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Technological Properties; 2.1.1 Basic Chemical/Physical Principles; 2.1.1.1 Chemical Composition and Molecular Structure of Collagen 2.1.1.2 The Conditioning Process and its Effects on the Amino Acid Composition of Gelatine 2.1.1.3 The Conditioning Process and its Effect on the Molecular weight Distribution of Gelatine; 2.1.2 Technologically Important Properties and Characteristics of Gelatine; 2.1.2.1 Gel Formation, Viscosity, and Texture; 2.1.2.2 Gel Strength/Bloom Value; 2.1.2.3 The Kinetics of Gel Formation; 2.1.2.4 The Rheology of a Gelatine Solution; 2.1.2.5 From Gelatine/Water to Complex Systems; 2.1.2.6 Surface Properties; 2.1.2.7 Amphoteric Behavior/Isoelectric Point; 2.1.2.8 Protective Colloid Function 2.1.2.9 Adhesion Properties 2.1.3 Basic Principles for Selecting a Suitable Type of Gelatine; 2.1.4 Chemically Modified Gelatines; 2.2 Manufacture of Gelatine: Theory and Practice; 2.2.1 The Raw Material "Ossein"; 2.2.1.1 Maceration; 2.2.1.2 Pressure Hydrolysis; 2.2.2 The Raw Material "Hide Split"; 2.2.3 The Raw Material Pigskin; 2.2.4 Conditioning; 2.2.4.1 Alkaline Pretreatment "Conditioning" for Type B Gelatine; 2.2.4.2 Acid Pretreatment for Type A Gelatine; 2.2.5 Traditional Extraction (Batch Process); 2.2.6 Continuous Extraction; 2.2.7 Production of Fish and Fowl Gelatine 2.2.8 Processing the Extracted Gelatine 2.2.8.1 Filtration and Clarification; 2.2.8.2 Deionization; 2.2.8.3 Concentration; 2.2.8.4 Final Sterilization; 2.2.8.5 Drying Process for Granulated Gelatine; 2.2.8.6 Standardization and Packaging of Granulated Gelatine; 2.2.9 Manufacture of Leaf Gelatine; 2.2.10 Instant Gelatine; 2.2.11 Gelatine Hydrolysate; 2.2.12 Environmental Aspects of Gelatine Manufacture; 2.3 Quality Control and Certified Product Safety; 2.3.1 The Quality Assurance Process; 2.3.1.1 Raw Materials; 2.3.1.2 Production; 2.3.2 Standard Quality Tests on the Final Product 2.3.2.1 Gel Strength (Bloom Value)

## Sommario/riassunto

A practical summary of the technical and technological as well as nutritional and physiological properties attained through the targeted selection of raw materials and the corresponding production processes. The two authors come from the world's leading gelatine company and adopt here an international approach, enabling their knowledge to be transferred between the various application areas on a global scale. Following an introduction to and the history of gelatine, the text surveys the global industry and current trends, before going on to analyze the basic physical, chemical and technolog