

8) and then incubated at 37.5° C. for 3 to 10 hours to allow for any possible formation of lactic acid. The lactic acid, after extraction and purification by Meyerhof's procedure,¹ was determined by the oxidation method, as modified by Friedemann, Cotonio and Shaffer.²

In every organ studied (kidney, testis, parotid, submaxillary, thyroid, cerebrum) a definite increase of lactic acid was obtained after incubation, an amount ranging from 1 2/3 to 30 times that originally present.

Investigation is now under way to determine the origin of lactic acid so produced.

¹ Meyerhof, O., *Arch. f. d. Ges. Phys.*, 1921, clxxxviii, 114.

² Friedemann, T. E., Cotonio, M., and Shaffer, P. A., *J. Biol. Chem.*, 1927, lxxiii 335.

3690

Glycolysis in Semen.

J. F. McCARTHY, C. T. STEPITA, M. B. JOHNSTON AND J. A. KILLIAN.

From the Department of Urology and the Department of Laboratories, New York Post-Graduate Medical School and Hospital.

In fresh specimens of semen obtained from 50 human subjects the sugar concentration varied from 67 to 658 mg. per 100 cc. In 80 per cent of the specimens the sugar content exceeded 300 mg. per 100 cc. The Shaffer-Hartmann method was utilized in these analyses. Fresh specimens of semen collected and maintained under aseptic conditions and containing motile spermatozoa showed a decrease in sugar when incubated at 38° C. for 6, 9, 12 and 24 hours. The final concentration of sugar after 24 hours incubation amounted to from 10 to 25 per cent of the original concentration. No glycolysis was noted in specimens placed in a water bath at 100° C. for 5 minutes before incubation. The lactic acid of fresh semen varied from 95 to 137 mg. per 100 cc., determined by the Brehme and Brahdly modification of the Clausen method. During incubation, an increase in lactic acid was noted coincident with the fall in sugar. Lactic acid, however, is not the end product of glycolysis, since in some specimens, the initial increase in lactic acid was followed by a subsequent fall. With Cullen's method the average pH of fresh semen was found to be 7.6. During the first 6 hours of glycolysis the pH rose to 8.0, and subsequently it fell to an acid reaction.