

The author has made an effort to bring this book up-to-date, including modern methods without discarding those which have proven to be of value in the past and some methods are also mentioned which have not yielded satisfactory results. Many suggestions have been added to these discussions and a large number of references are cited. Preference is given to abstracts in the *Analyst* and in the *Journal of the Society of Chemical Industry* (Great Britain).

The volume is divided into 31 chapters in which there are 273 tables; there is also an index of authors, a subject and a botanical index. Oils and Fats are classified in the first chapter and in the next their properties are discussed, followed by a chapter on their composition. Then the constituents are given consideration, followed by several chapters on qualitative, physical and chemical tests. Succeeding chapters treat of oils and fats in groups and singly, a chapter deals with medicinal oils and another with hydrogenated oils.

The large number of tables are convenient for the oil chemists and indicate to others as well the related characteristics of classified oils, their composition, etc. The illustrations show various methods of assay and apparatus used by the oil analyst. While the book is primarily for British oil chemists, a more general service has been rendered by the author in bringing the analytical methods employed by oil chemists into one volume. As indicated, the work is, probably, of greater value to British chemists than to those of this country, however, the methods are informative and may, in some instances, prove to be better or more rapid than those in use here, and serve those who are interested in export trade and for determining their comparative value with American products.

More attention has been given by the author to the analytical study of fats and oils than to their manufacture; the discussion of hydrogenated oils is not as comprehensive as that of other works, and may indicate that the industry has not assumed the large proportions in Great Britain which it has in the United States.

Chemists using the book will take the differences that obtain in refined products into consideration. The printing, paper, press work and binding of the volume are good, and it seems to be quite free from typographical errors.

E. G. E.

*The New Dutch Pharmacopœia*.\*—The fifth edition of the "Nederlandsche Pharmacopœe" presents many fundamental changes. The work, for reasons of economy, appears in Dutch and not as hitherto in Latin, the latter being retained only in the official titles. The chief innovation is a collective description of standard tests and reactions to determine the identity and purity of official substances, which are grouped together in the preface, a new feature in a Continental pharmacopœia. Thus, a liquid is alkaline to phenolphthalein if 10 cc. assume a pink to red coloration on the addition of one drop of 1:100 phenolphthalein solution; a liquid may be described as colorless if its tint is not deeper than that of the following three comparative solutions: (1) A yellow solution, containing 0.001 Gm. of potassium bichromate in 1000 cc. of water, acidified with dilute sulphuric acid; (2) a pink solution, containing 0.1 Gm. of cobalt nitrate in 1000 cc. of water, acidified with dilute hydrochloric acid; (3) a blue solution, containing 0.231 Gm. of copper sulphate in 1000 cc. of water, acidified with dilute hydrochloric acid.

The standard for limpidity is comparison with a suspension of 0.005 Gm. of kaolin (average diameter of the particles  $20\mu$ ) in 1000 cc. of water. The tests for purity command special attention—yields no reaction is given a precise definition; in fact, in the new Dutch Pharmacopœia the reactions for the more commonly occurring impurities have become essentially limit tests. Thus, "yields no reaction for iron" means that the addition of 1 cc. of solution of ammonium chloride (107:1000 *N/2*) and 3 drops of solution of sodium sulphide (84:1000 *N/1*) to 5 cc. of the liquid to be tested, rendered alkaline by the addition of solution of ammonia, should not produce a green coloration deeper than that which occurs on applying the same test to a solution containing 0.002 Gm. of trivalent iron in 1000 cc. of water (0.0172 Gm. of ferric ammonium sulphate in 1000 cc. of water, acidified with sulphuric acid). Chlorides: the cloudiness produced by the addition of solution of silver nitrate to 5 cc. of the liquid to be tested, and acidified with nitric acid, should not exceed that which occurs in a solution containing 0.005 Gm. of chlorine (0.0083

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Gm. of sodium chloride) in 1000 cc. The comparative standard for calcium is a solution containing 0.01 Gm. of calcium (0.219 Gm. of solution of calcium chloride 25 per cent) in 1000 cc.; for heavy metals, 0.001 Gm. of lead (0.0016 Gm. of lead nitrate) in 1000 cc.; for nitrates, a solution with 0.002 Gm. of nitrogen trioxide (0.00326 Gm. of potassium nitrate) in 1000 cc.

