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Viscosity Measurement of Thickening Hydrocolloid Solutions
2.9 Characterization of Gels2.10 Viscosimeters and Rheometers; 2.11 Relationship between Rheology and Sensory; References; 3 Cellulose; 3.1 Introduction, History and Development; 3.1.1 Introduction; 3.1.2 Historical Origin; 3.1.3 Industrial Development from the Beginning to Today; 3.1.4 Current Data for Cellulose Processing; 3.2 Raw Materials and Biological Origin; 3.2.1 Occurrence; 3.2.2 Potential Sources for Natural Cellulosic Fibres; 3.2.3 Wood as Cellulose Supplier; 3.2.3.1 Tree Wood and Perennial Plants; 3.2.3.2 Annual Plants; 3.2.4 Bacterial Cellulose; 3.2.5 Biosynthesis
3.2.6 Biological Composition3.2.6.1 Cotton Fibres; 3.2.6.2 Wood Fibres; 3.2.7 Explanation for Industrial Derivatization; 3.3 Manufacture of Pulp; 3.3.1 Purification of Natural Cellulose Sources; 3.3.2 Cotton Linters; 3.3.3 Wood; 3.4 Chemical Composition and Structure; 3.4.1 Molecular Structure; 3.4.1.1 Basic Structure; 3.4.1.2 Differences between Cellulose and Starch; 3.4.1.3 Structural Anomalies; 3.4.1.4 Chain Length and Molecular Weight; 3.4.2 Secondary Structure; 3.4.2.1 Lattice Structure and Crystallization; 3.4.2.2 Hydrogen Bonding; 3.4.2.3 Chain Stiffness of the Cellulose Molecule
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3.11 Options for Derivatization of Cellulose

Sommario/riassunto

Authored by an expert with many years of experience as an application engineer at renowned cellulose processing companies in the food industry, this book presents all the conventional and latest knowledge available on cellulose and its derivatives. Throughout, the necessary details are elucidated from a theoretical and practical viewpoint, while retaining the focus on food applications. The book provides an essential source of informations including recommendations and instructions of a general nature to assist readers in the exploration of possible applications of cellulose and its derivative