Physical Properties of Plant and Animal Materials: pt. 1. Structure, physical characteristics, and rheological properties. 1st prelim. ed, | 1968 | Department of Agricultural Engineering, Pennsylvania State University, 1968 | Nuri N. Mohsenin

Since the physical characteristics of plant and animal food materials affect how they are to be processed, handled, stored, and consumed, knowledge of these characteristics are important to engineers, processors and food scientists, plant and animal breeders, and other scientists. The following provides a list of various properties that will be discussed either in this or following chapters: Physical Characteristics 1. Shape 5. Surface area 9. Appearance 2. Size 6. Density 10. Drag coefficient 3. Weight 7. Porosity 11. Center of gravity 4 Rheological, structural and mechanical properties of the system and its formability can be predicted if material moisture, porous substance properties (fine particle fraction with high specific surface) and properties of structure- forming framework are known. The amount of liquid component in the system predetermines strength and size of the formed crystallization structure; however, solid phase properties in the newly-formed disperse system do not influence the dependence between solid phase volume concentration and the material moisture content at W?WLCM, where W is the moisture of material... Physical properties of materials. 1. Volumetric and Melting Properties 2. Thermal Properties 3. Mass Diffusion. Manufacturing materials --- IE251. lect-7, Slide 2. Physical Properties Defined.Â â€“ In microelectronics, electrical properties of silicon and how these properties can be altered by chemical and physical processes is the basis of semiconductor manufacturing. Manufacturing materials --- IE251. lect-7, Slide 4.Â â€¢ Plastic molding- melting characteristics of polymers are important in nearly all polymer shaping processes. â€¢ Sintering of powdered metals -sintering does not melt the material, but temperatures must approach the melting point in order to achieve the required bonding of powders. Manufacturing materials --- IE251. v. 1, pt. 1. Structure, physical characteristics, and rheological properties. 2d prelim. ed. v. 1, pt. 2. Texture of foods, mechanical damage, aero- and hydrodynamic characteristics, and frictional properties. 1st prelim. ed. Edition Notes. Includes bibliographies. Classifications. Dewey Decimal Class. 664/.07. Library of Congress. Rheological properties of food materials are important as they influence food texture, processing properties, and stability. Rotational rheometry has been widely used for measuring rheological properties. However, the measurements obtained using different geometries and rheometers are generally not compared for precision and accuracy, so it is difficult to compare data across different studies.Â The addition of dietary fibre has become a trend in the food sector and, as it changes some physical properties like flow parameters, knowing these changes is essential for food process design. In this work, the influence of both the temperature (5-60 Â°C) and the fibre content (0â€“16%, w/w) on the flow behaviour of apple juice were studied.