

BOOK REVIEWS

POWDERED VEGETABLE DRUGS. By Betty P. Jackson and Derek W. Snowdon. Pp. viii + 203 (including Index). J. & A. Churchill Ltd., London, 1968. 65s.

Sixty-four years separate a standard reference work from its obvious heir but the new Jackson and Snowdon is a worthy successor to the old Greenish and Collin; it will be welcomed by all concerned with the analytical microscopy of powdered drugs of vegetable origin.

If the need to authenticate such materials is somewhat less frequent than formerly, it is nonetheless necessary for some analysts to be able to determine the nature and quality of the still-large number of botanical drugs in current use. Indeed, in view of the new Medicines Legislation, it is desirable to exercise quality control not only on products containing some of the ninety-three crude drugs described but also on the range of herbal remedies used in less conventional medicine.

The book is an atlas in which diagnostic microscopical characters of each powdered drug are described on the page facing annotated drawings of these characters. The itemized descriptions are sufficiently full to enable those already familiar with plant histology to appreciate the detail in the drawings which, with a few exceptions, are of such meticulous accuracy that they will enable even the less expert to recognize what is there to be seen under the microscope. The arrangement is according to morphological grouping and information includes biological sources and drug synonyms, which also appear in the comprehensive index. Useful footnotes are given on comparative data for closely similar drugs and only in such instances are sizes recorded.

Any criticism of such painstaking work must be of a minor nature but the representation of cuticular striations on Belladonna Leaf is an example of the occasional lapse; the absence of sieve areas on the side walls of sieve tubes or of simple round pits in the phloem parenchyma of Cascara point the occasional omission; and the inference on relative prominence of tuberosities on starch granules of Potato and Maranta suggest the occasional query. Although most drawings are of features observed in cleared preparations and the authors state that certain cell contents were intentionally omitted, there are some drugs for which resultant illustration seems not quite complete. The aleurone grains (and often more calcium oxalate than shown) in Umbelliferous fruits and the fixed oil in Linseed are as necessary for completeness as is the protein illustrated in Capsicum.

Spices, unless also used in medicine, are deliberately excluded but perhaps the authors might reconsider this decision for future editions and give thought to further expanding the scope (and title) to include culinary herbs. Materials such as powdered grass or lucerne, as permitted diluents of Prepared Digitalis, and a small section on microscopy applied to unorganized drugs are further suggestions for expanding fractionally an already excellent book. It will be invaluable for the practising analyst and a constant source of information, perhaps inspiration, to both teachers and students of pharmacognosy. It is well that the book is of good paper, strongly bound, for copies will be much used.

This is a book which should meet the success it so clearly merits.

FRANK FISH

PRACTICAL PHARMACEUTICAL CHEMISTRY. Second Edition, Part I. By A. H. Beckett and J. B. Stenlake. Pp. x + 316 (including index). The Athlone Press, London, 1968. 55s.

During the six years which have elapsed since the first edition of this book, it has become established in most schools of pharmacy in this country as the standard work on pharmaceutical analysis. This period has seen a continuation of the trend, already well underway in the early 1960's, towards instrumental methods in both the quantitative and qualitative analysis of pharmaceutical chemicals. It is perhaps not surprising, therefore, to find that this second edition has been divided into two parts. Part One, reviewed here, deals with general methods of volumetric and gravimetric analysis, while Part Two will deal with physical instrumental methods. This is a sensible move and well suited to the structure of most pharmacy degree courses. The only disadvantage is the inevitable price increase of the complete work; these days, this will not be a new experience to the majority of readers!

In twelve chapters and 291 pages, the book covers essentially the same ground as was covered in eleven chapters and 238 pages of the first edition. The chapter headings remain the same and the general approach and much of the subject matter remains unaltered.

The first chapter on chemical purity and control has been considerably expanded and the contents organized in a more rational manner; this gives the reader a better appreciation of the need for the various tests included in a pharmacopoeial monograph. The sources of impurity in pharmaceutical chemicals are particularly well covered and a valuable addition is the section dealing with the standardization of pharmaceutical chemicals and formulated products. Chapter three on the technique of quantitative analysis deals more fully than its predecessor with the balance and includes a valuable table of comparative data on three types of modern balance. No mention is made of the use of glass fibre mats in the preparation of Gooch crucibles. Although not applicable where the contents have to be heated above about 200°C, these are so eminently superior to the use of asbestos for most assays, being both cheap and reliable and giving consistently good results in the hands of relatively inexperienced students. Filter papers are briefly mentioned in appropriate sections, but a valuable addition would be a comprehensive table of the characteristics of the various types of filter paper available and their special uses.

The new chapter on ion exchange and gel filtration gives a descriptive account of the two processes and the various types of material available on the market. Some practical exercises in ion exchange are given, but there are no exercises for gel filtration, although a brief mention is made of some practical applications.

The remaining chapters on the theoretical basis of quantitative analysis, acidimetry and alkalimetry, non-aqueous titrations, oxidation-reduction titrations, argentimetric titrations, complexometric analysis, gravimetric and alkaloidal type analysis and miscellaneous methods remain substantially as in the earlier edition.

Textual mistakes are remarkably few; the only important one noted by the reviewer being on page 87 where a definition for constant weight is too high by a factor of ten.

This book is a must for every new pharmacy student; existing owners of a first edition and potential purchasers of second-hand copies may not feel that the changes are sufficiently great to warrant the purchase of a new copy.

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