

solution). Nesslerise both solutions as nearly as possible at the same time with 5 c.c. of Nessler's reagent diluted immediately beforehand with 25 c.c. of ammonia free water. Fill both flasks to the mark with water, and mix.

Determination of the Depth of Colour.—This may be done by means of a Duboscq colorimeter or by means of Nessler's tubes; the former method is the more rapid and convenient. In one of the chambers place some of the unknown solution, in the other some of the standard ammonia solution. Place the tube of the standard at a certain depth (20 mm. is usually the best), and adjust the other tube until the colours match. Several readings should be taken, moving the unknown from below and from above.

Calculation of results.—Example :

$$\frac{\text{Height of standard}}{\text{Height of unknown}} = \frac{20 \text{ mm.}}{21.3 \text{ mm.}}$$

So the 1 c.c. of fluid taken contains $\frac{20}{21.3} = 0.94$ mgm. nitrogen.

Urine was diluted to 1 in 10.

So 100 c.c. of urine contains 0.94 grm. nitrogen.

For methods of preparing the standard solution of ammonium sulphate and Nessler's solution, see Cole's *Practical Physiological Chemistry*, p. 178. For diagram and description of the colorimeter, see Cole, p. 191. Read this carefully before using the instrument.