

# Sweetness Intensity of Sweeteners Compared to Table Sugar

TIMES SWEETER

**Advantame**

Advantame®

20,000

**Neotame**

Neotame®

7,000 to 13,000

**Thaumatin**

Tha®

2,000 to 3,000

**Saccharin**

Sweet and Low®, Sweet Twin®,  
Sweet'N Low®, Necta Sweet®

200 to 700

**Sucralose**

Splenda®

600

**Steviol Glycosides**

Revia®, PureVia®, Endulze®

200 to 400

**Luo Han Guo**

Nectresse®, Monk Fruit in the Bowl®, PureLuo®

100 to 250

**Aspartame**

NutraSweet®, Equal®, Sugar Twin®

200

**Acesulfame Potassium (Ace-K)**

Sweet One®, Sunett®

200

Table Sugar  
(Sucrose)



RANGE OF SWEETNESS

# Sweetness Sweeteners

**Lyn O'Brien-Nabors**



## Sweetness Sweeteners:

**Alternative Sweeteners, Third Edition, Revised and Expanded** Lyn O'Brien-Nabors, 2001-06-08 A survey of the extensive field of sucrose alternatives detailing scientific information technical applications and regulatory ratings for a wide array of sweeteners It highlights the change in status of saccharin the increased use of polyols and the possibilities provided by the availability of a variety of alternative sweeteners and their uses in combination This third edition contains new chapters on neotame tagatose trehalose erythritol and aspartame acesulfame salt *Handbook of Sweeteners* S. Marie, J. R. Piggott, 2013-11-21 The study of sweetness and sweeteners has recently been an area well served by books at all levels but this volume was planned to fill what we perceived as a gap in the coverage There appeared to be no book which attempted to combine a study of sweetness with a thorough but concise coverage of all aspects of sweeteners We set out to include all the important classes of sweeteners including materials which do not yet have regulatory approval so that clear comparisons could be made between them and their technological advantages and disadvantages To achieve our first aim of sufficient depth of coverage the accounts within this volume are comprehensive enough to satisfy the requirements of a demanding readership but cannot be exhaustive in a single volume of moderate proportions The second aim of breadth and conciseness is satisfied by careful selection of the most pertinent material For the purposes of this book a sweetener is assumed to be any substance whose primary effect is to sweeten a food or beverage to be consumed thus including both the nutritive and non nutritive varieties from the ubiquitous sucrose to the lesser known newer developments in alternative sweeteners The volume has its contents structured in a logical manner to enable it to be used in an ordered study of the complete subject area or as a convenient reference source *Sweetness and Sweeteners* Gordon Gerard Birch, Leslie Frank Green, Charles Barrie Coulson, 1971 **Noncaloric Sweeteners** Roy Arthur Ballinger, 1967 **Alternative Sweet and Supersweet Principles** Ram Snehi Dwivedi, 2022-09-24 This book compiles the latest information on different kinds of natural plant based super sweeteners A book on alternative natural super sweeteners is extremely timely and useful especially in light of the decreasing cultivable area ever increasing demand for sucrose and the well identified ills of sugar consumption Every year more than 50 million people die due to diabetes and diabetes associated diseases like cardiovascular kidney disorder liver cancer etc This book describes the use of non saccharide super sweet principles to counter such maladies The readers will get an in depth understanding of different kinds of sweeteners molecular basis of sweetness their general classification plant source with photo plates etc The chapters explain different kinds of super sweet principles This book emphasizes on the propagation cultivation and conservation of NSSS plants NSSSP and extraction of super sweet principles and granting of generally recognised as safe GRAS certificate to sweeteners The concluding chapter describes the eco physiological difference between saccharide super sweet and non saccharide sweet plants The book also describes commercial production of selected potential Natural Super Sweeteners This book will be of great interest to researchers extension workers as well

as postgraduate students in Food science nutrition ayurveda plant physiology Unani naturopathy biochemistry and plant breeding It would also be of interest to industry stakeholders in sweetener industry and alternative sweetener manufactures

