

REVIEW.

AN INTRODUCTION TO THE ANALYSIS OF DRUGS AND MEDICINES. An Elementary Handbook for the Beginner. By BURT E. NELSON. New York: Wiley and Sons. London: Chapman and Hall, Ltd. 1910. Pp. 384. Price 12s. 6d. net.

This little book will prove useful to pharmaceutical analysts and those engaged in the examination of all classes of medicinal substances. It is exceedingly comprehensive and carefully arranged on a thoroughly systematic basis. It includes outlines of complete inorganic and organic analysis, as well as a most useful chapter on microscopical analyses of drugs based on the author's own scheme originally printed serially in Merck's Report.

In the Preface the author states that it is intended to furnish methods by which the student or analyst who has not specialised in drug chemistry may obtain information which is often desired by Health Departments, the State, and the general public. He expresses the opinion that there is undoubtedly a legitimate place in trade for reliable patent medicines, provided they do not contain any actively potent ingredients, or, containing them, state their names and amounts; but local Health and State authorities should exercise control, and exclude such as are found dangerous or obviously fraudulent. For such a purpose the book is admirably adapted, and although it is concise to the verge of terseness, very little of importance has been omitted.

A brief outline of the necessary apparatus is followed by a complete scheme for the separation and determination of mineral constituents. A new scheme is proposed for the organic analysis of crude drugs, by which an alcoholic extract is separated into six groups, including resinoids, tannins, extractives, alkaloids, glucosides, and volatile constituents. A brief outline is given of the older methods of Dragendorff and Parsons (of the United States Department of Agriculture). This is followed by special methods of assay for alkaloids, glucosides, aloin, and drugs of the anthraquinone type.

The microscopical portion is well written, and the characteristic structures of woods, barks, roots, leaves, and seeds are illustrated by diagrams drawn from microscopical preparations of powdered drugs. A well-worked-out scheme enables the student to trace the constituents of a mixture of powdered drugs as completely as it is possible for an experienced analyst with an intimate knowledge of drugs.

The employment of pharmacological tests for the identification and assay of certain active principles is not largely employed in this country, owing to legal restrictions; but in the States physiological standardisation is more common, and possibly more highly developed. At all events, physiological tests are useful in certain cases, and the outline given in this book is a new departure in a work on analysis, and should prove useful to those who are interested in this comparatively new subject. Instructions are given for the carrying out of such operations as measurement of blood-pressure, stimulation of nerve centres, and observing the effects of different active principles on the various organs of the body. At the same time the author does not lose sight of the fact that the lower animals often differ

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remarkably from man in their susceptibility to the action of various chemicals and drugs, and that pathological conditions often modify the observed effect of drugs on animal tissues. A table is included, showing the effects of some common drugs on the various organs.

A useful table is appended, carefully arranged to assist identification of some 500 definite organic compounds used in medicine, with their melting- and boiling-points. These include many so-called synthetic remedies, such as mesotan, bromipin, validol, xeroform, and ichthargan, as well as the more common members of such groups as phenols, acids, alcohols, alkaloids, glucosides, etc., for each of which special characteristic tests are given. This table is carefully worked out in relation to the general scheme for analysis of drugs previously referred to. It is followed by a table showing elementary analysis of organic medicinal chemicals arranged in order of carbon content, and another table arranged in order of melting-point.

Other tables include constants for fats and fixed oils, volatile oils, resins, and gum resins, all very concise and, as far as can be judged without detailed criticism, of general accuracy.

The book is remarkably free from printer's errors, and for its size contains an enormous amount of information extremely useful to the drug analyst. It is worthy of greater elaboration.

C. T. BENNETT.



THE INSTITUTE OF CHEMISTRY.

PASS LIST: JULY EXAMINATIONS, 1910.

FIFTY-NINE candidates presented themselves for the July Examinations of the Institute of Chemistry. Seventeen candidates passed the Intermediate Examination: D. L. Allan, S. W. Bridge, G. M. Carruthers, D. S. Dawson, B.Sc., F. E. Day, B.Sc., G. J. Eastburn, W. J. S. Eastburn, H. D. Elkington, Maud Gazdar, B.Sc., D. Hamilton, G. Hamilton, W. P. Harmsworth, W. Jewell, R. W. Pope, S. P. Schotz, J. Sorley, J. C. White. In the Final Examination, one candidate passed in Mineral Chemistry: C. S. Grace, B.Sc.; one candidate passed in Metallurgical Chemistry: W. A. Riley; ten passed in Organic Chemistry: F. L. Bassett, B.Sc., F. Challenger, B.Sc., F. A. F. Crawford, B.A., E. G. Davis, W. Dickson, J. R. Nicholls, G. C. Petrie, E. F. Pollock, T. Schwarz, T. A. Simmons, B.Sc.; and eight candidates passed in the Chemistry of Food and Drugs, etc.: H. M. Harvey, D. Henville, F. E. Laughton, H. R. Lyell, W. M. Paulley, B.A., P. L. J. Smith, M.A., R. W. Warrick. One candidate passed a Final (A.I.C.) Examination in General Chemistry: J. B. Solomon, A.R.S.M., A.R.C.S.; one candidate passed a Special Examination for the Fellowship: Colin C. Frye; and one Fellow passed in the Chemistry of Food and Drugs, etc.: G. W. Monier-Williams, B.A., Ph.D., F.I.C.