

Book review

Q. Fan (Ed.), Chemical Testing of Textiles, CRC Press, Boca Raton, FL, USA, 2005 (x+325 pp., £100.00, ISBN 0-8493-3483-7)

The chemical testing of textiles fibres has continued to receive special attention from producers, manufacturers, governmental agencies, domestic and industrial consumers. In most cases, the chemical analysis is done with a test method regulated and updated by a professional organisation. Some test methods may be adopted by a few organisations. It should, however, be noted that a particular chemical property of materials can be tested in a variety of different ways.

Chemical testing of textiles is an overview of chemical testing in textiles which provides extensive coverage of the chemical analyses used for a broad range of textiles and introduces both fundamental chemical concepts and rudimentary procedures. Textiles are not necessarily synthetic polymers but also natural materials including many carbohydrate polymers centred around celluloses. There is a consideration of testing of fibres provides another aspect of carbohydrate polymers.

The first chapter is devoted to fibre and yarn identification, introducing a selection of chemical tests that are useful in a textile laboratory and documents some of the more common chemical methods of analysing single textiles fibres and yarns. It is an overview of modern

instrumental/analytical tools such as electron microscopy, SEM, transmission electron microscopy, TEM and Fourier transform infrared spectroscopy, and FTIR. Subsequent chapters report on chemicals analysis of feather and down, leather, fabric finishes and performance-related tests, textile coatings, membranes and damage to textiles; analysis of chemical used in textiles wet processes, fibre finishing, water and wastewater analysis. The book concludes with a chapter devoted to chemical analysis and focuses on the major techniques that are used to analyse colorants associated with the textile coloration industries.

Chemical testing of textiles is a reference for academic and industrial chemists, lecturers and students of textile chemistry and a guide for textile plant managers, process engineers, technologists, qualified practitioners, textile research and testing institutes, quality inspectors, colourists and textile designers.

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