

128 SYNOPSES OF LABORATORY COURSES

2. *Folin's microchemical method.*—Use the apparatus provided.

Into the test tube measure 1 to 5 c.c. of urine, so that 0.75 to 1.5 mgms. of ammonia-nitrogen are dealt with. For normal urine, 2 c.c. are usually about right. With diabetic urine, even 1 c.c. may be too much, and the urine must be previously diluted.

Add water, if necessary, to bring the volume to about 5 c.c. Add 3 c.c. of a saturated solution of potassium hydroxide, also a few drops of kerosene or heavy, crude machine oil (to prevent foaming).

Measure 2 c.c. of decinormal hydrochloric acid into the 100 c.c. graduated flask, add about 20 c.c. of distilled water, connect up the apparatus, and pass a strong current of air through for 30 minutes. Nesslerise as described below, and compare with 1 mgm. of nitrogen obtained from the solution of standard ammonium sulphate, similarly and simultaneously Nesslerised.

Calculation.—The number of mgms. of ammonia-nitrogen in the volume of urine taken are readily calculated, and so the number of grammes per 100 c.c. The amount of ammonia is obtained from this by multiplying by $\frac{17}{14} = 1.214$.

Preparation of the Nesslerised Solutions.—In another 100 c.c. measuring flask place 5 c.c. of standard ammonium sulphate solution, containing 1 mgm. of nitrogen, and dilute it to 60 c.c. To each flask add 3 c.c. of a cold saturated solution of Rochelle salt (to prevent the formation of a cloud on adding Nessler's