Food Analysis by HPLC, Second Edition Leo M.L. Nollet, 2000-04-05 Food Analysis by HPLC Second Edition presents an exhaustive compilation of analytical methods that belong in the toolbox of every practicing food chemist Topics covered include biosensors BMO s nanoscale analysis systems food authenticity radionuclides concentration meat factors and meat quality particle size analysis and scanning colorimetry It also analyzes peptides carbohydrates vitamins and food additives and contains chapters on alcohols phenolic compounds pigments and residues of growth promoters Attuned to contemporary food industry concerns this bestselling classic also features topical coverage of the quantification of genetically modified organisms in food

**Sweeteners** Theodoros Varzakas, Athanasios Labropoulos, Stylianos Anestis, 2012-05-14 Sweeteners Nutritional Aspects Applications and Production Technology explores all essential aspects of sugar based natural non sugar based and artificial sweeteners The book begins with an overview presenting general effects safety and nutrition Next the contributors discuss sweeteners from a wide range of scientific and lifestyle perspectives Topics include The chemistry and functional properties of monosaccharides oligosaccharides polysaccharides and sugar polyols Analytical methodologies for determining low calorie nonnutritive sweeteners Honey syrups and their physicochemical aspects and applications Sweeteners such as sykin and raisin prune apple and grape juice concentrate Quality control production handling storage safety legislation and risk assessment of sweeteners The impact of sweeteners and sugar alternatives on nutrition and health Environmental and health concerns from the use of genetically modified GM herbicide tolerant sugar beets and GM high fructose corn syrup Inulin and oligofructose as soluble dietary fibers derived from chicory root As manufacturers strive to produce healthier and safer products with better taste new avenues of inquiry are opening up with respect to both the sources and the processing of sweeteners This volume provides a solid starting point for researchers and product developers in the food and beverage industry

Sweeteners and Sugar Alternatives in Food Technology Kay O'Donnell, Malcolm Kearsley, 2012-07-13 This book provides a comprehensive and accessible source of information on all types of sweeteners and functional ingredients enabling manufacturers to produce low sugar versions of all types of foods that not only taste and perform as well as sugar based products but also offer consumer benefits such as calorie reduction dental health benefits digestive health benefits and improvements in long term disease risk through strategies such as dietary glycaemic control Now in a revised and updated new edition which contains seven new chapters part I of this volume addresses relevant digestive and dental health issues as well as nutritional considerations Part II covers non nutritive high potency sweeteners and in addition to established sweeteners includes information to meet the growing interest in naturally occurring sweeteners Part III deals with the bulk sweeteners which have now been used in foods for over 20 years and are well established both in food products and in the minds of consumers In addition to the traditional polyol bulk sweeteners newer

products such as isomaltulose are discussed These are seen to offer many of the advantages of polyols for example regarding dental health and low glycaemic response without the laxative side effects if consumed in large quantity Part IV provides information on the sweeteners which do not fit into the above groups but which nevertheless may offer interesting sweetening opportunities to the product developer Finally Part V examines bulking agents and multifunctional ingredients which can be beneficially used in combination with all types of sweeteners and sugars

**Alternative Sweeteners** Lyn O'Brien-Nabors, 2016-04-19 The fourth edition of *Alternative Sweeteners* follows the same formula as the previous three books by discussing each sweetener in terms of its characteristics Qualities covered include means of production physical characteristics utility and relative sweetness compared to sucrose Technical qualities covered include admixture potential application availability shelf life transport metabolism carcinogenicity and other toxicity evaluation data A new chapter on the sweetener Advantame has been added and new contributors have updated information throughout the book Also new is a section on how stevia sweeteners have been examined and deemed safe by the Joint FAO WHO Expert Committee on Food Additives and the US FDA

