The experiments may be grouped in four series, each series covering completely, or nearly so, several consecutive days, except as stated below:—

Series I. Forty-four irregular periods, nearly consecutive, during 17 out of 19 consecutive days.

Series II. Thirty-two six-hour periods, consecutive except at one point, during ten consecutive days.

Series III. Thirty-seven consecutive four-hour periods during seven days.

Series IV. Thirty-six periods, consecutive except at one point, during seven out of eight consecutive days; the periods were so arranged as to cover especially the three hours immediately following each meal, with a view to learning the effect, if any, of gastric digestion.

EXPERIMENTAL METHODS AND CALCULATIONS.

The *volume* in cubic centimeters (c.c.) was measured with graduated cylinders, the *reaction* determined with sensitive litmus paper, the *color* recorded by comparison with Vogel's scale of urine tints as given in James Tyson's "Practical Examination of Urine" (pale yellow, light yellow, yellow, reddish yellow, yellowish red, red, brownish red, reddish brown, brownish black); the *specific gravity* was determined with a Vogel's urinometer, or hydrometer, at room temperature, corrections being made for variations from 15.5° centigrade by adding or subtracting .001 to or from the observed figure for every 3 degrees above or below the standard temperature; the *urea per cent.* was determined with a Doremus' ureometer, the urine being introduced into an alkaline sodium hypobromite solution and the grains of urea in 1 c.c. urine read on the graduations according to the volume occupied by the evolved nitrogen gas, and the reading multiplied by 100.

Certain other figures were calculated from these data, as follows:—The *volume per hour* in cubic centimeters was estimated by dividing the volume of the sample analysed by the number of hours elapsed during its excretion; the *solids per hour* in grams by multiplying the gravity above 1000 (water being taken as 1000) by Haser's coefficient, 2.33, dividing by 1,000 to obtain grams of solids per cubic centimeter, and multiplying the result by the volume per hour; the *urea per hour* in grams was estimated by multiplying the urea per cent by the volume per hour and dividing by 100; the *solids not urea per hour* in grams by subtracting the urea per hour from the solids per hour.

With regard to the accuracy and significance of the analytical results, it may be said briefly that methods commonly used in diagnosis were