5307

Finger Blood Method for Micro-Kjeldahl Non-Protein Nitrogen.

THOMAS L. CANNIFF. (Introduced by J. F. McClendon.)

From the Physiological Chemistry Laboratory, University of Minnesota.

Into a centrifuge tube, pipette 10 cc. of Folin's micro-tungstic acid solution. Make a reasonably deep wound in the finger to be assured of an adequately free and natural flow of blood, as squeezing appears to contaminate the sample. Using an accurate, capillary-bore pipette, draw up 0.1 cc. of blood. Carefully discharge the blood at the bottom of the centrifuge tube, and rinse the pipette with the clear supernatant solution; mix thoroughly. Allow to stand 2 or 3 minutes, and centrifuge. Decant the clear solution and apply a 4% correction for solution in the precipitate (or use a 5 cc. aliquot) and conduct a micro-Kjeldahl digestion. Collect the ammonia by distilling into 5 cc. of 0.1 *N* HCl. Fill the receiver tube containing the HCl up to the 25 cc. mark with distilled water, and add 5 cc. of Nessler's solution drop by drop while stirring. Add 5 cc. of the Nessler's solution to 25 cc. of the standard ammonium sulfate solution which should contain 0.1 mg. of nitrogen. Nesslerize the unknown and the standard simultaneously and compare in the colorimeter within 10 minutes.

TABLE I.

Blood from 1 fasting subject	Mg. per 100 cc. blood		
	Det. 1	Det. 2	Average
Venous blood	32	30	31 mg.
" "	33	30	31.5
Finger blood (decantation)	34.7	34.3	34.5
" " "	35.9	35.5	35.7
" " "	36.4	36.1	36.25
" " "	35.5	35.3	35.4
" " "	35.8	35.2	35.5
Finger blood (5 cc. aliquot)	40	37	38.5
" " "	38	38.1	38.05
" " "	36.8	39.3	38.05
" " "	36.8	37	36.9
" " "	44	47.2	45.6

The fasting level on finger blood was always found to run higher than that on blood from a veni-puncture, and the difference appears to be fairly constant.