1. Record Nr. UNINA9910453269203321

Autore	Velisek Jan <1946->
Titolo	The chemistry of food / / Jan Velisek ; cover design by Andy Meaden
Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2014 ©2014
ISBN	1-118-38496-2 1-118-38383-4
Descrizione fisica	1 online resource (1125 p.)
Altri autori (Persone)	MeadenAndy
Disciplina	664/.07
Soggetti	Food - Analysis Food - Composition Electronic books.
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	Cover; Title Page; Copyright; Contents; Preface; About the Companion Website; Chapter 1 Introduction; Chapter 2 Amino Acids, Peptides and Proteins; 2.1 Introduction; 2.2 Amino acids; 2.2.1 Structure, terminology, classification and occurrence; 2.2.2 Physiology and nutrition; 2.2.3 Properties; 2.3 Peptides; 2.3.1 Structure, nomenclature and classification; 2.3.2 Biochemistry; 2.3.3 Occurrence; 2.3.4 Properties; 2.4 Proteins; 2.4.1 Classification and nomenclature; 2.4.2 Structure; 2.4.3 Properties; 2.4.4 Physiology and nutrition; 2.4.5 Occurrence, composition and changes; 2.5 Reactions 2.5.1 Intramolecular and intermolecular reactions2.5.2 Reactions with food components; Chapter 3 Fats, Oils and Other Lipids; 3.1 Introduction; 3.2 Classification; 3.3 Fatty acids; 3.3.1 Structure and nomenclature; 3.3.2 Biochemistry, physiology and nutrition; 3.3.3 Occurrence; 3.3.4 Properties of fatty acids; 3.4 Homolipids; 3.4.1 Esters of monohydric alcohols; 3.4.2 Glyceryl ethers; 3.4.3 Glyceryl esters; 3.4.4 Esters of polyhydric alcohols; 3.5 Heterolipids; 3.5.1 Phospholipids; 3.5.2 Glycolipids; 3.5.3 Sulfolipids and lipid sulfates; 3.5.4 Sialolipids; 3.5.5 Other heterolipids 3.6 Miscellaneous simple and complex lipids3.6.1 Lipoamino acids and fatty acid amides; 3.6.2 Complex lipids; 3.7 Substances accompanying

lipids; 3.7.1 Hydrocarbons; 3.7.2 Aliphatic alcohols; 3.7.3 Aliphatic ketones; 3.7.3 Aliphatic ketones; 3.7.4 Triterpenoids and steroids; 3.7.5 Lipophylic vitamins; 3.7.6 Lipophilic pigments; 3.8 Reactions; 3.8.1 Reactions of fatty acids; 3.8.2 Reactions of homolipids; 3.8.3 Reactions of heterolipids; 3.8.4 Reactions of steroids; Chapter 4 Saccharides; 4.1 Introduction; 4.2 Monosaccharides; 4.2.1 Structure and nomenclature; 4.2.2 Occurrence
4.2.3 Physiology and nutrition4.2.4 Use; 4.3 Derivatives of monosaccharides; 4.3.1 Sugar alcohols; 4.3.2 Sugar acids; 4.3.3 Other sugar derivatives; 4.4 Oligosaccharides; 4.4.1 Glucooligosaccharides; 4.4.2 Fructooligosaccharides; 4.4.3 Galactooligosaccharides; 4.4.4 Other oligosaccharides; 4.5 Polysaccharides; 4.5.1 Structure and nomenclature; 4.5.2 Classification; 4.5.3 Natural occurrence in foods; 4.5.4 Physiology and nutrition; 4.5.5 Properties and use; 4.5.6 Plant polysaccharides; 4.5.7 Seaweed polysaccharides; 4.5.8 Polysaccharides of microorganisms and higher fungi
4.5.9 Animal polysaccharides4.6 Complex saccharides; 4.6.1 Mucopolysaccharides; 4.6.2 Proteoglycans; 4.7 Reactions; 4.7.1 Monosaccharides and oligosaccharides; 4.7.2 Derivatives of monosaccharides; 4.7.3 Oligosaccharides; 4.7.4 Polysaccharides; 4.7.5 Maillard reaction; 4.7.6 Caramelisation; Chapter 5 Vitamins; 5.1 Introduction; 5.2 Vitamin A; 5.2.1 Structure and terminology; 5.2.2 Biochemistry; 5.2.3 Physiology and nutrition; 5.2.4 Use; 5.2.5 Occurrence; 5.2.6 Reactions; 5.2.7 Changes in foods; 5.3 Vitamin D; 5.3.1 Structure and terminology; 5.3.2 Biochemistry; 5.3.3 Physiology and nutrition
5.3.4 Use

Sommario/riassunto

A core subject in food Science, food chemistry is the study of the chemical composition, processes and interactions of all biological and non-biological components of foods. This book is an English language translation of the author's Czech-language food chemistry textbook. The first half of the book contains an introductory chapter and six chapters dealing with main macro- and micronutrients, and the essential nutritional factors that determine the nutritional and energy value of food raw materials and foods. It includes chapters devoted to amino acids, peptides a