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Quantitative Paper and Thin-Layer Chromatography, edited by E. J. SHELLARD, Academic Press, London and New York, 1968, 140 pp., price £ 2.2.6.

This book contains the formal contributions made by invited speakers at a recent Symposium, the object of which was to discuss problems associated with quantitative paper and thin-layer chromatography. Unfortunately, the book does not contain the general discussion arising from the formal presentations.

The first four, and the eighth, chapters (J. W. FAIRBAIRN, G. FRANGLÉN, W. E. COURT, E. J. SHELLARD and C. A. JOHNSON) discuss the factors involved in producing a spot, the amount of material in which can be accurately and precisely measured, and which can be related back to the concentration in the original sample. Densitometry, visual assessment and elution from the stationary phase followed by spectroscopy are the methods of quantitation described in these chapters. Original data are included to support the authors' conclusions, one of the more important being that a major source of error lies in the difficulty of applying known amounts of material to the stationary phase.

A chapter on the application of spectroscopy to thin-layer chromatography (G. W. GOODMAN) tends to concentrate on the solution to one or two specific problems (albeit in an original manner) by I.R. spectroscopy, rather than give a general account of the difficulties encountered in obtaining meaningful spectra on microgram quantities of components initially adsorbed on active materials. The remaining chapters deal with some of the more specialised (and expensive) instrumentation that is currently being used for the evaluation of chromatograms. These include fluorimetry (D. E. JÄNCHEN), direct spectrophotometry (H. JORK) and three methods of radioactive scanning (B. A. WOOD, A. E. LOWE, and B. R. PULLAN).

As might be expected from a book of this type, there is some variation in the quality of the chapters. Typographical errors are restricted to two or three contributions, whilst the understanding of bidimensional radiochromatogram scanning with Geiger-Müller counters, punched-tape and a computer would have been facilitated by the inclusion of a few simple diagrams.

It is clear that much work needs to be done before the full potential of quantitative paper and thin-layer chromatography is fully realised. In the meantime, those that contemplate using such techniques will benefit from reading this book.

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