

with respect to their approval of these alternative sweeteners.

The book considers the manufacture of several categories of fruits products, such as jams, jellies, hydrocolloids, fruit beverages, and fruit as an ingredient. Sanitation and safety in the fruit processing plant are addressed.

Fruits have been part of the human diet since times immemorial. However, the discovery of the role of vitamins and minerals in the human body has triggered substantial changes in eating habits. Fruit consumption has become an everyday need. Appearance of chemical, and biological substances, and the application of new technological procedures, especially aseptic techniques, have resulted in revolutionary developments including effects on the palatability and safety of fruit products.

The final part of the book discusses individual fruits, covering important groups of fruits such as apples, apricots, citrus fruits, and berries. Included is an insight into the composition of the flavour of strawberries and the sugars involved in providing this and the rich colour they have. Also discussed is the impact on health and how the world market provides this indispensable part of the human diet. Covered in great detail is the citrus market in developed and developing countries and the expansion in world citrus production from 2003 onwards.

The *Handbook of fruits and fruit processing* is primarily aimed at the professional researcher but is also a practical textbook ideal for all individuals involved in the fruit industry.

John F. Kennedy*

Anna Stepien

Chembiotech Laboratories, Institute of Research & Development, University of Birmingham Research Park, Birmingham B15 2SQ, UK

Available online 28 December 2007

* Corresponding author.

doi:10.1016/j.carbpol.2007.12.014

Dietary Fibre-Components and Functions, Hannu Salovaara, Fred Gates, Maija Tenkanen, Wageningen Academic Publishers, The Netherlands, 2007 (344 pp., £59, ISBN: 90-8686-019-7)

Numerous papers in the scientific literature indicate the beneficial role of dietary fibre to health. Industry puts a constant effort to increase the dietary fibre content in food by invention of new process design and applications. However, intake is still generally below recommended levels. The relation between composition of dietary fibres and their physiological effects are of special interest for scientists

dealing with bioprocesses and food technology. The volume presents the conclusions presented at the “Dietary Fibre 2006 – Multifunctional Complex of Components” conference, and presents a broad scope concerning dietary fibres, from their formation in plants to their useable roles in human health.

Physiological properties of fibres depend on their origin and plant cell wall structure and appropriately fibre architecture is examined (Chap. 2). The molecular weight of the component macromolecules affects their acceptability and fermentation speed by the gut (*in vitro* assays revealed that partially hydrolysed guar gum is fermented easier than the native form, Chap. 12). However, many aspects of fibre properties remain to be determined. Clearly, dietary fibre and whole grains are thought to have an impact on human health. Together with other synergistic factors such as minerals and vitamins, they play a role as coronary heart disease and metabolic syndrome reducing agents. Moreover, they help maintain proper body weight preventing weight reduction (Chap. 1). It is claimed that β -D-glucans play a key role in lowering cholesterol levels in the blood. However, it is still not known what physical forms of dietary fiber are needed in a food to be active. The sub-division of dietary fibres into soluble and insoluble fractions and testing shows that they possess different physiological effects. Soluble fibres, having ‘viscous, gelling’ properties and high molecular weights are suggested to excite physiological response (Chap. 6). Wheat, oats and rye fibres, as food additives, alter profiles of products derived from non-digestible carbohydrates (Chap. 14).

Important aspects of fibres emerging include: prebiotic fibres, inulin and oligofructose increase calcium absorption and magnesium levels in post-menopausal women (Chap. 16). Moreover, acacia gum presents prebiotic effects, helps gut transition and improves lipid metabolism in a number of clinical trials. Thanks to their technological functionalities (encapsulating properties) and nutritional properties gums are a good source for healthy food product production (Chap. 17).

The book gives a spotlight on the whole journey of dietary fibre, starting from synthesis in the plant through food processing and digestive process to its role in human health. It covers a broad range of disciplines including plant science, chemistry, microbiology, nutritional science and medicine.

John F. Kennedy*

Pawel Grycko

Chembiotech Laboratories, Institute of Research & Development, University of Birmingham Research Park, Birmingham B15 2SQ, UK

Available online 28 December 2007

* Corresponding author.

doi:10.1016/j.carbpol.2007.12.018