The resolutions adopted at the Second International Conference for the Standardization of the Formulas for Potent Preparations, held in Brussels in 1925, have not been embodied in this edition, since they have not yet received official recognition by the Netherlands Government, and also for the fact that the work was already in the press when the Conference was held. As soon as the agreement is ratified the changes entailed in the Pharmacopœia will be published in the form of a Supplement. No alteration has been made in the Latin nomenclature, neither has any attempt been made to coin arbitrary official designations to take the place of lengthy chemical appellations; registered trade-marks included among the synonyms are designated by an asterisk. Compared with the preceding edition, the text of the single monographs is presented in a much clearer and more logical form; descriptions of entire drugs have been somewhat curtailed; on the other hand, the microscopic characters of powdered drugs are fully described. It is interesting to note that the refractometer is used to a much greater extent than in any other pharmacopœia, the determination of the refractive index being regarded by the authors of this work as a quick and reliable method of assay. Hence this index is given for 47 articles, including, *inter alia*, essential and fixed oils, certain solutions acetic ether, glycerin, creosote, creosote carbonate, crude cresol, guaiacol and liquefied phenol. The optical rotation figures among the tests for the official salts of quinine. In many instances the specific gravity (at 15° C.) is followed by an indication of the correction for each 1° C. difference in temperature, *e. g.*, glycerin sp. gr. 1.230-1.235 (correction 0.0006 for 1° C.). The solubility of a substance in water, alcohol and ether at 15° C. and 25° C. is given in several cases in tabular form at the end of the monograph. Sterilization forms the subject of a special article, in which the procedure to be adopted for sterilizing a number of specified medicaments is described in detail. Digitalis is the only

drug for which physiological standardization is prescribed, by the Hatcher-Magnus method, which is based on the determination of the minimum lethal heart dose, by continuous intravenous injection of a 1:200 infusion into an anaesthetised cat under artificial respiration. Assayed by this method, digitalis leaves are required to have a value of 17.5 to 20, and if they do not correspond with this standard, adjustment has to be effected by the admixture of leaves with a lower or higher potency, as may be required. To ascertain Focke's valor the above figure is divided by 75. A monograph entitled "Olea Pinguia" is devoted to a description of certain specific tests applicable to fixed oils: Recognition of the presence of mineral oil, resin oil, sesame oil cottonseed oil, arachis oil, sulphur products, heavy metals, determination of the melting point, optical rotation, acid value, saponification value and of the "additive value" (*i. e.*, the iodine value).

Quite a number of the additions made correspond with those of the German Pharmacopœia. Two new preparations of digitalis have been included, one for injection and the other for oral administration. The chapter describing the immediate antidotal treatment to be undertaken in cases of poisoning has been revised in accordance with recent progress. The appendices include much matter that is included in U. S. P., also a list of the medicaments which medical practitioners entitled to supply medicines to their patients are required to keep in stock; a schedule of the official poisons to be stored in a locked cupboard, which includes, *inter alia*, adrenalin, ethylhydrocupreine hydrochloride, ethylmorphine hydrochloride, luminal, novocaine hydrochloride, and strophanthus seeds; a list of poisonous official substances which must be labeled with a blue cross, and a general index, in which, in tabular form, the maximum doses, as well as directions regarding storage, *e. g.*, to be protected from light, are given.

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#### INDIA'S EXPORT TRADE IN CINCHONA, NUX VOMICA AND SENNA.

Indian exports of nux vomica and senna, increased during the first six months of last year. However, shipments of cinchona during the same period were very much less than during the previous year.