

1. Record Nr.	UNINA9911004860603321
Autore	Pokorný J
Titolo	Antioxidants in Food : Practical Applications
Pubbl/distr/stampa	Burlington, : Elsevier Science, 2001
ISBN	1-280-37279-6 9786610372799 1-59124-331-9 1-85573-616-0
Descrizione fisica	1 online resource (397 p.)
Collana	Woodhead Publishing Series in Food Science, Technology and Nutrition
Altri autori (Persone)	Yanishlieva N Gordon M
Disciplina	661.8
Soggetti	Antioxidants
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Front Cover; Antioxidants in Food: Practical Applications; Copyright Page; Table of Contents; List of contributors; Chapter 1. Introduction; Part 1: Antioxidants and food stability; Chapter 2. The development of oxidative rancidity in foods; 2.1 Introduction; 2.2 Types and effects of rancidity; 2.3 Mechanism of autoxidation; 2.4 Photo-oxidation; 2.5 Ketonic rancidity; 2.6 Metal-catalysed lipid oxidation; 2.7 Antioxidant effects; 2.8 Other relevant reactions; 2.9 Mechanism of lipoxygenase-catalysed oxidation; 2.10 Future trends; 2.11 Sources of further information and advice; 2.12 References Chapter 3. Inhibiting oxidation; 3.1 Critical points of oxidation; 3.2 Inhibiting oxidation; 3.3 Types of inhibitors; 3.4 Types of antioxidants; 3.5 Key influences on antioxidant activity; 3.6 Future trends; 3.7 Sources of further information and advice; 3.8 References; Chapter 4. Measuring antioxidant activity; 4.1 Introduction; 4.2 Radical-scavenging methods; 4.3 Methods for measuring the current state of an oil or food sample; 4.4 Methods to monitor changes in oxidation; 4.5 Predictive methods; 4.6 Applications to particular foods; 4.7 Future trends 4.8 Sources of further information and advice; 4.9 References; Part 2: Antioxidants and health; Chapter 5. Cardiovascular disease and

nutritional phenolics; 5.1 Introduction; 5.2 LDL oxidation and atherogenesis; 5.3 Polyphenols and cell response; 5.4 Polyphenols and activated NF- κ B; 5.5 Other aspects of polyphenols as modulators of signal transduction; 5.6 Indirect evidence for polyphenol activity in atherogenesis; 5.7 Conclusions and future trends; 5.8 List of abbreviations; 5.9 References; Chapter 6. Antioxidants and antitumour properties; 6.1 Introduction; 6.2 The nature of tumour growth; 6.3 Models of carcinogenesis; 6.4 Diet and gene interactions; 6.5 Mechanisms of action: nutrients; 6.6 Mechanisms of action: phytochemicals; 6.7 Conclusion: the role of functional foods; 6.8 Future trends; 6.9 Sources of further information and advice; 6.10 References; Chapter 7. Predicting the bioavailability of antioxidants in food: the case of carotenoids; 7.1 Introduction; 7.2 Metabolism; 7.3 Systems for predicting carotenoid absorption; 7.4 Maximising the bioavailability of carotenoids; 7.5 Future trends; 7.6 Sources of further information and advice; 7.7 References

Part 3: Natural antioxidants

Chapter 8. Introducing natural antioxidants; 8.1 Introduction; 8.2 Categorising natural antioxidants; 8.3 Potency of natural antioxidants; 8.4 Future trends; 8.5 Sources of further information; 8.6 References; Chapter 9. Sources of natural antioxidants: oilseeds, nuts, cereals, legumes, animal products and microbial sources; 9.1 Introduction; 9.2 Characteristics of natural antioxidants; 9.3 Antioxidants from legumes, nuts and oilseeds; 9.4 Antioxidants from cereals; 9.5 Antioxidants from animal products; 9.6 Antioxidants from microbial sources

9.7 Antioxidants as preserving agents

Sommario/riassunto

Antioxidants are increasingly important additives in food processing. Their traditional role is, as their name suggests, in inhibiting the development of oxidative rancidity in fat-based foods, particularly meat and dairy products and fried foods. However, more recent research has suggested a new role in inhibiting cardiovascular disease and cancer. Antioxidants in food provides a review of the functional role of antioxidants and discusses how they can be effectively exploited by the food industry. Part one of the book looks at antioxidants and food stability with chapters on the develo
