beaker and the anode, a platinum plate of about 15 sq. cm. surface, was introduced into it. The cathode, a piece of platinum foil, was contained in a small porous cup of about 75 cc. capacity which was suspended in the solution. This porous cup was filled with a dilute solution of selenic acid. The beaker was placed in a freezing-mixture and a current varying from 2.5 to 3 amperes was passed through the solution. The temperature in the outer cell averaged about 4° C.

After the action of the current had continued for some hours, a white substance began to appear in the neighborhood of the anode, its formation being accompanied by an increase in the resistance of the cell. After considerable of the solid had separated, the process was interrupted, the solution in the beaker was decanted, and the substance dried on a porous plate. It was then placed in a desiccator containing phosphorus pentoxide, and this was placed upon ice.

The complete analysis of the substance was not made at the time but merely the available oxygen was determined, this being done, first by adding oxalic acid in excess and determining the excess by means of potassium permanganate, and second, by adding ammonium ferrous sulphate in excess and titrating this excess in the same manner.

The two methods gave agreeing results, for when used on a sample of potassium selenate containing a small amount of perselenate, oxalic acid and potassium permanganate showed 2.41 per cent. of $KSeO_4$, while the ammonium ferrous sulphate method gave 2.42 per cent.

Potassium perselenate was not obtained free from selenate, the highest percentage of perselenate in the product being 74.44.

Potassium perselenate, when hot, oxidizes manganese dioxide to potassium permanganate, quickly oxidizes ferrous sulphate in the cold, and acts similarly upon thallous sulphate. An aqueous solution of the salt gives off oxygen when warmed.

CORNELL UNIVERSITY,
April, 1901.

NOTES.

On Methods of Sugar Analysis.—In the March number of the Journal of the American Chemical Society there is published a paper by Professor H. W. Wiley on "The Fourth International

Congress of Applied Chemistry," which, it appears, was read before the Northeastern Section of the American Chemical Society, January 17, 1901.

In that article (on page 188) Professor Wiley refers to some of the topics which engaged the attention of the "International Committee on Unification of Methods of Sugar Analysis."

Professor Wiley writes: "In the meeting of this committee, the data relating to the influence of temperature on polarizations were presented at length by M. Wiley of the United States, and M. Brodhun, of Germany. The only advocate of the stability of specific rotation, independent of temperature, was M. Wiechmann of the United States. The opinions of the majority were embodied in a resolution which finally passed the International Committee without a dissenting vote. This resolution was to the effect"...(For wording of this resolution, see this Journal, Vol. 23, page 62). Professor Wiley continues: "The influence of temperature on specific rotation has now been so thoroughly worked out that we may say without hesitation that the points established by Andrews eleven years ago, are now fully accepted by practically all the investigators of the world."

These statements tend to give to one not familiar with the facts, the impression that the majority of the members present indorsed the opinion, that the specific rotatory power of sucrose is affected by changes in temperature.

As a matter of fact the International Committee studiously avoided any expression of opinion on this question which had been a prominent topic of discussion between Professor Wiley and myself that day, before this body.

It was for this very reason that Professor Wiley's resolution, that his method of correcting polarization readings for the influence of temperature be adopted, was not accepted by the committee. Instead of this, the resolution offered by Mr. Sachs and cited above, was unanimously adopted.

An amendment which, Professor Wiley suggested, Mr. Sachs should include in his resolution, and which amendment would practically have allowed the use of Professor Wiley's method of temperature correction as an alternate method, was declined by Mr. Sachs.

This International Committee, which numbers among its members some of the most eminent sugar chemists of Europe, there-

fore certainly did *not* endorse Professor Wiley's method of correction factors, which takes into account an alleged influence of temperature on the specific rotation of sucrose.

This fact alone would seem to cast serious doubt on the validity of the opinion hazarded, "without hesitation," by Professor Wiley, "that the points established by Andrews eleven years ago, are now fully accepted by practically all the investigators of the world."

F. G. WIECHMANN,
Secretary, The International Committee, etc.

APRIL 22, 1901.

BOOKS RECEIVED.

The Chemical Analysis of Iron. A complete account of all the best known methods for the analysis of iron, steel, pig-iron, iron ore, limestone, slag, clay, sand, coal, coke, and furnace and producer gases. By Andrew Alexander Blair. Fourth Edition. Philadelphia: J. B. Lippincott Co. 1901. 319 pp. Price, $4.00.

A Compendium of Gold Metallurgy and Digest of U. S. Mining Laws, Water Rights and Desert Land Laws, by E. M. and M. L. Wade, 115½ North Main St., Los Angeles, Cal. 140 pp.

Condimental and Medicinal Cattle and Poultry Foods, Bulletin 132. February, 1901. Connecticut Agricultural Experiment Stations, New Haven, Conn. 7 pp.

Spraying. Bulletin No. 70. November, 1900. 32 pp. Poultry Experiments. Bulletin No. 71. December, 1900. 20 pp. Commercial Fertilizers. Bulletin No. 72. January 1, 1901. 32 pp. West Virginia University Agricultural Experiment Station, Morgantown, W. Va.

The Sunflower Plant: Its Cultivation, Composition, and Uses. By Harvey W. Wiley. Bulletin No. 60, U. S. Department of Agriculture, Division of Chemistry, Washington, D. C. 32 pp.

Pure-food Laws of European Countries, affecting American Exports. Prepared, under the direction of H. W. Wiley, by W. D. Bigelow. Bulletin No. 61, U. S. Department of Agriculture, Washington, D. C. 39 pp.

Experiments on the Effect of Muscular Work upon the Digestibility of Food and the Metabolism of Nitrogen, conducted at the University of Tennessee, 1897 to 1899. By Chas. E. Wait. Bulletin No. 89, U. S. Department of Agriculture, Office of Experiment Stations, Washington, D. C. 77 pp.

First Report on Food Products, for 1900. December, 1900. 61 pp. Fertilizer Analyses and Analyses of Iron Ores. January, 1901. 32 pp. Analyses of Fertilizers. February, 1901. 24 pp. North Carolina State Board of Agriculture, Raleigh, N. C.

Report of the Connecticut Agricultural Experiment Station for the Year