1. Record Nr. UNINA9910595061003321

Autore	Dwivedi Ram Snehi
Titolo	Alternative Sweet and Supersweet Principles : Natural Sweeteners and Plants / / by Ram Snehi Dwivedi
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-336-350-9
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (792 pages)
Disciplina	664.1
Soggetti	Botanical chemistry Food science Plant physiology Biotechnology Plant Biochemistry Food Science Plant Physiology Edulcorants Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Search of Sweeteners, their general classification, synthesis, and saccharide sweeteners plant - animal interphases -- Chapter 3. Molecular basis of sweetness and recent concepts, An ideal sweetener and saccharide and non-saccharide sweet principles qualifying it -- Chapter 4. Saccharide sweet (SS) principles, classification and structural and functional details of SS sweeteners and plants -- Chapter 5. Non saccharide super sweet principles, their general characteristics, outline of synthesis, classification, ecological significance and eco-friendly adherence -- Chapter 6. Perillartine (Mono-terpenoid) -- Chapter 7. Steviosides (Diterpenoids) -- Chapter 8. Triterpenoids -- Chapter 9. Hernandulcin: (Sesquiterpene) -- Chapter 10. Falvonoid Super Sweet Principles Dihydrochalcone -- Chapter 11. PHYLLODULCIN -- Chapter 12. Osladin, Polypodoside A, B, and C (Steroidal saponins) -- Chapter 13. Monatin:(Super Sweet Amino acid) -- Chapter 14. Super sweet and

taste modifier proteins -- Chapter 15. Vegetal Taste modifiers -- Chapter 16. Eco-Physiological difference between sacchariferous sweet (SS) and non sacchariferous super sweet (NSSS) principles and Plants -- Chapter 17. Molecular approaches for the improvement of Non sacchariferous super sweet (NSSS) plants -- Chapter 18. Commercial Production of natural NSSS sweeteners-A concised sketch.

Sommario/riassunto

This book gathers the latest information on various kinds of natural, plant-based sweet and super sweet sweeteners. A book on alternative, natural sweeteners with zero or very few calories is extremely timely and useful, especially in light of the decreasing amount of cultivable land, ever-increasing demand for sucrose, and the well-known risks of sugar consumption. Every year, more than five million people die due to diabetes and diabetes-associated diseases like cardiovascular conditions, kidney disorders, liver cancer, etc. This book describes the use of natural non-saccharide super sweet (NSSS) principles to avoid such maladies. Readers will gain an in-depth understanding of various sweeteners, the molecular basis of sweetness, sweeteners' general classification, plant sources, etc. In turn, the book focuses on the propagation, cultivation and conservation of NSSS plants (NSSSP) and extraction of super sweet principles and granting of Generally Recognised As Safe (GRAS) certificates for sweeteners. The closing chapter describes the eco-physiological difference between sacchariferous sweet and non-sacchariferous super sweet plants and principles. This book will be of great interest to researchers, professors, graduate students and practitioners in the fields of food science, nutrition, ayurveda, plant physiology, unani, chemotaxonomy, naturopathy, biochemistry and plant breeding. It will also be of interest to industry and alternative sweetener manufacturers.