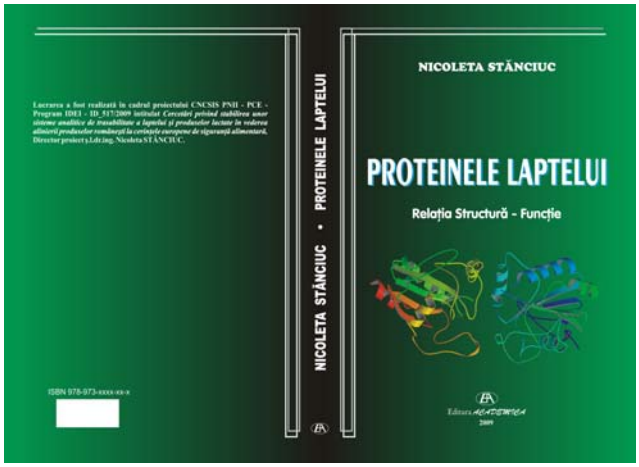

Book Review

Milk proteins.
Structure - Function relationship

Nicoleta Stănciuc is a lecturer at the Bioengineering in Food Industry Department, Faculty of Food Science and Engineering, Dunarea de jos University of Galati, and the author of the book entitled *Milk proteins: Structure – Function relationship*, published by Academica Publishing, Galaţi, 282 pg. ISBN 978-973-8937-57-4.

The natural function of milk proteins is to supply young mammals with the essential amino acids required for their development and with a number of biologically active proteins. On the other hand, the properties of many dairy products depend on the properties of milk proteins. The book *Milk proteins: Structure – Function relationship* presents the current state of knowledge on the content of proteins in milk, the chemical, functional, and nutritive properties of milk proteins, the chemical and biochemical modification of proteins in milk during heat treatment. It emphasizes the structure-function relationship as well as the effects of practical thermal conditions applied in food processing on the biochemical and chemical reactions between milk proteins.

The book provides an overview of the physical properties of proteins and how dynamic changes in conformation, structural changes, and protein-protein interactions are involved in the performance of particular functional properties such as gelation, emulsification, foaming properties and susceptibility to enzymatic hydrolysis.

This book covers in a scientific and practical manner such subjects as structure and functions of caseins, whey proteins, the effect of thermal treatment on the functional properties of milk proteins, the conformational and structural premises to enzymes proteolysis, and kinetics and denaturation mechanisms during heat treatment and also describes some thermal intrinsic indicators to distinguishing different time-temperature combination applied in milk and dairy industry.

The following seven chapters describe the structure of milk proteins and present detailed information on the effects of conditions applied in processing on the reactions in proteins and their impact on quality attributes of food products.

5. Structural and conformational premises of milk proteins to enzymatic hydrolysis Fundamentals of proteolysis Methods to quantify the extent of hydrolysis Enzymatic processing of proteins Susceptibility of β-lactoglobulin to enzymatic hydrolysis The influence of heat treatment on the susceptibility of β-lactoglobulin to enzymatic hydrolysis	6. Kinetics parameters and mechanisms of heat induced denaturation of milk proteins General aspects Mechanisms of thermal denaturation of whey proteins Kinetics of heat induced structural changes of β-lactoglobulin in enzymatic susceptibility
7. Intrinsic indicators for heat treatment of milk Introduction Safety criteria Intrinsic indicators for pasteurization Alkaline phosphatase Lactoperoxidase γ-Glutamil transferase	Whey proteins Intrinsic indicators for sterilization Maillard reaction Lactulose Volatile compounds Limitations of thermal intrinsic indicators European regulatory requirements

The *Milk proteins: Structure – Function relationship* book provides an accessible resource covering all aspects of milk protein biochemistry for scientists and students. It describes traditional and state-of-the-art techniques for elucidating protein function and structure. The *Milk proteins: Structure – Function relationship* is a comprehensive and reliable resource for teachers, students and researchers in the life sciences.

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