment.

6.1 The Dietary Significance of Processing-Induced Lysinoalanine in Food

6.2 Dietary Significance of Processing-Induced D-Amino Acids

6.3 Chloropropanols
PART II: General Considerations.

7 Application of HACCP for the Management of Processing Contaminants

8 Emerging Food Technologies

9 Food Processing and Nutritional Aspects

10 Risk Communication

11 Risk/Risk and Risk/Benefit Considerations

Index.