

eight or ten seconds separates the last drops. The exact point of complete reduction is reached when the blue color has entirely disappeared, leaving the solution clear and transparent, with a slight opalescent tint. The number of minims of urine necessary to accomplish this result is then carefully noted on the graduated stem of the burette or pipette. Since the test as prepared, has a fixed equivalent of one-tenth grain of sugar, it necessarily follows, providing the conduct of the test has been correct, that the number of minims of urine required to completely discharge the blue color must contain exactly that amount of sugar. It is now only necessary in order to complete the determination to divide four hundred and eighty, (the number of minims in an ounce) by the number of minims found necessary to complete the reaction, and again divide the quotient by ten.

Example:—Eight minims of urine are found necessary to fully discharge the blue color from the test. The equation then becomes—

$$\begin{array}{r} 8 \mid 480 \\ \hline 10 \mid 60 \\ \hline \end{array}$$

6 grains of sugar per ounce
of urine.

It is advised that all urines having a specific gravity exceeding 1.028, which by their conduct with the qualitative test give evidence of containing a large amount of sugar, should be diluted with an equal volume of distilled water before submitting them to estimation and the result be multiplied by two. This precaution renders the progress of the test more capable of delicate and exact supervision.

In place of a flask or beaker an ordinary test tube of large lumen may be used as the containing vessel in which to boil the reagent, which under such circumstances should not be diluted by the addition of water. Some slight loss of accuracy necessarily attends the crudity of this method, although the results are even sufficiently accurate for clinical purposes. No preparation of the urine is needed previous to submitting it to estimation, and no precautions are necessary in applying the test except care in the addition of the urine lest it be added too rapidly. On the other hand, the procedure must not be conducted too slowly, for