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Book reviews

C.M. Weaver, J.R. Daniel, The Food Chemistry Laboratory: A Manual for Experimental Foods, Dietetics, and Food Scientists, 2nd edition, CRC Press, Boca Raton, USA, 2003 (137 pp., £49.95, ISBN 0-8493-1293-0).

Laboratory exercises are designed to illustrate the chemical and physical principles discussed in lectures. For students of food chemistry and related fields, it is important that laboratory experience provides detailed knowledge of the experimental methodologies and associated scientific equipment used in food research, and that students become familiar with the fundamentals of designing, executing, and reporting the results of a research project.

This informative manual provides up-to-date, well-tested food chemistry laboratory experiments, along with uses and procedures for major equipment used in such research. Information is also provided on the proper way to maintain a laboratory notebook, how to record original data, and how to analyse such data. The opening seven short sections provide concise information on accessing all forms of food chemistry literature (hard copy and electronic formats), evaluation of foods (in terms of colour, texture and flavour), objective and sensory methods, laboratory notebooks, writing research papers, preparing research proposals and oral and written presentations. The next 12 sections detail well-tested food chemistry laboratory sessions on sensory and objective evaluation, physical properties, matter dispersion, lipids, amino acids, proteins and browning, gelatin, carbohydrates, flour mixtures, pigments, pectin and food gums.

Each of these sections is composed of a selection of experiments. For example, the carbohydrates section includes experiments on reducing sugars (using Fehling's solution), starch microscopy, starch gels, and starch paste viscosity curves. Other experiments with particular reference to carbohydrates include pectin gels (in the pectin section), and the dispersibility and thermogelation of cellulose gums, and alginate gums (both in the food gums section). The approximate time needed for completion of such experiments, and discussion of possible complications and pitfalls is also provided.

The final chapter presents an equipment guide, which describes the principles, applications and procedures relating to more than 20 different pieces of scientific equipment routinely utilised in food research (e.g. viscometer, colorimeter, hydrometer, texture analyser, etc). This informative manual is a clear, concise and up-to-date account of experimental techniques and equipment for food research, and is a useful compendium for food science students, teachers and researchers.

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I. Russel (Ed.), Whisky: Technology, Production and Marketing, Academic Press, Amsterdam, The Netherlands, 2003 (xvi + 366 pp., £79.85, ISBN 0-12-669202-5).

Whisky is the most consumed alcohol among the beverages in world—and of course it is derived from a carbohydrate polymer source. Scottish whiskies are the most reputed whiskies in Europe, since their fabrication is a very old tradition in Scotland. The first record of commercial transaction of Scottish whisky dates from 1494 between a Benedictine monastery in Fife and the court of King James IV in Edinburgh. As in the case of other beverage products, the evolution of whisky processing has changed in accordance with historical events and economic considerations. This has resulted in the use of several production processes in Scotland today. Literature discussing whisky processing with respect to the 'art of beverage' production is numerous, however few reference textbooks consider the science and technology behind whisky manufacturing. *Whisky: Technology, Production and Marketing* therefore presents detailed information on both the 'art of beverage' and the scientific aspects behind Scottish whisky production.