

recommended for scientists providing chromatographic analysis.

J.F. Kennedy\*

L. Quinton

*Birmingham Carbohydrate and Protein Technology Group,  
Chembiochem Laboratories,  
The University of Birmingham Research Park,  
Birmingham B15 2SQ, UK  
E-mail address: jfkennedy@chemistry.bham.ac.uk*

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.

PII: S0144-8617(00)00158-2

---

\* Corresponding author.

### Quality in the Food Analysis Laboratory

R. Wood, H. Wallin, A. Nilsson; The Royal Society of Chemistry, London, 1998, 309 pages, ISBN 0-854-04566-X, £52.50

Quality is a requirement for both customers and contractors; whenever a transaction occurs, be it goods or information, it must be 'fit for the purpose'. Quality is the assurance of this fitness. Historically quality has been rather empirical, but with the advent of mass manufacture and consumption, quality has become a science. This has occurred in part due to product standardisation and increasingly in the food industry, legislation.

The general principles of quality in the food analysis laboratory are considered along with a variety of detailed models of quality systems. The choice of model and implementation lead on to the specific aspects of laboratory practice and validation. The rationale behind validation is described with aspects such as recovery, correction and measurement reliability being considered. Procedures for implementing internal quality control and proficiency testing are outlined, which allows the laboratory to achieve results with respect to a statutory or contractual limit. Specific aspects of laboratory practice and procedures are discussed with the aim of accreditation in mind.

A constant theme throughout the book is the application of statistics to quality, many definitions and statistical formulae are included: precision and accuracy; analysis of collaborative trial data; measurement of uncertainty and repeatability.

The book is clearly written and well cross-referenced. *Quality in the Food Analysis Laboratory* is an essential acquisition for those employed directly within the industry or those allied to the food industry. It would also be a valuable reference work for those associated with quality control or the statistical analysis of quality control in any

capacity, as the concepts and implementation of quality are universal.

J.F. Kennedy\*

L.A. Quinton

*Birmingham Carbohydrate & Protein Technology Group,  
Chembiochem Laboratories,  
The University of Birmingham Research Park,  
Birmingham B15 2SQ, UK  
E-mail address: jfkennedy@chemistry.bham.ac.uk*

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.

PII: S0144-8617(00)00161-2

---

\* Corresponding author. Tel.: +44-121-414-7029; fax: +44-121-414-7030.

### Comprehensive Cellulose Chemistry

Fundamentals and Analytical Methods, Vol. 1; Functionalization of Cellulose, Vol. 2; D. Klemm, B. Philipp, T. Heinze, U. Heinze, W. Wagenknecht (Eds.); Wiley-VCH, Chichester, 1998, Vol. 1: xxii + 260 pages, ISBN 3-527-29413-9, £170; Vol. 2: xvi + 389 pages, ISBN 3-527-29489-9, £170

Cellulose, a linear 1,4- $\beta$ -glucan, is the most abundant polymer found in nature. Its use as a chemical raw material started over 150 years ago, with the discovery of the first cellulose derivatives. *Comprehensive Cellulose Chemistry*, Vol. 1: Fundamentals and Analytical Methods, and Vol. 2: Functionalization of Cellulose, covers all aspects of modern cellulose chemistry in an illustrative way. Beginning with the structure and properties of cellulose, and continuing with the mechanisms and kinetics of derivatization reactions, also elucidating and describing the supra-molecular architecture.

These volumes are centred on the routes and mechanisms of cellulose functionalization, and also cover inter-relationships between heterogeneous cellulose reactions and the supra-molecular structure of cellulose. Vol. 1 covers the more general aspects of cellulose relevant to chemical reactions. Describing its properties and structure in relation to: reactivity; the processes of swelling and dissolution with their consequences to chemical reactions; and the pathways of cellulose degradation accompanying chemical transformations. Special emphasis is placed on areas of physical and colloidal chemistry. A detailed presentation of cellulose analytics for characterization of the organic polymer and its derivatives at various structural levels are included. Vol. 2 covers the various classes of cellulose derivatives. Emphasis is placed on reaction mechanisms and the distribution of functional groups with associated industrial