for a dusting powder containing only zinc oxide, starch and talc. For the same reason provision is made in four of the Standard Dressings for replacing boric acid by a less suspect antiseptic. Additions to the Surgical Dressings Section include monographs on lint and gauze made from rayon and on penicillin gauze dressing.

In addition to the inclusion of monographs on new substances and preparations, the Supplement brings the B.P.C. 1954 up to date by giving details of all the alterations and amendments made since the 1954 book was issued. Most have been published previously but it is convenient to have them bound in one volume with the new material.

The Supplement will be welcomed by those whose daily work could not be done without the Codex, and the Editor is to be congratulated on having welded a compilation, to which many different hands and minds have contributed, into a unified and consistent whole.

BOOK REVIEWS

MATHEMATICS AND STATISTICS FOR USE IN PHARMACY, BIOLOGY AND CHEMISTRY. By L. Saunders and R. Fleming. Pp. x + 257 (including Index). The Pharmaceutical Press, 17, Bloomsbury Square, London, W.C.1. 1957. 27s. 6d.

This is a very useful book for anyone working in a biological field who wants to improve his mathematical knowledge. Its fifteen chapters proceed from arithmetic, algebra, and graphs through differential calculus, trigonometry and probability to statistical analysis and applications. Additional mathematical theorems and techniques and statistical tables are provided in a number of appendices. To cover all this ground in so few pages is a remarkable achievement, and the authors deserve much credit for their concise and readable English. Since the material is so highly compressed, there are few explanatory passages to ease the reader's difficulties when the mathematical logic is not self-evident. On the other hand, worked examples are clearly set out and give guidance in practical applications, particularly of the statistical material. For the honours students for whom it is intended, this book is a valuable supplement to other teaching; it is also likely to be very useful to research workers for reference, particularly because it contains so much material in such a small volume. The production and the appearance are excellent.

MILES WEATHERALL.

GLOSSARY OF INDIAN MEDICINAL PLANTS. By R. N. Chopra, S. L. Nayar and I. C. Chopra. Pp. xx + 330. Council of Scientific and Industrial Research, India, 1956.

An all-India survey of medicinal and poisonous plants was begun more than thirty years ago to investigate the extensive native materia medica. Attempts have been made to establish the true botanical identity of each of these drugs and to set in order the lists of vernacular names. A herbarium, the first of its kind in India, of some 1,600 species of medicinal plants has been collected throughout the sub-continent and a museum of vegetable drugs is being organised.

The Glossary under review is the work of this survey. It is a list of some 2,000 native Indian medicinal plants and the information concerning them, ". . . based on a critical study of the literature . . ."; it also includes some of

the imported drugs sold in the Indian bazaars. The plants are arranged in alphabetical order of genera (the plant family being given in parenthesis). Many of the common alternative botanical names are quoted, with cross references to the accepted names: important vernacular names commonly used in different regions of India are also recorded and indexed. The various parts of the plant which comprise the drugs are then named together with a condensed list of medicinal uses. The active principles of the drugs are briefly named, together with references to published work thereon up to 1953, and an index of chemical constituents is provided. Finally, the distribution of the plants in different regions of India is stated but no descriptions of the drugs nor of the plants are given.

The volume is well produced, it is a valuable addition to our references on vegetable drugs and its compilation is the result of a very large amount of useful work. By its very nature, however, it must leave more questions unsolved than answered; thus the reader has no means of identifying an unknown drug or of confirming the characters of a named specimen by means of this volume, nor of tracing such a description in the literature; for the references quoted are almost entirely on chemical composition. These are by no means exhaustive and are (one imagines, purposely) uncritical: thus three separate sets of references are quoted to show that the principal alkaloid of *Datura metel* is atropine, is hyoscyamine, is scopolamine, respectively. Space could have been saved by a more critical appraisal of such contradictory information and might well have been used in giving references to publications on drug morphology and anatomy where known (and much does exist in widely scattered publications). An indication of toxicity or dosage might also have been given, for some relatively harmless materials are recorded along with other highly toxic drugs, e.g., *Illicium verum* and *I. religiosum* are both described as "stomach, carmin." These criticisms should not belittle the valuable nature of this book, and it is to be hoped that the detailed investigation of the rich field of Indian medicinal plants will be continued actively and critically.

J. M. ROWSON.

(ABSTRACTS *continued from page* 701.)

end point defining the initial minimal inhibitory concentration being much sharper in semi-solid media. Moreover, only in semi-solid media could be distinguished the later growth of colonies which gave a measure of the variability of resistance within a culture. These presumptive resistant colonies appeared most often with Kirchner semi-solid medium containing isoniazid and less frequently with the other 2 drugs, but the retesting of cultures from the colonies of the isoniazid medium showed that drug resistance did not always occur. If, however, the drug was not added to the inoculated medium until the 2nd or 3rd day (by this time minute colonies had appeared) a few large colonies containing truly resistant organisms later developed. Differing rates of decay of isoniazid in the different media were observed. The end points obtained with all 3 drugs in the semi-solid media were sharp and consistent. With aminosalicylic acid, the inhibitory concentration varied greatly with the inoculum size and with different strains and was attributed in part to the antagonism of *p*-aminobenzoic acid. The agar concentration used appeared to be optimal: discrete colonies developed and yet the culture was sufficiently fluid to be sucked up in a dropping pipette when picking out single colonies for subculture. The authors conclude that for all 3 drugs the Fisher semi-solid agar gave the most satisfactory results. B. A. W.