15858

A Simple Means to Determine Exact Moment of Clotting in Prothrombin or Thrombin Time Determination.

RENÉ HONORATO. (Introduced by A. J. Quick.)

From the Laboratorio de Química, Escuela Dental, Universidad de Chile, Santiago, Chile.

The determination of the exact moment of coagulation by direct visual observation is at times difficult, especially if the solutions are water clear as happens for instance in following the action of purified thrombin on a fibrinogen solution. By employing the principle that the fluid in a test tube remains stationary when the tube is slowly revolved, one can accurately time the beginning of solidification since at that moment the contents revolve with the tube. The procedure as applied to the prothrombin time (one-stage method) is as follows: 0.1 cc of oxalated plasma is transferred to a small pyrex test tube (100 x 13 mm) by means of a 1 cc pipette graduated in 0.1 cc cut to 170 mm length (as recommended by Quick[1] for his method) and fitted with a rubber bulb from a medicine dropper. In transferring the plasma the tip of the pipette must touch the bottom of the tube and enough air blown through to produce a few bubbles which gather about the periphery. At least one-half of the circumference should be free of bubbles. The thromboplastin (0.1 cc) is carefully added, and then 0.1 cc of 0.02 M $CaCl_2$ is forcefully blown in to assure prompt mixing. At this moment the stop watch is started. The upper part of the tube is held by the last 2 fingers of the right hand and rotated slowly with the thumb and the first finger. By practice one learns the most advantageous angle at which the test tube is to be held and likewise the best speed of rotation. The bubbles are closely watched and the moment they revolve with the tube, the stop watch is clicked.

The test is performed in a glass water bath (the type used for the Wassermann reaction) kept at 37°C and illuminated by a desk lamp placed opposite the observer. The light must be focused so that the contents of the test tube can be observed while immersed in the bath. All reagents as well as the test tubes used for the determination are kept in the water bath.

[1] Quick, A. J., *Am. J. Physiol.*, 1947, **148**, 211.

15859

Intravenous Carbohydrate Tolerance Tests on Swine.

VERA M. HANAWALT, R. P. LINK, AND JESSE SAMPSON. (Introduced by F. W. Tanner.)

From the Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, and the Agricultural Experiment Station, University of Illinois, Urbana, Ill.

Early work[1-4] on carbohydrate tolerance indicated that the rise and fall of blood sugar after the administration of glucose are rapid and reproducible tests of the regulating mechanisms of carbohydrate metabolism. Although the reliability of the method as a diagnostic tool has been questioned because of divergent results obtained after repeated tests on the same normal individual, the procedure is of distinct value if the test is car-

[1] Liefmann, E., and Stern, R., *Biochem. Z.*, 1906, **1**, 299.

[2] Gilbert, A., and Baudouin, A., *C. R. Soc. biol.*, 1908, **65**, 710.

[3] Bang, I., *Biochem. Z.*, 1913, **49**, 19.

[4] Jacobsen, A. Th. B., *Biochem. Z.*, 1913, **56**, 471.