important amount of the metabolism of individuals having "ketosis". It follows that this mechanism of fat utilization could operate when the body is oxidizing fat without showing ketosis.

9228 P

A Method for Determination of Blood Acetone Bodies.

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A satisfactory method for the determination of the acetone bodies in blood at low levels or suitable for use with small volumes of blood has not hitherto been available. An attempt has been made to devise a method which combines the sensitivity of the iodine titration (Hubbard's Method) with the specificity of the Denigè's-Van Slyke method. In this method the ketone bodies are precipitated as in Van Slyke's method, this precipitate is freed from contaminating material by washing, it is dissolved in acid and is distilled with heat into alkaline iodine which can be titrated with thiosulfate. Oxidation of the ketones is carried out in a large centrifuge tube with a small volume of liquid, which allows the acetone precipitate to form with very small quantities of acetone. Barium chloride is added and the fine barium sulfate precipitate helps to prevent the loss of the acetone mercuric sulfate precipitate when decanting.

Briefly the procedure is as follows: 2 cc. of oxalated blood is lyzed with 14 cc. water in a 50 cc. centrifuge tube and 14 cc. of mercuric sulfate solution (as in the Van Slyke method[1]) added with shaking. After standing an hour this is centrifuged and the supernatant liquid filtered. Ten cc. of filtrate* is placed in a special centrifuge tube with a ground glass joint and 4 cc. of a solution added which contains per 100 cc.: 70 cc. of the above mentioned mercuric sulfate solution, 20 cc. of 50% sulfuric acid, and 10 cc. of water. Connected by the glass joint to a reflux condenser this mixture is boiled for 90 minutes. As soon as boiling has commenced 0.5 cc. of 5% potassium dichromate is added. The tube is then cooled, 3-4 drops of 10% barium chloride is added and then centrifuged at high speed for 10 minutes and the supernatant liquid carefully poured off.

[1] Peters and Van Slyke, *Quantitative Clinical Chemistry*, 625.

* Filtrates prepared in this manner from diabetic blood must be treated further for the high sugar present.

TABLE I.
Recovery of Acetone from Pure Acetone Solutions and Following the Oxidation of β-hydroxy-butyric Acid (Racemic).

Acetone		β-hydroxy-butyric acid	
Present mg.	% recovered	Mg. % by Van Slyke method	% recovered
.0178	71.4	3.96	75.8
.0378	73.6	11.75	73.1
.0550	74.6	24.1	79.3
.0735	70.1	36.1	77.0
.0770	71.2	59.1	77.9
.0910	73.6		
.0960	76.0		
.1098	74.5		
.1543	76.6		
.1704	75.0		
.1931	74.9		
Aver.	73.9		76.6

Five cc. of 10% sodium hydroxide is used to wash the precipitate and decanted after centrifuging. Ten cc. of 20% hydrochloric acid is added and the tube connected by a ground glass joint to a distilling condenser, the delivery tip of which dips below the surface of an excess of iodine (.001 N) made alkaline with 5 cc. of 40% sodium hydroxide. After distillation of almost all the liquid in the special tube, the receiving flask solution is acidified with 50% sulfuric acid and the excess iodine titrated with thiosulfate. In Table I is shown the recovery of acetone from pure solutions (74%) and from the Denigè's-Van Slyke precipitate formed by the oxidation of β-hydroxy-butyric acid (76%). Recovery of these substances when added to ketone-free blood is essentially the same. Until more information as to the relative concentrations of the various acetone bodies in the blood in ketonemia is available we are expressing our results as acetone, and using the factor 1.33.

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Early Effect of Total Thyroidectomy in a Case of Polycythemia vera (Vaquez-Osler Syndrome).

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Up to the present time the etiology of polycythemia vera has not been clarified nor have the methods of treatment proposed met