



Chemical deterioration and physical instability of food and beverages

Edited by Leif H. Skibsted, Jens Risbo
and Mogens L. Andersen

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Chemical deterioration and physical instability of food and beverages

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Food spoilage microorganisms

(ISBN 978-1-85573-966-6)

Action by microorganisms is a common means of food spoilage and ensuring that a product has a suitable shelf-life is a critical factor in food quality. With current trends towards less-severe processing techniques, reduced use of preservatives and higher consumption of perishable foods such as fresh fruit and vegetables, the deterioration of foods by microbial spoilage is an increasing problem for the food industry. Methods to detect, analyse and manage food spoilage are reviewed in the opening parts of this collection. Following chapters focus on important yeasts, moulds and bacteria, their classification, growth characteristics and detection and the implications of these factors for their control in food products.

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The shelf-life of a product is critical in determining both its quality and profitability. This important collection reviews the key factors in determining shelf-life and how it can be measured. Part I examines the factors affecting shelf-life and spoilage, including individual chapters on the major types of food spoilage, the role of moisture and temperature, spoilage yeasts, the Maillard reaction and the factors underlying lipid oxidation. Part II addresses the best ways of measuring the shelf-life of foods, with chapters on modelling food spoilage, measuring and modelling glass transition, detecting spoilage yeasts, measuring lipid oxidation, the design and validation of shelf-life tests and the use of accelerated shelf-life tests.

The stability and shelf-life of food

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