

1. Record Nr.	UNINA9910768185803321
Titolo	Advances in Sea Cucumber Processing Technology and Product Development // edited by Changhu Xue
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	3-031-16512-8
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (VI, 364 p.) : 1 illus
Collana	Advances in Marine Bioprocesses and Bioproducts, , 2731-443X
Disciplina	577.6 577.7
Soggetti	Freshwater ecology Marine ecology Animal biotechnology Ecology Oceanography Food science Freshwater and Marine Ecology Animal Biotechnology Biooceanography Food Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Diversity, Distribution, and Biology of Sea Cucumber -- Nutritional Components of Sea Cucumber and the Biochemical Characteristics of Autolytic Enzymes -- The Functional Components of Sea Cucumber and their Nutritional and Biological Activities -- Traditional Processing Technologies and Products of Sea Cucumber: Historical Review -- The Pretreatment Technology of Raw Sea Cucumber and New Processing Technology of Salted Sea Cucumber -- The New Processing Technology of Dried Sea Cucumber Products -- Ready-to-Eat Sea Cucumber Products and Collagen Stabilization Technology -- The Extraction, Separation Technology and New Product Development of Sulfated Polysaccharides from Sea Cucumber -- The Extraction, Separation Technology and New Product Development of Functional Lipids from

Sea Cucumber -- The Extraction, Separation Technology and New Product Development of Collagen Peptides from Sea Cucumber -- The Quality Management Systems and Standards of Sea Cucumber Products -- Food Safety Issues and Regulatory Requirements of Sea Cucumber Products and Their Internationalization.

Sommario/riassunto

Sea cucumbers belong to the Phylum Echinodermata. There are more than 900 recorded species of sea cucumber of which more than 40 are edible. As a food source, sea cucumbers are rich in protein, low in fat, rich in collagen, sulfated polysaccharides, phospholipids, glycolipids, saponins and other functional components. Therefore, sea cucumbers have important nutritional and medicinal value. Growing awareness of these health benefits has promoted growth in marine aquaculture and processing technologies for the development of sea cucumber products for many applications. Novel perspectives of nutritional functions and processing technologies of sea cucumbers are defined in this book. The chemical structure and nutritional function of sea cucumbers are systematically reviewed. These include the functional/nutritional components, the endogenous enzymatic properties related to processing efficiency and product quality, and the efficient preparation technology of functional components. The traditional processing technology is presented as the background context to highlight the advances in new processing technologies including low-temperature cooking technology based on controllable negative pressure system, heat pump-hot-blast air combined drying technology, microwave sterilization of instant sea cucumber, collagen stabilization technology. The book finishes with the authentication of sea cucumber types and origin, quality standards, product quality control systems and food safety requirements.
