

Glycerine C.P. ....3 drachms.  
 Distilled water .....2½ drachms.  
 Liquor Potassa.....to 4 ounces.

Prepare by dissolving the copper sulphate in the glycerine and distilled water. Gentle heat will facilitate solution. To this solution add the liquor potassa. Stir thoroughly with a glass rod and then filter the solution.

*Reagent No. II.—*

A saturated solution of chemically pure tartaric acid in distilled water.

These reagents, if properly prepared, are quite stable, and with a little care will keep indefinitely.

*Mode of Application.*—Pour one drachm of the copper test solution (Reagent No. I.) into an ordinary test tube and bring it to the boiling point over a spirit lamp. Then add three drops—not more—of the tartaric acid solution (Reagent No. II) and boil again. A slight deepening in color is the only change observed to follow the addition of the tartaric acid. Now add the suspected urine drop by drop, boiling and shaking the test solution after each addition until reduction takes place, or until eight drops of urine have been added. If no change follows the addition of that amount of urine sugar is not present. If sugar be present a reddish or yellowish precipitate of cuprous oxide forms. The richness of color and density of this deposit varies according to the amount of sugar present in the urine. The reaction produced by slight traces of sugar will be found to deepen and become more positive if the test be allowed to stand for a few minutes and be then re-examined. Applied in this manner the test will detect one part of sugar in one thousand of urine, or one-tenth of one per cent. More than eight drops of urine should not be used, since that amount never fails to give a distinct reaction with half a grain of sugar to the ounce, and smaller traces than that are of no interest to the clinician. Greater delicacy may be attained by the addition of a larger quantity of urine, but by so doing accuracy is sacrificed, for greater sensitiveness and one of the special virtues of the method is destroyed. The danger of false reduction by non-saccharine reducing substances, to which Fehling's test is so liable, is almost entirely obviated by the use of this small amount of urine,