Repeat the washing. Wring out, and spread it on paper to dry. Hot water, and an elevated temperature will spoil it. Keep it in an open jar, covering it with distilled water. (Proc. 94, 663.)

Bienert states that when sulphuric acid of sp. gr. 1.83 is being used, the nitric acid should not be higher than 1 36 to 1.38. He states also that the acids need not be thrown away, as they can very well be used a second or third time, if needed, adding a little more of the sulphuric acid. (Ph. Ztg. Russl. 94, 676.)

Quassia.

Is not inodorous, but has a faint odor. Hirsch.

(Quinidina.)

Microchemical reactions. Behrens (J. Ch. Soc. 94, 491. Proc. 95, 997).

Quinina.

Thalleioquine Test. In order that about the same depth of green tint may be obtained from every official quinine salt, the strength of the several aqueous solutions to be employed for this test has been adjusted so as to contain approximately the same quantity of the alkaloid quinine calculated as hydrate. Rice (Circ. No. 137, p. 854).

Tests. Examination of the most favorable conditions for the successful application of the thalleioquine, bromine, and herapathite tests, and the bitter taste. Curtman (A. J. Ph. 94, 561. Proc. 95, 996).

Kubli is dissatisfied with all methods proposed, and recommends the following:

1. Water test. This is based on the fact that the sulphates of bases other than quinine are more soluble than quinine sulphate, while with the free alkaloids the contrary is the fact. If we therefore set free the alkaloid of a given quantity of quinine sulphate with an alkali, we can form an idea of the contamination by the quantity of water necessary to dissolve it. He uses pure sodium carbonate, and for comparison, "normal quinine."

2. Carbon dioxide test. This test is based on the fact that, when a saturated solution of neutral quinine sulphate is precipitated by sodium carbonate, the alkaloidal quinine is easily dissolved in sodium bicarbonate. On passing carbonic acid into this solution, quinine separates in needle-shaped crystals. Now, there will be found perceptible differences in the volume and the general look of the crystal mass, according to the kind and amount of contamination. (Ph. Zts. Russl. 95, 593 to 737 incl. Bull. Ph. 96, 25.)

Weller states that Kubli's tests are inferior to his and Kerner's ammonia test (see "Digest" on U. S. P. 1880, p. 143), which gives good results with mixtures, but not with salts crystallized together. (Ph. Ztg. 96, 236.)

Quinine is soluble not only in ammonia, but also in potassa and soda. Doumer & Deraux (J. de Ph. & Ch. 95, 50. Proc. 95, 998),

(Last paragraph.) Addition of "7 Cc. of ammonia"—Hirsch says, that this would indicate an allowance of about 4 p. c. of alkaloids, other than quinine. (Ph. Rdsch. N. Y. 93, 240.)

Solubility. In 1960 parts of water. Merck (Index, p. 201).

Indicators. Value. A. Ph. A. Comm. (Proc. 95, 191), and Kebler & LaWall (A. J. Ph. 95, 503).

Microchemical Reactions. Behrens (J. Ch. Soc. 94, 491. Proc. 95, 997).

Quininæ Hydrobromas.

Should be "Hydrobromidum." A. P. A. Comm. (A. J. Ph. 95, 484. Proc. 95, 240).

Solubility. In water. Squibb found it 1:53; Rice, 1:52.5. (Circ. No. 137, p. 857.)

Quininæ Hydrochloras.

Should be "Hydrochloridum." A. P. A. Comm. (A. J. Ph. 95, 484. Proc. 95, 240.)

(Ninth paragraph.) "Less than 0.9 Gm."——Hirsch says that it should be "0.91;" "9 p. c." water of crystallization, should be "9.079 p. c." (Ph. Rdsch. N. Y. 93, 240.)

Quininæ Sulphas.

Solubility. In chloroform. The former statement that it is soluble in 1000 parts of chloroform, refers to chloroform free from alcohol. Rice (Circ. No. 137, p. 859).

Water of Crystallization. It has been deemed best to allow, as heretofore, 1 molecule of water in excess of 7 molecules. Rice (Ibid.).

Kerner-Weller Test. (Last paragraph.) Ph. German III, reduces the amount of water of ammonia to 4 Cc. This requires an almost chemically pure sulphate, such as cannot be supplied by manufacturers except by first making the bisulphate. A sulphate, standing the 4 Cc. of ammonia, has an entirely different appearance, being denser, in coarser and heavier crystals, and cannot be made to look like the light, fluffy, crystalline mass, so familiar to us; and for that reason would be very generally suspected as spurious or impure by

the public at large. The small additional proportion of other cinchona alkaloids, now permitted by the U. S. P., has never been demonstrated to be objectionable. Rice (Ibid.).

(Tenth paragraph.) The apparent contradiction (8 molecules *vs.* 7 molecules) is probably due to the fact that the salt is variously stated to contain 7, 7½, or 8 molecules of water. Hirsch (Ph. Rdsch. N. Y. 93, 241).

(Last paragraph.) "Dried at 100° C."—Ph. German. has "completely effloresced at 40 to 50° C." (Ibid.)

Cinchonidine. Grave modifies de Vrij's method ("Digest" on U. S. P. 1880, p. 141) by adding to the filtrate from the chromate of quinine a few drops of a 5 p. c. solution of sodium acetate. If pure, the liquid remains quite clear for several days; in the presence of cinchonidine, the liquid becomes turbid. This reaction he considers quantitative; the cinchonidine precipitate may be collected and weighed. (J. de Ph. d'Anvers, 93 . . . Proc. 94, 1108, & 95, 996.)

Titration. Allen points out that the sulphate is practically neutral to brazil-wood, cochineal and logwood, but strongly alkaline to methyl-orange. The end reaction with the last-mentioned comes when acid sulphate is formed, while with the three former ones the end reaction comes when half as much acid is used. As the sulphate is distinctly alkaline to litmus, this indicator cannot be used, although the end reaction is well-marked. (Ch. & Dr. 96, 22.)

Solutions. Crousel recommends to replace the sulphuric acid, usually employed, by citric or tartaric acid, as being more eligible therapeutically. (Union Ph. 94 . . . Proc. 95, 997.)

Resina.

Purification. Melt, strain off from the coarser impurities, and then heat with zinc chloride, adding finally potassium dichromate, strain or filter. (Ph. Era, 94, 351. Proc. 94, 606.)

(Resinæ.)

"Add the alcoholic solution with constant stirring to . . . water"——it would be better to specify "in a thin stream" . . . to "cold" water. Coblentz (Pharmacy, p. 350).

Resina Jalapæ.

Acetone may advantageously replace alcohol. Morrison (Proc. 94, 281).

Analysis. Kromer (Ph. Zts. Russl. 94 . . . Proc. 94, 604).

Solubility. Not more than 7 p. c. should be soluble in chloroform. Caspari (Pharmacy, p. 281).