1. Record Nr. UNINA9910830649503321

Titolo	Bioactive compounds in foods [[electronic resource] /] / edited by John Gilbert, Hamide Z. Senyuva
Pubbl/distr/stampa	Oxford, : Blackwell Pub., 2008
ISBN	1-282-70640-3 9786612706400 1-4443-0228-0 1-4443-0229-9
Descrizione fisica	1 online resource (434 p.)
Altri autori (Persone)	GilbertJohn SenyuvaHamide Z
Disciplina	664 664.07 664/.07
Soggetti	Food - Analysis Food - Toxicology Food contamination Bioactive compounds - Effect of temperature on
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Contributors; PART ONE: NATURAL TOXICANTS; 1 Introduction; 1.1 Different perceptions of chemicals in food; 1.2 Residues and contaminants in foods; 1.3 Natural toxicants in foods; 1.4 Developments in analytical methodology; 1.5 Emerging risks; 1.6 Bioactive compounds in foods; 2 Pyrrolizidine Alkaloids; Summary; 2.1 Introduction; 2.2 The pyrrolizidine alkaloids; 2.3 Occurrence; 2.3.1 Formation and function; 2.4 Exposure; 2.4.1 Contamination of foods; 2.4.2 Pyrrolizidines in herbal preparations; 2.5 Regulations; 2.6 Toxicity and metabolism; 2.6.1 General toxicity; 2.6.2 Metabolism 2.6.3 Carcinogenicity and mutagenicity2.7 Analytical methods; 2.7.1 Extraction; 2.7.2 Gas chromatography; 2.7.3 High performance liquid chromatography; 2.7.4 Other methods; Conclusions; References; 3 Glucosinolates; Summary; 3.1 Introduction; 3.2 Nature and occurrence; 3.3 Biosynthesis; 3.3.1 Amino acid modification; 3.3.2 Conversion of

amino acids; 3.3.3 Secondary transformations; 3.4 Hydrolysis; 3.4.1 Myrosinase; 3.4.2 Hydrolysis products; 3.5 Analytical methods; 3.5.1 Total glucosinolates; 3.5.2 Individual glucosinolates; 3.5.3 Breakdown products; 3.6 Biological effects
3.6.1 Anticarcinogenicity3.6.2 Toxicity; 3.7 Taste versus health; 3.8 Responses to stress factors; 3.9 Effects of processing; Conclusions; References; 4 Phycotoxins in Seafood; Summary; 4.1 Introduction; 4.2 Causative and vector organisms; 4.3 Classification of phycotoxins; 4.4 The saxitoxin (STX) group (PSP); 4.4.1 The toxins causing PSP: the saxitoxin family; 4.4.2 Toxic effects; 4.5 The okadaic acid (OA) group (DSP); 4.5.1 The toxins causing DSP: okadaic acid and the dinophysistoxins; 4.5.2 Toxic effects; 4.6 The domoic acid (DA) group (ASP)
4.6.1 The toxins causing ASP (DAP): domoic acid and its isomers4.6.2 Toxic effects; 4.7 The azaspiracid (AZA) group (AZP); 4.7.1 The toxins causing AZP: the azaspiracids; 4.7.2 Toxic effects; 4.8 The brevetoxin (BTX) group (NSP); 4.8.1 The toxins causing NSP: the brevetoxins; 4.8.2 Toxic effects; 4.9 The ciguatera toxin (CTX) group (CFP); 4.9.1 The toxins causing CFP; 4.9.2 Toxic effects of CTXs; 4.10 Other phycotoxins; 4.10.1 The pectenotoxin group; 4.10.2 The yessotoxin group; 4.10.3 The cyclic imine group; 4.10.4 The cyanobacterial toxins; 4.10.5 Miscellaneous phycotoxins
4.11 Detection of phycotoxins in seafood and algae4.11.1 Assays and analyses; 4.11.2 Mammalian bioassays; 4.11.3 Instrumental (physico-chemical) analysis; 4.11.4 In vitro assays; 4.12 Depuration of phycotoxins; 4.12.1 Natural depuration; 4.12.2 Studies on cooking as a method of depuration; 4.12.3 The effects of freezing and chilling; 4.13 Monitoring and regulation; 4.13.1 Phytoplankton monitoring; 4.13.2 Monitoring of shellfish tissues for toxicity; 4.13.3 Risk analysis; 4.14 Future prospects; 4.15 A note on the IOC harmful algal bloom programme; Acknowledgements; References
5 Mushroom Toxins

Sommario/riassunto

Inherent toxicants and processing contaminants are both non-essential, bioactive substances whose levels in foods can be difficult to control. This volume covers both types of compound for the first time, examining their beneficial as well as their undesirable effects in the human diet. Chapters have been written as individually comprehensive reviews, and topics have been selected to illustrate recent scientific advances in understanding of the occurrence and mechanism of formation, exposure/risk assessment and developments in the underpinning analytical methodology. A wide range of contaminan