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Book reviews

G.A. Burdock (Ed.), Fenaroli's Handbook of Flavor Ingredients, 5th ed., CRC Press, Boca Raton, FL, USA, 2005 (xxx + 2009 pp., £199.00, ISBN 0-8493-3034-3)

The U.S. Food and Drug Administration (FDA) defines flavoring agents as adjuvants as 'substances added to impart or help impart a taste or aroma in food'. Although the definition of a flavor will vary according to the source. FDA identifies flavor enhancers as 'substances added to supplement, enhance, or modify the original taste and/or aroma of a food, without imparting a characteristic taste or aroma of its own'. The term artificial flavor or artificial flavoring means any substance, the function of which is to impart flavor, which is not derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf or similar plant material, meat, fish, poultry, eggs, dairy products, or fermentation products thereof.

Fenaroli's Handbook of Flavor Ingredients has remained the standard reference for flavor ingredients throughout the word. As per the editor's note, this volume is the fifth edition of the above and has been expanded over the previous edition with over 100 new entries, including many botanicals and other natural substances.

This volume is a completely revised version with up-to-date information, with alphabetical listing of various flavoring ingredients. Each entry contains (where appropriate) primary name, synonyms, CAS number, FEMA number, NAS number, EINECS number, EEC number, CoE number, JECFA number, description, sensory thresholds, molecular structure, empirical formula/MW, specifications, natural occurrence, synthesis, consumption, food functions, regulations/guidelines. Besides this, it also contains summarized information about flavors, glossary of different terms and brief explanation of synthetic and natural flavours.

This volume is an authoritative and illustrative compilation of different flavor ingredients with more than 5000 tables. In conclusion, this handbook provides an abundance of information on flavor ingredients, and would be excellent resource for flavor chemists, food scientists, food safety and quality control personnel, and professionals in the pharmaceutical, dietary supplement, and cosmetic industries.

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K. Shetty, G. Paliyath, A. Pometto and R.E. Levin (Eds.), Food Biotechnology, CRC Press, Taylor and Francis Group, Boca Raton, FL, USA, 2006 (xxvi+1982 pp., £130.00, ISBN 0-8247-5329-1)

Man has exploited biotechnology for thousands of years in various activities, however, the discovery of genetic engineering techniques is responsible for the current 'biotechnology boom' and has doubtless been the main cause of much recent publicity of biotechnology. Not only these techniques offer the prospect of improving existing processes and products, but they are also enabling us to develop totally new products, which were not previously possible. Food biotechnology integrates biochemistry, microbiology, genetic engineering, and chemical engineering for the enhanced production, processing and preservation of food products. The recent biotechnological techniques have a distinct impact on food processing industries and have opened up the newer possibilities for rapidly improving the quantity and quality of available foods. Exciting opportunities in unique ingredients, new product development, cost reductions and novel processing methods will occur by application of new technologies.

Food Biotechnology explores the latest research and advances in the impact of biotechnology in food production and processing. The contents of the book are divided into three sections. The first section explains the basic principles of microbiology, fermentation technologies, and aspects of genetic engineering used in the production of various food ingredients. The next section comprises several chapters, which deal with different aspects of plant tissue cultures techniques, genetic engineering of plants and animals, functional food ingredients, probiotics, and topics on enzyme technologies.

Food borne diseases are responsible for numerous types of illness and pathogens responsible for these illnesses include viruses, eukaryotic parasites, and bacteria. An understanding of microbial population and our ability to control the presence of pathogens in foods is critical element in food safe-