

Definitive IUPAC Recommendations

The following definitive recommendations on nomenclature, terminology, and symbolism have been published since January 1993;

1. 'Quantities, Units and Symbols in Physical Chemistry'. Blackwell Scientific Publications, Oxford, 1993.
2. Nomenclature for chromatography. Pure Appl. Chem. (1993) 65: 819
3. Nomenclature, symbols and definitions in electrochemical engineering. Pure Appl. Chem. (1993) 65: 1009
4. Revised nomenclature for radicals, ions, radical ions and related species. Pure Appl. Chem. (1993) 65: 1357
5. Nomenclature for regular double-strand (ladder and spiro) organic polymers. Pure Appl. Chem. (1993) 65: 1561
6. Glossary for chemists of terms used in toxicology. Pure Appl. Chem. (1993) 65: 2003
7. Nomenclature of kinetic methods of analysis. Pure Appl. Chem. (1993) 65: 2291
8. Nomenclature for liquid–liquid distribution (solvent extraction). Pure Appl. Chem. (1993) 65: 2373
9. Nomenclature for supercritical fluid chromatography and extraction. Pure Appl. Chem. (1993) 65: 2397
10. Nomenclature and terminology for analytical pyrolysis. Pure Appl. Chem. (1993) 65: 2405
11. Kinetics of composite reactions in closed and open flow systems. Pure Appl. Chem. (1993) 65: 2641

Comments on these recommendations would be welcomed, addressed to the originating IUPAC Commission (for addresses see the appropriate issue of Pure Appl. Chem.), with copies to Dr A. D. McNaught, Secretary, Royal Society of Chemistry Nomenclature Committee, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 4WF, UK.

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Book Review

Pharmaceutical Technology.
Tableting Technology Volume 2 (Compression)
(Ellis Horwood Series in Pharmaceutical Technology)
Edited by James I. Wells and Michael H. Rubinstein
Published 1993 Ellis Horwood Limited, Chichester
ix + 216 pages
ISBN 0 13 662958 X £55·00

Tableting is an area that still exercises the mind of pharmaceutical scientists despite the fact that the process has been with us for a long time. As a member of what appears to be a dwindling band of "powder pressers", any book on compression is a welcome arrival.

Tableting Technology is a collection of papers selected from presentations in tableting made at four meetings of the Pharmaceutical Technology Conference from 1989 to 1992. In this lies both its strength and its weakness. Although the papers chosen cover a wide range of topics related to tableting, ten out of the eighteen contributions focus on double compression and lubrication.

The first four chapters illustrate the problem with this type of collection. The subject is roller compaction and the contributions are all from the same research group. Hence there is a certain amount of repetition and at times ambiguity. For example, the relationship expressed by hardness of tablets divided by the maximum upper punch force is termed yield in one paper and cohesion index in another. Although it is not the intention of collections such as this, if the authors could have been persuaded to combine their presentations into two chapters, a more coherent contribution to the subject would have resulted. None the less, this is a welcome investigation into an area which is used extensively in pharmacy but has not been subjected to the detailed analysis that has been afforded to wet granulation.

The papers on lubrication are of interest in that one covers an approach to evaluate efficacy in tableting, two are concerned with that perennial bane of formulators, magnesium stearate, one looks at improving water soluble lubricants, and the final paper examines the influence of machine variables on friction and lubrication. There is much of value in this section.

Of the other contributions, some are specific to particular systems whereas others are of more general application. The Editors have ensured a consistency of style which is pleasing. The diagrams are large and well produced, although this occasionally entails placing them at the end of the text rather than within it which detracts from an otherwise well produced book.

This is not a general text on tableting but workers in the area, both in industry and academia, will find much of interest.

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Book Review

Therapeutic Applications of Prostaglandins
Edited by John Vane and John O'Grady
Published 1993 Edward Arnold, London
x+277 pages
ISBN 0 340 56022 3 £65.00

The editors have conscripted an impressive panel of distinguished contributors to this volume so that it must rank as the definitive text on therapeutic uses of prostaglandins. To put the clinical perspective in context, the first five chapters review the history, biochemical and pharmacological actions of prostaglandins, dietary manipulation of their synthesis and prostaglandin analogues. These chapters are all of a very high standard and are informative. The chapter on prostanoid receptors will be of particular value to many in collating information not readily available elsewhere.

Since 1971, when Vane and colleagues showed that aspirin inhibited prostaglandin synthesis, there has been an almost explosive interest in these varied and ubiquitous products of fatty acid metabolism. This has not only provided a basis for understanding the actions and side-effects of aspirin and other non-steroidal anti-inflammatory agents, but has been instrumental in extending their therapeutic applications. In particular, aspirin is now widely used in the prophylaxis of thrombosis.

In recent years, prostaglandins have themselves been extensively studied as potential therapeutic agents, a process facilitated by the synthesis of more stable analogues such as iloprost, cicaprost and misoprostol. In this book, a chapter is devoted to each established use or potential use of prostanoids.

Established uses of prostanoids include the termination of pregnancy and the induction of labour. Termination of pregnancy in the second trimester is best effected by treatment with antiprogestin followed by intravaginal administration of a prostaglandin E analogue. Because of their crucial role in the control of parturition, prostaglandins are also a logical choice for the induction of labour, again the intravaginal route being the most successful in minimizing side-effects. Also considered are a number of heart and lung diseases of the new-born and small infants which have been evaluated for prostaglandin therapy. The use of prostaglandins of the E series to re-open or prevent closure of the ductus arteriosus has had a tremendous impact on the management of some congenital heart and circulatory defects. They buy time, enabling the child with duct-dependent pulmonary or systemic circulation to be stabilized, assessed and sent for operation in good condition. The value of prostanoids in pulmonary vascular disease is less clear-cut, their relative safety being balanced by the likelihood of inducing hypotension and deterioration of gaseous exchange. Another chapter deals with the use of prostanoids to prevent peptic ulcer in patients undertaking therapy with non-steroidal anti-inflammatory drugs. Here the prostanoids tend to be eclipsed by histamine H_2-receptor antagonists and inhibitors of H^+K^+ ATPase, both classes of drug being more potent inhibitors of acid secretion and generally producing fewer side-effects. However, part of the beneficial effect of prostanoids in peptic ulcer appears to be due to a cytoprotective action. Evidence for such an effect is further reviewed in a chapter embracing liver disease and organ transplantation.

Many prostanoids are potent vasodilators and an array of disorders which might benefit from such an action are considered in individual chapters. Ischaemic heart disease has been one area where prostanoids had been thought to have great therapeutic potential, but after numerous clinical trials their efficacy in this condition remains unproven. Some of the early trials in cardiovascular disease used a continuous infusion of prostanoids, but evidence of decreasing responsiveness, presumably due to receptor down-regulation, has led more commonly to the use of daily infusions lasting 2–8 h. Other chapters review the effects of prostanoids on peripheral ischaemic vascular disease, cerebral ischaemia, stroke and erectile dysfunction. Clearly, prostanoids will not become established therapeutic agents in all of the conditions discussed. Given their widespread effects on biological systems, prostanoids tend to produce a high incidence of side-effects, a problem which might be partially ameliorated by the introduction of a second generation of more selective prostanoids, and by controlled and targetted drug delivery.

This book is a very stimulating read and with useful running titles it is exceptionally easy to delve into and retrieve information. One cannot fail to be impressed by the resourcefulness of research workers in this field. For them at least, this book will be indispensable.

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