extract of quercitron bark. Such an addition would have been indicated by the modification of the shade given with ferrous sulphate. Again, had the extract of logwood been oxidized with hydrogen peroxide, etc., the color would have been taken up by the wool fiber much quicker and the deep blue shade would have developed much sooner than with an extract not so oxidized.

CAMDEN, N. J., April, 6, 1895.

ABSORBENT BLOCKS.[1]

BY PETER T. AUSTEN AND W. HOMER BROADHURST.

Received April 16, 1895.

FOR drying moist precipitates unglazed plates are generally used in the laboratory, but they have the disadvantages of being rather expensive, as well as fragile, while their absorptive capacity is not great.

We have found that a mixture of equal parts of infusorial earth and plaster of Paris, when moistened, will set, forming a block that after drying has a very strong absorbent power for liquids. The plaster and infusorial earth are thoroughly mixed, then moistened with sufficient water to work easily, and placed in the molds. After setting, the blocks are placed in an air-chamber and heated for a day or two at 100°–120° to free them from hygroscopic moisture.

The molds are easily made in the following way: A sheet of glass, the larger the better, is laid on a table, and rubbed with waste oiled with a few drops of light lubricating oil. Long glass strips, an inch wide, and one-quarter of an inch or more thick, are laid on edge on the plate at a distance apart of six inches, if the block is intended to be of that size, and cross-pieces of the same kind of glass strips, but cut in suitable lengths, are placed between the long parallel strips, thus making squares. The strips should also be oiled a little. The wet mixture is poured in and the top smoothed with a straight edge of wood. After setting, the strips of glass are easily removed and the blocks come off the plate easily, and are ready to be placed in the drying oven. The surface next to the glass plate is very smooth.

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[1] Read before the N. Y. Section, March 8, 1895.

These blocks are very convenient in qualitative analysis, and in the preparation of substances. The filter-paper containing the wet precipitate, or substance to be dried, is placed on the smooth side of the block, and after a short time much of its moisture is absorbed. One or more filter-papers may be placed between the substance and the block if too intimate contact of the substance and the block be not desired.

CHEMICAL LABORATORY OF THE BROOKLYN
POLYTECHNIC INSTITUTE.

THE VOLUMETRIC DETERMINATION OF ZINC AND A NEW INDICATOR FOR FERROCYANIDE.[1]

BY GEORGE C. STONE.

Received March 11, 1895.

BEFORE titrating with ferrocyanide it is necessary to separate all the metals of the iron group. Rapid and accurate methods are known for all but manganese; the methods commonly used in gravimetric analysis take too long; and I have been unable to get even passably accurate results on the New Jersey ores by the method of Messrs. von Schultz and Low,[2] or the modification of it proposed by Mr. Hinman.[3] Not finding any satisfactory method of separation I have tried titrating the two together, determining the manganese in a separate portion, by titration with permanganate, and taking the zinc by difference, and find the method easy, rapid, and sufficiently accurate for technical work.

Indicators.—Uranium salts are generally used as indicators for ferrocyanide and are fairly satisfactory when titrating zinc alone, though the sensitiveness of the test varies very much with the amount of free acid present. In titrating manganese, uranium cannot be used in the usual manner because it reacts on the precipitated manganese ferrocyanide; good results can be obtained by its use by putting drops of the solutions to be tested, on filter-paper and allowing them to run together so that the uranium does not touch the precipitate; the reaction develops very slowly making the titration very tedious. Ferric chloride, another

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[1] Read before the N. Y. Section, March 9, 1895.

[2] Colorado Scientific Society, June 11, 1892; *J. Anal. Appl. Chem.*, 6, 682.

[3] S. of M. 2, 14, No. 1; *J. Anal. Appl. Chem.*, 6, 682.