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1.9.5 Moka (mocha); 1.9.6 Percolated coffee; 1.9.7 Soluble coffee; 1.9.8 Liquid coffee; 1.9.9 Single-serve coffee machines; 1.10 Coffee beverages and specialties; 1.11 Coffee consumption; 1.12 Conclusions AcknowledgmentsReferences; 2 Coffee Constituents; 2.1 Introduction; 2.2 Production of coffee and coffee-based beverages; 2.2.1 Green coffee production; 2.2.2 Decaffeinated coffee production; 2.2.3 Steam-treated and monsooned coffees; 2.2.4 Coffee roasting; 2.2.5 Coffee brewing; 2.2.6 Instant coffee production; 2.3 Natural coffee constituents; 2.3.1 Green coffee chemical composition; 2.3.1.1 Nonvolatile compounds in green coffee; Caffeine; Trigonelline; Chlorogenic acids; Cafestol and kahweol; Soluble dietary fiber; Water; Carbohydrates; Protein, peptides, and free amino acids; Minerals Lipids2.3.1.2 Volatile compounds in green coffee; 2.3.2 Changes in coffee chemical composition during roasting; 2.3.2.1 Nonvolatile components in roasted coffee; 2.3.2.2 Volatile compounds in roasted coffee; 2.3.3 Changes in coffee chemical composition during special coffee processing; 2.3.4 Chemical composition of coffee brew; 2.4 Incidental coffee constituents; 2.4.1 Incidental nonvolatile compounds in coffee; 2.4.1.1 Ochratoxin A; 2.4.1.2 Biogenic amines; 2.4.1.3 - carbolines; 2.4.1.4 Acrylamide; 2.4.1.5 Polycyclic aromatic hydrocarbons; 2.4.1.6 Pesticide residues 2.4.2 Incidental volatile constituents in coffee2.5 Concluding remarks; Acknowledgments; References; 3 Bioavailability of Coffee Chlorogenic Acids; 3.1 Introduction; 3.2 Chlorogenic acids: contribution of coffee to dietary levels ingested; 3.2.1 Dietary intake; 3.2.2 Levels in coffee beverage; 3.3 Bioavailability of coffee chlorogenic acids; 3.3.1 Absorption and metabolic fate; 3.3.2 Extensive metabolism upon intake; 3.3.2.1 Identification of chlorogenic acid metabolites; 3.3.2.2 Metabolic pathways; 3.3.2.3 Bioavailability of intact chlorogenic acids; 3.3.3 Urinary and biliary excretion 3.3.4 Effects of food matrix and co-ingestion on bioavailability

Sommario/riassunto

Coffee: Emerging Health Benefits and Disease Prevention presents a comprehensive overview of the recent scientific advances in the field. The book focuses on the following topics: coffee constituents; pro- and antioxidant properties of coffee constituents; bioavailability of coffee constituents; health benefits and disease prevention effects of coffee; and potential negative impacts on health. Multiple chapters describe coffee's positive impact on health and various diseases: type 2 diabetes; neurodegenerative diseases (Parkinson's and Alzheimer's); cancer (prostate, bladder, pancreat