

Book Reviews

Advances in Food Research, Vol. 28. Edited by C. O. Chichester, E. M. Mrak and G. F. Stewart, Academic Press, New York, 1982. Price: £32.80.

Proteins receive considerable attention in the latest volume of *Advances in Food Research*, three out of the five chapters being concerned with this topic. Chemical, biochemical, functional and nutritional properties of bean proteins and collagen are discussed concisely. Different forms of collagen are described and their characteristics in food systems reviewed in detail. Protein or muscle is also the focus of attention in the chapter on porcine stress symptoms. The physiological activities resulting in the classical symptoms of porcine stress syndromes—muscle rigidity, hyperthermia and lactacidosis—are outlined, as is the etiology, mode of inheritance, detection and treatment of animals susceptible to stress.

The remaining two chapters deal with unrelated but equally interesting topics. Phytates are components of cereals, legumes and oil seeds and are capable of forming complexes with multivalent cations and proteins resulting in reduced mineral bioavailability. The development of processing techniques for the removal of phytic acid is therefore of particular interest. The final chapter in this volume is an evaluation of xylitol in food technology and complements earlier reviews in this series which dealt with metabolic, nutritional and dental aspects of this sweetener.

All five chapters are very readable and provide extensive lists of references. Consequently, this book should be of value both to workers in

the different fields covered and to the general reader. It is a welcomed addition to an excellent series.

K. L. Jones

Food Texture and Viscosity: Concept and Measurement. By M. C. Bourne, Academic Press, New York, 1982. Price: £23.80.

This work is one of a series of monographs on food science and technology. It represents an up-to-date, detailed review of work on the measurement of food texture and viscosity by sensory and instrumental methods. It comprises seven chapters as follows:

Chapter 1 Texture, Viscosity and Food: This sets the scene, so to speak, by discussing the importance of texture as a food quality attribute, presenting definitions for the term texture and related terms and outlining the early history of texture measurement.

Chapter 2 Body-Texture Interactions: In this short but useful chapter the author discusses the process of mastication, the rate of application of force and the magnitude of the forces developed in the mouth.

Chapter 3 Principles of Objective Texture Measurement: In this chapter the author outlines the principles involved in instrumental texture measurement, including the measurement of force, distance, area, volume, work energy and power. Multiple measuring instruments are also discussed.

Chapter 4 Practice of Objective Texture Measurement: Here the author describes the design and operation of texture measuring instruments, under the same headings as in the previous chapter. The applications and limitations of each instrument are outlined.

Chapter 5 Viscosity and Consistency: The various patterns of flow behaviour of fluid foods and methods of measuring such behaviour are discussed in this chapter.

Chapter 6 Sensory Methods of Texture and Viscosity Measurement: Sensory texture profiling is the main topic in this chapter and various aspects are discussed, including: selection and training of panel members, establishing scales, developing score sheets and developing comparative texture profile analysis ballots for specific products. Correlations between subjective and objective measurements are also discussed.