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A method for the determination of the diastatic activity of the blood with some observations obtained in diabetes and other conditions.

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The procedure introduced by Lewis and Benedict,¹ for the estimation of the sugar of the blood, is utilized in the estimation of its diastatic activity. Two 2 c.c. samples of oxalated blood are taken, and to one of these is added 1 c.c. of 1 per cent. soluble starch solution. Both tubes are now made up to 10 c.c. and incubated at 40° C. for 15 minutes. About 0.5 gram of dry picric acid is now added and the mixture stirred. When the proteins are precipitated, the tubes are centrifuged and the supernatant fluid filtered. The sugar in three cubic centimeter portions of the filtrates is now estimated according to the technique described by Myers and Bailey.² Correction is made for the sugar originally present in the blood (with the aid of the control) and for the slight reducing action of the soluble starch. The results are recorded in terms of the percentage of the soluble starch (10 mg.) transformed to reducing sugars (calculated as glucose) by the 2 c.c. of blood employed. It is believed that under the above conditions, the possible error of glycolysis is a negligible one.

The diastatic activity of the blood, according to this method, appears to vary from 15 to 25 in a variety of miscellaneous conditions in the human subject, while in diabetes, figures from 30 to 70 have been observed. The possible significance of these observations we are not prepared to discuss at the present time.

¹ Lewis and Benedict, *Jour. Biol. Chem.*, 1915, XX, 61.

² Myers and Bailey, *Jour. Biol. Chem.*, 1916, XXIV, 147.