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Titolo	Science and Technology of Fibers in Food Systems // edited by Jorge Welti-Chanes, Sergio O. Serna-Saldívar, Osvaldo Campanella, Viridiana Tejada-Ortigoza
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Descrizione fisica	1 online resource (VIII, 468 p. 60 illus., 21 illus. in color.)
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Soggetti	Food science Chemistry, Organic Food Science Organic Chemistry
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Formato	Materiale a stampa
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Nota di contenuto	Structure and Chemistry of Plant Cell Walls and Dietary Fiber in Foods -- Chemical composition and physical properties of dietary fiber components -- Association of dietary fiber to food components -- Analysis of fibers and its components -- Dietary fiber in cereals and legume seeds -- Dietary fiber in fruits and vegetables -- Resistant starch -- Dietary fiber and obesity -- Dietary fiber and diabetes -- Dietary fiber and hyperlipidemia and cardiovascular disease -- Dietary fiber and cancer -- Dietary fiber and gut microbiota -- Extraction pretreatments of individual dietary fiber components -- Enzymatic Processes of Dietary Fibers -- Extraction and Modification of Dietary Fiber applying Thermal Processes -- Chemical Processes for the Extraction and Modification of Dietary Fiber -- Emerging Technologies for the Extraction and Modification of Dietary Fiber -- Functional properties in industrial applications -- Fiber Addition to Foods. Effect on Sensory and Texture Properties -- Dietary fibers in foods- Formulating and processing for nutritional benefits.
Sommario/riassunto	This text provides comprehensive coverage of fibers used in food

formulations, starting with the understanding of their basic chemical structure and how they are present and organized in the cell wall structure, their physicochemical and functional properties, their impact on the digestive process and their role and preventive action against various chronic diseases including colon cancer. The book focuses on traditional and new fiber rich sources, incorporating an integrated approach in terms of the technological and engineering processes used to obtain and incorporate them in traditional foods, plus their characterization, extraction and modification. The study of processing conditions including the chemical, physical and enzymatic processes of fiber extraction and modification are also covered, including traditional and emerging processing technologies, plus the application of fibers in the development of new products and processes. Science and Technology of Fibers in Food Systems integrates knowledge of fibers from their basic structural and property aspects and the applications of these ingredients to extraction process analysis, modification and feasibility for use at the industry level. The chapters incorporate the physiological aspects related to the consumption of fiber for prevention of serious diseases. .
