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**The determination of small quantities of sugar in urine, including observations on the polysaccharide content of human urine.**By **STANLEY R. BENEDICT.***[From the Department of Chemistry, Cornell University Medical College, New York City.]*

Conditions have been found for carrying out the reaction between sugar and picric acid which render it possible to determine sugar in the presence of three or four times its weight of creatin or creatinine without affecting the results. When this reaction is applied directly to urine, figures for sugar are obtained which are only a few hundredths of a per cent. higher than those obtained after precipitation with mercuric nitrate as described by Benedict and Osterberg. After treatment of the urine with a suitable purified bone-black the figures obtained duplicate very closely those found with the mercuric nitrate method. The procedure recommended will be described in detail in the near future.

Using the new technique, observations have been made on the increase in reducing substance of normal urine which results from mild hydrolysis with hydrochloric acid. The increase in reducing substance thus obtained amounts to about 0.5 gm. per day calculated as glucose, for the 24 hour elimination of a normal human adult. Very much higher figures (several grams per day) have been observed in cases of diabetes mellitus which were under treatment, and where the glucose eliminated amounted to from 3 to 20 grams per day.

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**Disturbances in the development of mammalian embryos caused by radium emanation.**By **J. F. GUDERNATSCH** and **H. J. BAGG** (by invitation).*[From the Department of Anatomy and the Memorial Hospital, Cornell University Medical College, New York City.]*

As has been shown by various observers, the exposure of living tissues to the influence of radium rays leads to a severe injury and