

Book Reviews

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The Index of Antioxidants and Antiozonants. Compiled by Michael and Irene Ash, Gower Publishing Ltd, Aldershot, 1997. Cost £95.00. xx + 409 pages.

This reference work provides information on more than 1500 trade name products and chemicals, representing a broad range of antioxidants and antiozonants that are available from major chemical manufacturers. Part I is a reference by trade name which includes a chemical description, list of uses, regulatory references and physical properties. Part II is a chemical dictionary and cross reference which gives the CAS number, synonyms, chemical formula, properties, information on toxicology, storage, uses, manufacturer and distributor, and trade names. Part III provides an application cross reference, whereby groups of antioxidants and antiozonants are described for specific applications. Part IV comprises a Manufacturers Directory providing addresses and contact numbers. Appendices covering CAS number and EINECS/ELINCS number to trade and chemical name cross-references and a glossary defining the meaning of 31 words are also included. This is a useful reference book for scientists using antioxidants and antiozonants, and is recommended for purchase by libraries serving scientists and technologists in this field.

M. H. Gordon

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Food processing—Recent Developments. Edited by A. G. Gaonkar. Elsevier Science B.V. Amsterdam, 1995. ISBN 0-444-81500-7.

This edited work is comprised of 14 chapters contributed by 17 authors from the USA, UK, Japan, India and Sweden. The topics covered are in sequence: Applications for NMR Imaging in Processing of Foods—covers the use of NMR in the study of crystallization and freezing, diffusion, emulsions, syneresis and flow of materials; The Use of NMR for On Line Process Control and Quality Assurance—deals with the principles, potential on line measurements and instrumentation; Advances in Sensor Technology—describes developments and applications for optically and electrically based sensors in the food industry; Ultrasonics in Food Processing—outlines the use of ultrasonics for presence/absence detection, detection of thickness level, foreign bodies, measurement of flow rate, temperature, microstructure and composition; New Methodology Using

Synchrotron Radiation to Characterise Fast Events in Food Processing—covers the uses of X-ray diffraction and, in particular, its application to triglyceride crystallization; New Developments in Membrane Processing—discusses developments in RO, UF, MF, ED and NF and their application to processing of dairy products, fruit juices, beer, oils and in waste treatment. Applications for Microporous Glass Membranes—includes applications in production of emulsions, silica hydroxyl particles and dissolution of ozone gas in a liquid; Separation Processes for Biotechnology in the Food Industry—covers preparation of bulk enzymes, genetic manipulation in bioseparations, column chromatography, partitioning, process design and optimization; Advances in High Pressure Food Processing in Japan—deals with the principles of HP processing and its application to proteins, starchy foods, for sterilization, combined HP and heat treatment and industrial applications to jams, fruit juices and rice wine; Recent Progress in Aseptic Processing of Food—discusses ohmic heating, high voltage pulsed electric field heating, high pressure processing, developments in tubular heat exchangers and pumps and the *aseptic ship*. The Use of Ionizing Radiation in the Preservation of Food—covers the principles, sources and facilities for radiation, the effects on food components and methods of identifying irradiation in foods; Emerging-Freezing Technologies—summarizes the various methods of freezing and highlights some of the new technologies, applications and efficiencies; Role of Extrusion in Food Processing—describes and compares single and twin screw extruders, mechanisms of flow in extrusion and applications including starch modification, snack foods, TVP, pasta, meat products and confectionery products; Progress in Extraction Technology Related to Food Processing—covers conventional solvent extraction of solids and liquids, supercritical fluid extraction and its application to cholesterol, caffeine, hops and spices, aqueous two-fluid extraction, reverse micelle extraction and emulsion liquid membrane extraction. As with all edited works the chapters vary in length, style and detail. However, they are all well written, illustrated and referenced. The book provides an excellent source of up-to-date information and reference material on a wide range of food processing operations. Inevitably one can point to some omissions, e.g. developments in food dehydration and packaging. It should be of considerable use to student and staff academics and to those working in the food industry, in Research and Development and in other capacities.

J. G. Brennan