

tric contents, or with the form of the acid curve. Determination of the alkaline tide furnished a method for checking the findings in the gastric juice, and has been found useful in establishing a possible anacidity in cases where satisfactory gastric analyses could not be obtained.

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The blood chemistry of thyroidectomized sheep.

By **AARON BODANSKY** (by invitation).

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A study of the blood chemistry of Dr. Sutherland Simpson's experimental flock has been undertaken as a part of a larger study of the metabolism of thyroidectomized sheep.

The flock consists of thyroidectomized individuals and normal controls. The thyroidectomized sheep were operated on at different ages, and to some of them were later administered thyroxin, thyroid gland or sodium iodide in the course of other experimental work. These administrations were discontinued about 10 months before the beginning of this series of analyses.

Some of the animals were withdrawn from the author's use for shorter or longer periods, and others were used simultaneously for other experimental work involving increased exercise. In the preliminary tests no attempt was made to control the diet of the animals in any manner. Later the uniform practice was adopted of taking the blood after a night of enforced rest in the sheep pens before the sheep were given their morning meal. Greater uniformity of results was then obtained and it became possible to observe certain broad distinctions between the normal and operated groups.

The blood was drawn from the jugular vein directly into tubes containing finely powdered potassium oxalate, which were kept in ice water until used for analyses. Folin and Wu's procedure was employed.

At this time enough determinations are available only for sugar and N. P. N. Sugar was found to range between 0.06 and 0.07

grams per 100 c.c. of blood for the normal animals and between 0.04 and 0.05 for the thyroidectomized ones. (A sharper division was observed when the blood was obtained several hours after the morning meal. The normal animals showed 0.1 – 0.12 grams per 100 c.c.; the thyroidectomized group showed 0.06 – 0.07 grams per 100 c.c.)

The values observed for N. P. N. were as follows: For normal sheep, 40–42 mgms. per 100 c.c., for thyroidectomized sheep 28–32 mgms.

Other data are incomplete, and will be reported later in connection with a new series of analyses to be undertaken on animals under better experimental control.

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Basal metabolism of premature and undersized infants.

By JOHN R. MURLIN and ELIZABETH MARSH.

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The basal metabolism of infants must be obtained during sleep and infants naturally sleep best when recently fed. Following the procedure employed by Bailey and Murlin¹ the infants of the present series were studied under those conditions while exposed in the respiration incubator² to an environing temperature of 27 to 29° C.

Studies on two premature infants were reported by Rubner and Langstein³ in 1915 and a preliminary report of several cases has been made recently by Talbot.⁴ The former authors found the metabolism of a 2 months' premature infant on the 27th day after birth to be 973 calories per sq. meter per 24 hours (Meeh-

¹ Bailey and Murlin, *Journ. of Obstet.*, 1915, lxxi, No. 3.

² Murlin, J. R., *Amer. Journ. Dis. of Children*, 1915, ix, 42–58.

³ Rubner and Langstein, *Archiv. f. Physiologie*, 1915, p. 39.

⁴ Talbot, F. B., *PROC. SOC. EXP. BIOL. AND MED.*, 1922, xix, 309.