*Advances in Sweeteners* Trevor H. Grenby, 2012-12-06 The subject of sweeteners continues to advance and expand but the progress that is being made may not be apparent for all to see owing to changes that have been taking place in how research is funded and the locations where it is now mainly done In former times scientific advancement was rated as a prized part of the output of academic research laboratories and institutions Today however it is increasingly likely that major advances emanate chiefly from the research and development units of industrial and commercial enterprises and organisations This means of course that the work becomes more focused on achieving specific marketing objectives but because of the high level of commitment cost and dedicated input required publication of the findings tends to take a lower priority and may actually be barred if there is any risk of loss of the commercial edge or advantage which has been one of the targets of the research Thus one of the objects of preparing this book has been to collect together information that might otherwise remain unpublished on advances in the field of sweeteners Of the fifteen contributions which form the chapters only 13% originate from academic departments whereas in earlier books of reviews on similar topics contributions from academic sources accounted for as much as 50% *Developments in Sweeteners* vols 2 and 3 1987 and 1989 and 64% *Progress in Sweeteners* 1989

Taste, Nutrition and Health Beverly J. Tepper, Iole Tomassini Barbarossa, 2020-06-25 The sensation of flavor reflects the complex integration of aroma taste texture and chemesthetic oral and nasal irritation cues from a food or food component Flavor is a major determinant of food palatability the extent to which a food is accepted or rejected and can profoundly influence diet selection nutrition and health Despite recent progress gaps in knowledge still remain regarding how taste and flavor cues are detected at the periphery conveyed by the brainstem to higher cortical levels and then interpreted as a conscious sensation Taste signals are also projected to central feeding centers where they can regulate hunger and fullness Individual differences in sensory perceptions are also well known and can arise from genetic variation

environmental causes or a variety of metabolic diseases such as obesity metabolic syndrome and cancer Genetic taste smell variation could predispose individuals to these same diseases Recent findings have opened new avenues of inquiry suggesting that fatty acids and carbohydrates may provide nutrient specific signals informing the gut and brain of the nature of the ingested nutrients This Special Issue Taste Nutrition and Health presents original research communications and comprehensive reviews on topics of broad interest to researchers and educators in sensory science nutrition physiology public health and health care

*Sweeteners and Sugar Alternatives in Food Technology* Helen Mitchell, 2008-04-15

Sugar replacement in food and beverage manufacture no longer has just an economic benefit The use of ingredients to improve the nutritional status of a food product is now one of the major driving forces in new product development It is therefore important as options for sugar replacement continue to increase that expert knowledge and information in this area is readily available *Sweeteners and Sugar Alternatives in Food Technology* provides the information required for sweetening and functional solutions enabling manufacturers to produce processed foods that not only taste and perform as well as sugar based products but also offer consumer benefits such as calorie reduction dental health benefits digestive health benefits and improvements in long term disease risk through strategies such as dietary glycaemic control Part I of this comprehensive book addresses these health and nutritional considerations Part II covers non nutritive high intensity sweeteners providing insights into blending opportunities for qualitative and quantitative sweetness improvement as well as exhaustive application opportunities Part III deals with reduced calorie bulk sweeteners which offer bulk with fewer calories than sugar and includes both the commercially successful polyols as well as tagatose an emerging functional bulk sweetener Part IV looks at the less well established sweeteners that do not conform in all respects to what may be considered to be a standard sweetening properties Finally Part V examines bulking agents and multifunctional ingredients Summary tables at the end of each section provide valuable concentrated data on each of the sweeteners covered The book is directed at food scientists and technologists as well as ingredients suppliers

*Optimising Sweet Taste in Foods* W J Spillane, 2006-07-17

A sweet taste is often a critical component in a consumer's sensory evaluation of a food product This important book summarises key research on what determines consumer perceptions of sweet taste the range of sweet tasting compounds and the ways their use in foods can be optimised The first part of the book reviews factors affecting sweet taste perception It includes chapters on how taste cells respond to sweet taste compounds genetic differences in sweet taste perception the influence of taste odour and taste ingredient interactions and ways of measuring consumer perceptions of sweet taste Part two discusses the main types of sweet tasting compounds sucrose polyols low calorie and reduced calorie sweeteners The final part of the book looks at ways of improving the use of sweet tasting compounds including the range of strategies for developing new natural sweeteners improving sweetener taste optimising synergies in sweetener blends and improving the use of bulk sweeteners With its distinguished editor and international team of contributors *Optimising sweet taste in foods* is a standard reference

