

Near Infrared Spectroscopy in Food Analysis. By B. G. Osborne and T. Fearn. Longman Scientific & Technical, Harlow. 1987. vii + 200 pp., ISBN 0-582-49489-3. Price: £29.95.

The analysis of food is a scientific discipline in its own right, which employs a wide variety of instrumental techniques. Until fairly recently, infrared spectroscopy was not considered to be of any great use because of its severe limitations in quantitative analysis. However, the advent of near infrared spectroscopy has given the food scientist a means of determining several components simultaneously in solid samples such as cereal grains, milk powders, bread, cheese etc or in liquid samples such as beer, milk or liquid formulations with very little sample preparation. The technique also has the advantage of simplicity, speed and accuracy.

This text is the first complete guide to near infrared spectroscopy in food analysis. The subject matter is divided into nine chapters. The chapters on the theory of NIR (Chapter 2) and the physics of interaction of infrared radiation with matter (Chapter 3) give a clear and extensive background of the method. The practising food analyst will be particularly interested in the chapters concerning instrumentation (Chapter 4), applications (Chapter 7), practical problems in the application of the method (Chapter 8) and its current status and future prospects (Chapter 9). Instrument calibration is of major importance in NIR and the chapters concerning data handling and calibration (Chapters 5 and 6) give suitable examples to explain the methods used and problems encountered. A very useful section on the standard methods of food analysis employing near infrared spectroscopy is appended to the text.

This book, which contains many tables and diagrams to amplify the text and an extensive reference section at the end of each chapter, is a comprehensive and invaluable guide for anyone — experienced food analyst or novice — involved in quality control or research and development in the food industry.

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