

Instead of the 100 cc. burette mentioned above, one, two or three automatic burettes may be used; one constructed to automatically fill itself to 28.08 cc., one to 42.12, and one to 56.16 cc. These should be graduated to 1/10 cc. and the figures should run up the burette as in the one described above. Burettes of this kind can be obtained of Richards & Co., of New York.

LABORATORY OF THE AGRICULTURAL EXPERIMENT STATION OF THE R. I. COLL. OF A. AND M. ARTS.

A. W. BOSWORTH.

Note on Perkin's Test for Bicarbonates.—There was recently published,¹ by F. M. Perkin, a test for bicarbonates based on the fact that bromine is liberated in a mixture of solutions of a bromide and sodium hypochlorite, if a dilute acid is added. Bicarbonates are sufficiently acid to bring about this reaction and may thus be distinguished from normal carbonates.

This test has proved very satisfactory in practice but the following exceptions must be noted: The test will not show the presence of ammonium bicarbonate nor can ammonium bromide be substituted for the sodium or potassium salts. Further than this, the presence of ammonium salts, even in very small quantities, prevents the reaction entirely. The ammonium salts experimented with were the chloride, carbonate, nitrate, sulphate, and oxalate, using solutions of the usual reagent strength and 5 per cent. solutions of sodium bicarbonate and potassium bromide.

For the test, 1 cc. each of the bromide and hypochlorite solutions were used and 10 or 12 drops of the bicarbonate solution. Of the interfering ammonium salt solution, 2 drops, added before the bicarbonate, absolutely prevented the liberation of bromine, except in case of the oxalate, and a small additional quantity of this produced the same result.

Incidentally it may also be remarked that care must be taken that the hypochlorite solution used is reasonably fresh and has been kept away from light, or it will be sufficiently acid to lead to erroneous results.

FRANCIS O. TAYLOR.

A Convenient Form of Table for Calculations of Chemical Weights.—The author, having frequent occasion to check calculations of weights of substances made by students in quantitative analysis, has constructed a table, to enable him to quickly obtain

¹ *J. Soc. Chem. Ind.*, 22, 1375 (1902).