Marenzi procedure, while with the use of a greater amount of another type of charcoal tyrosine could be detected in the charcoal filtrate.

By use of the method of preparation here described the concentrated liver extract contains tyrosine, which Subbarow, Jacobson and Fiske[2] postulate as one of the factors necessary for blood formation.

Summary. 1. A method for the preparation of a concentrated liver extract is described in which the precipitation of $CaCO_3$ by the interaction of $CaCl_2$ and Na_2CO_3 is used to remove protein, and the active principle is subsequently adsorbed on norit. Of this extract 3 cc are derived from 100 g of fresh liver. 2. The extract is effective in the treatment of pernicious anemia in relapse and in the maintenance of a normal red blood cell level. 3. Some properties of the extract are discussed. 4. Tyrosine is present in the final product.

10156 P

Determination of "Hormone Iodine" in 5 cc. Blood.*

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In a series of 100 determinations of blood iodine by the McClendon-Bratton method it appeared as if a long time was required to eliminate a dose of Lugol's solution from the blood.

This suggested the desirability of developing a method for fractionating quantitatively the iodine of blood. We found when a sample of blood is divided into 2 parts and to 1 part KI is added and then the blood samples are subjected to the following procedure that the KI does not appreciably raise the blood iodine.

Five cc of blood is spurted through a fine opening into 100 cc of methanol in a glass-stoppered flask of capacity of about 115 cc to the stopper. This is violently shaken and then allowed to settle. The methanol is decanted and 100 cc of acetone introduced and the shaking repeated. An 8-inch length of ⅜-inch Visking sausage casing is closed at one end by any method, and the other end tied onto a 100 cc burette without stop-cock. The acetone suspension is shaken and poured into the burette. The acetone filters through

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the casing and the blood residue remains in the casing. After the visible liquid has evaporated, the casing is suspended in air and dried 24 hours or in an oven at 100° and dried for one hour and then analyzed by the McClendon-Bratton method.[1]

It was shown that although KI is washed out of the blood by this means that thyroglobulin-iodine added to the blood is entirely retained. Therefore the method is provisionally considered a method of determining "hormone iodine."

	Hormone Iodine
5 cc beef blood	0.55 γ
5 cc beef blood + 0.5 γ thyroglobulin-iodine	1.04 γ
5 cc beef blood + 1 γ iodine as KI	0.56 γ

The values of 125 determinations on human blood obtained by this method are near 0.3 γ in 5 cc whereas the normal of total blood iodine is near 0.5 γ in 5 cc. Taking 2.5 g iodide by mouth did not greatly raise the "hormone iodine."

10157 P

Effect of Solutions of Salts Normally Present in the Body on Imbibition of Water by Brain Tissue *in Vitro*.*

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Earlier experiments[1] on the effects of solutions of various salts on brain cells have led indirectly to this study of imbibition of water in salt solutions by whole brains of white rats.

The rat's brain was chosen in order to find the reaction of the whole organ, so that the relation of surface to mass should be relatively constant. As might have been anticipated, Parry[2] found this relation to be a factor in variations in the degree of swelling of muscle tissue.

If the swelling is not allowed to go on until a constant is reached,

1 McClendon, J. F., and Bratton, A. C., *J. Biol. Chem.*, 1938, **123**, 699.

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1 Ludlum, S. DeW., Taft, A. E., and Nugent, R. L., *Arch. Neur. and Psy.*, 1930, **23**, 1121.

2 Parry, A. A., *J. Cell. and Comp. Physiol.*, 1936, **8**, 277.