

## PRIKAZI KNJIGA – BOOKS REVIEWS

### Maillard Reactions in Chemistry Food and Health

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*Special Publication No. 151*

The Royal Society of Chemistry,  
Thomas Graham House, The Science Park, Cambridge CB 4 4WF,

**Hardcover xviii + 400 pages**

**ISBN 085186 802 9 1994.**

The 5th International Symposium, held at the University of Minnesota in Minneapolis in September 1993, on the Maillard Reaction reviewed the new developments in nonenzymatic browning reactions.

The Conference papers were divided in three groups: Chemistry (13), Food (12) and Health (35). The proceedings are complete manuscripts of the oral presentations, including plenary lectures, while poster presentations, written in a form of abstracts, covered the following topics: Chemistry (22), Pharmacology/Biochemistry (16), Toxicology/Ageing (13).

The original research by world renowned experts presents aspects of the chemistry, kinetics, technology and toxicology of Maillard reaction. As the detailed mechanisms of amino-carbonyl reaction are still not clear, owing to the difficulties in the isolation and chemical characterization of the important unstable reaction intermediates, this book presents a valuable contribution in this field. The essence of the methods worked out by the authors is to combine different analytical approaches for extraction and for purification of known substances. Furthermore, the increased application of molecular modeling techniques, the use of isotropic labeling coupled with techniques such as nuclear magnetic resonance spectroscopy, gas chromatography/mass spectrometry, as well as novel studies that employed a  $^{13}\text{C}$  label and a matrix-assisted laser desorption-mass spectrometry, have greatly enhanced the ability to describe reaction pathways.

As a general remark, the book is unique not only for its content and the number of references but also suggestions for future research.

The only remark on the impressive number of abstracts (51) presented that can be made is regret at their not being written in the form of papers.

Kata Galić

### Food Microbiology

M. R. Adams and M. O. Moss

1<sup>st</sup> ed., The Royal Society of Chemistry,

Thomas Graham House, The Science Park, Cambridge CB 4 4WF,

**xiii + 398 pages**

**ISBN 0-85404-509-0 1995**

The book »*Food Microbiology*« written by Adams and Moss that appeared recently, presents a compilation of the modern knowledges related to microbiology and foods. The first edition is divided into 12 chapters: The scope of food microbiology, Microorganisms and food materials, Factors affecting the growth and survival of microorganisms in foods, The microbiology of food preservation, Microbiology of primary food commodities, Food microbiology and public health, Bacterial agents of foodborne illness, Non-bacterial agents of foodborne illness, Fermented and microbial foods, Methods for the microbiological examination of foods, Controlling the microbiological quality of foods and Further reading.

The aim of the authors was to present an account of modern food microbiology by including more recent events, and assumes some knowledge of basic microbiology. Written highly professionally and covering a diversity of topics,

supplied with the copious list of literature references, mostly review articles and monographs, the book will be of great help to all scientists and teachers dealing with microbiology and food sciences. Since, it is written in a simple and comprehensible way and can also be used by students of related subjects. Abundant practical information make it useful for the technologists faced with the problems of food storage and processing, including fermentations. Since food microbiology is in a close connection with the health sciences, chapters covering these problems are strongly recommended to doctors as well as to students of medicine.

In conclusion, there is no doubt that this book will be useful and interesting to a very wide reading audience.

F. Delaš

## Biochemistry of Milk Products

Edited by: A. T. Andrews  
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The Royal Society of Chemistry,  
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The book represents the proceedings of 15 papers presented at the Symposium organised by the Food Chemistry Group, held at Reading University. The papers document the latest advances in the field of dairy biochemistry (8 reviews and 7 scientific papers).

Two leading topics of the book represent current into the biochemistry of cheese, covering an application of starter microorganisms and their role in cheese ripening (especially proteolysis) and the production of new milk coagulants as alternatives to traditional rennet. The research was based on molecular biological techniques in order to develop microorganisms with new enzyme characteristics (peptidases, proteinases and to a lesser degree lipases) based on genetic manipulation. The aim of the research was to produce selected microorganisms capable of developing cheese ripening in a shorter time to give better quality cheeses with superior flavour and texture, without the formation of undesirable by-products such as bitter peptides. The possibility of phage-resistant starter culture production was also covered.

The second part of the book covers the research into functional properties of milk proteins (casein, especially whey protein fraction and their concentrates obtained by ultrafiltration). Production, isolation or modification of milk proteins as well as the effect of heat on chemical and biochemical changes of proteins were also documented. A number of modern techniques, such as gel-chromatography, gel-electrophoreses, high performance liquid chromatography, have been used for the research.

Generally, it can be emphasised that the book covers current research and can be recommended to dairy technologists, researchers dealing with biochemistry of dairy products. The book is also strongly recommended for the students working on their M.Sc. and Ph.D. theses as it contains a number of theoretical and practical data on 175 pages, as well as an enormous number of references for further reading.

Ljubica Tratnik