

Moreover, the amylene contains a somewhat larger percentage of isopropyl ethylene than that prepared by the sulfuric acid method.

Isoamyl ether may be run through the furnace under exactly the same conditions as the alcohol and amylene is produced in the same yields as from alcohol.

Using amyl alcohol, 5 lbs. of amylene may readily be prepared in a day's time by this method and the cost, considering carefully all the necessary charges, is much below Kahlbaum's pre-war price. Since the present cost of amyl alcohol is many times the pre-war price, there is no reason why amylene, tertiary amyl alcohol or trimethyl ethylene should not be produced in normal times at a very low figure.

Tertiary Amyl Alcohol.

$\frac{1}{2}$ kilo of cracked ice is placed in a 5-liter round-bottom flask and $\frac{1}{2}$ liter of conc. sulfuric acid is added. The mixture is cooled to 0° and through a dropping funnel $\frac{1}{2}$ liter of amylene (prepared by the sulfuric acid method) is run in. The mixture is vigorously agitated by means of a mechanical stirrer during the addition of the amylene and the stirring is then continued for one hour longer. After this time most of the amylene has gone into solution, although a small quantity of unchanged hydrocarbon (50 cc.) is separated by means of a separatory funnel and is recovered. The sulfuric acid solution is then run into a mixture of two kilos of cracked ice and water after which a concentrated solution of 720 g. of sodium hydroxide is added gradually. The mixture is distilled until from the distillate no more alcohol may be salted out by the addition of potassium carbonate; the tertiary amyl alcohol is very volatile and distills rapidly. The product is finally dried over calcined potassium carbonate¹ and then fractionated. 275–300 g. of a product boiling at 100 to 103° may be obtained from 325 g. of amylene.

URBANA, ILLINOIS.

CORRECTION.

The Identification of the Cinchona Alkaloids by Optical-crystallographic Measurements.—In the July number of THIS JOURNAL, through oversight two references were omitted from footnote 2, page 1063: Kley, *Z. anal. Chem.*, **43**, 160 (1904), and Bolland, *Monatsh.*, **29**, 991 (1908); **31**, 387 (1910); it may be noted that the data on alkaloids given by these authors are apparently only rough approximations. On making up pages some shifting of the figures occurred, and it is not clearly

¹ The cost of potassium carbonate for salting out and for efficient drying of organic preparations is no longer prohibitive; in fact, a good grade of 90% calcined potassium carbonate may now be obtained at a very reasonable cost and the market is reported to be over-supplied. When considerable quantities are used, the material is readily recovered and may be used repeatedly.

brought out to which alkaloid some of them refer. On page 1065, Fig. 1 represents cinchonine; page 1067, Fig. 4, the stable form of quinine; and page 1068, Fig. 5, the unstable form of the same alkaloid. On page 1070, Table II, heading of 6th column, for quinine read quinidine; and in the same table, under refractive indices, for α - γ read γ - α .

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NEW BOOKS.

Chemical Pathology. By H. GIDEON WELLS, PH.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Third Edition, Revised and Reset. Octavo, 707 pages. Philadelphia and London. W. B. Saunders Company, 1918. Cloth, \$4.25 net.

The importance of the recent advances in biological chemistry in its varied relations to pathology are evidenced by the necessity for a revision of Professor Wells' standard book on Chemical Pathology within 4 years after the appearance of the previous edition. New matter and careful revision of the old have added 68 pages to the text. Most notable of the new material added to the book are the sections on the Abderhalden Reaction, atrophy, pressor bases, and the chemical basis of growth. The addition of this last section dealing with the so-called "Vitamines" and their relation to growth and the deficiency diseases furnished material the lack of which in previous editions has seemed unfortunate to many. In view, however, of the increasing interest in and importance of the nutritional diseases, beri-beri, pellagra, scurvy, and the like, it would appear that they merit more than the passing mention accorded them in the section on growth. This, however, may be the point of view of a biochemist and student of nutrition. The changes in view-point as a result of the application of the newer methods of micro-analysis of blood and tissues are well illustrated by the discussions of uric acid and gout. As in the previous edition, the excellent chapter on diabetes by Dr. Woodyatt is of unusual interest. The full bibliographical references are a feature of great value to investigator and general reader alike.

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Sir William Ramsay. By Tarini Charan Chaudhuri, M.A., Professor of Chemistry, Edward College, Pabna; with the introduction by Panchanan Neogi, M.A., Ph.D., Professor of Chemistry, Government College, Rajshahi. Butterworth and Company. India. 1918.

This little book of 66 pages from far-off India tells in very fascinating manner the story of the life and triumphs of the great Nobel prize-winner, Ramsay, whose work has done so much to advance modern chemistry. Professor Neogi in his introduction, says that ordinary text-books give