for the food industry in improving low fat and other foods Investigates what determines consumer perceptions of sweet taste Looks at improving the use of sweet tasting compounds Explores strategies for delivering new natural sweeteners *Food Chemical Safety* David Watson,2002-02-22 Annotation The safety of chemicals introduced into the supply chain remains a major concern for food producers Food Chemical Safety Additives provides an authoritative survey of current developments in regulation research and best practices in the management of chemicals in food Some topics include analytical methods and instrumentation for detecting chemicals in food international regulation of additives in food and flavourings colourings sweeteners enzymes and solvents **Ingredient Interactions** Anilkumar G. Gaonkar,Andrew McPherson,2016-04-19

Understanding interactions among food ingredients is critical to optimizing their performance and achieving optimal quality in food products The ability to identify study and understand these interactions on a molecular level has greatly increased due to recent advances in instrumentation and machine based computations Leveraging this knowledge *Handbook of Olfaction and Gustation* Richard L. Doty,2015-05-22 The largest collection of basic clinical and applied knowledge on the chemical senses ever compiled in one volume the third edition of Handbook of Olfaction and Gustation encompass recent developments in all fields of chemosensory science particularly the most recent advances in neurobiology neuroscience molecular biology and modern functional imaging techniques Divided into five main sections the text covers the senses of smell and taste as well as sensory integration industrial applications and other chemosensory systems This is essential reading for clinicians and academic researchers interested in basic and applied chemosensory perception *How Flavor Works* Nak-Eon Choi,Jung H. Han,2015-02-23 Taste is the number one driving force in the decision to purchase a food product and food consumption is the most critical function for living organisms to obtain the energy and resources essential to their vitality Flavor and aroma are therefore universally important concepts intrinsic to human well being and pleasure and of huge significance for the multi trillion dollar global food business How Flavor Works the Science of Taste and Aroma offers a fascinating and accessible primer on the concepts of flavor science for all who have an interest in food and related topics Professionals and students of food science and technology who do not already specialize in flavor science will find it a valuable reference on a topic crucial to how consumers perceive and enjoy food products In this regard it will also be of interest to product developers marketers and food processors Other readers with a professional eg culinary and food service or personal interest in food will also find the book interesting as it provides a user friendly account of the mechanisms of flavor and aroma which will provide new insights into their craft Stevia A. Douglas Kinghorn,2001-11-29 Stevia rebaudiana is a remarkable South American plant that has become widely used in certain parts of the world as a natural sweetening agent and dietary supplement Purified extracts of S rebaudiana have been used as sweeteners and flavor enhancers in the food industry in Japan for over a quarter of a century and have been found to be up to 300 **Discovering Nutrition** Paul Insel,Don Ross,Kimberley McMahon,Melissa Bernstein,2018-02-15 Written with non majors in mind

Discovering Nutrition Sixth Edition introduces students to the fundamentals of nutrition with an engaging and personalized approach. The text focuses on teaching behavior change and personal decision making with an emphasis on how our nutritional behaviors influence lifelong personal health and wellness while also presenting up to date scientific concepts in a number of innovative ways. Students will learn practical consumer based nutrition information using the features highlighted throughout the text including For Your Information boxes presenting controversial topics, Quick Bites offering fun facts and the NEW feature Why Is This Important opens each section and identifies the importance of each subject to the field.



## Decoding **Sweetness Sweeteners**: Revealing the Captivating Potential of Verbal Expression

In a time characterized by interconnectedness and an insatiable thirst for knowledge, the captivating potential of verbal expression has emerged as a formidable force. Its ability to evoke sentiments, stimulate introspection, and incite profound transformations is genuinely awe-inspiring. Within the pages of "**Sweetness Sweeteners**," a mesmerizing literary creation penned with a celebrated wordsmith, readers attempt an enlightening odyssey, unraveling the intricate significance of language and its enduring impact on our lives. In this appraisal, we shall explore the book's central themes, evaluate its distinctive writing style, and gauge its pervasive influence on the hearts and minds of its readership.

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