rhodanate animals showed an average increased depth of anesthesia and retardation of recovery over the controls.

These results confirm the work of Henderson and of Burkholder and are in absolute contradiction to the claims of Bancroft regarding the pharmacological action of sodium rhodanate. Bancroft's therapeutic claims based upon such experiments are therefore unwarranted.

6713

Thermolability of the Tissue Extract Factor in Extract Activation.

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The writer has found that the addition of one volume of rabbit plasma to 60-100 volumes of chick embryo extract greatly increases the coagulative power of the extract[1]; that the increase of power is due to the appearance of a body which shows the same sensitivity to heparin as thrombin[2]; that the body reacts like thrombin in the presence and absence of ionic calcium[3]; that thermolability studies on the plasma factor indicate that this factor is prothrombin[4]. Mills and Matthews[5] found that mixtures of rabbit serum and lung extract show a temporary increase in coagulative power. Burns, Scharles, and Aitkin[6] have recently restudied the clotting power of extracts and sera from various sources. The papers cited above and some unpublished work made it reasonable to suppose that the cephalin in tissue extracts might be the factor involved in activation.

It is generally accepted that the only coagulation factor surviving boiling is cephalin. Mills[7] uses this as a method of distinguishing between tissue fibrinogen and cephalin in his study of blood platelets.

In this study chick embryo extract is made by extracting a 10 day embryo with Ringer solution. Coagulative power is tested by determining the shortening of the clotting time of a recalcified

1 King, Joseph T., *Arch. f. Exp. Zellforschung*, 1931, **10**, 467.

2 King, Joseph T., *Am. J. Physiol.*, 1932, **101**, 64.

3 King, Joseph T., PROC. SOC. EXP. BIOL. AND MED., 1932, **29**, 1112.

4 King, Joseph T., in press.

5 Mills, C. A., and Matthews, Stewart, *Am. J. Physiol.*, 1922, **60**, 193.

6 Burns, E. L., Scharles, F. H., and Aitkin, L. F., *Am. J. Physiol.*, 1931, **97**, 233.

7 Mills, C. A., *Chinese J. Physiol.*, 1927, **1**, 235.

citrate rabbit plasma. Clotting time is done in 10 mm. tubes. In each test 2 drops of citrate plasma plus optimal amount 1% $CaCl_2$ plus 1 drop of the coagulant plus sufficient .9% NaCl to make a total of 10 drops are used. In this way the concentration of fibrinogen is kept constant. Activation is carried out by adding 1 part of citrate plasma to 20 parts chick extract. Pipettes are calibrated to drop 0.05 cc. Determinations have been made between 30° C. and boiling at intervals of 10°. Extracts are held at the designated temperature for 10 min.

There is a marked decrease in the power of the unactivated extract in this range, the main decrease taking place below 60° C. After testing, each extract is then activated and retested as soon as the added plasma coagulates. It is found that the increase in the clotting power of heated extracts is at least as great as in the unheated. In a typical experiment the following data were obtained: Recalcification time for the citrate plasma 14 min.; with 1 drop of unactivated, unheated tissue extract 4 min.; 1 drop same extract activated 45 seconds; 1 drop unactivated heated (boiling bath 10 min.) extract 11 min. 15 sec.; 1 drop same extract activated 1 min. 30 sec.

When the degree of activation is calculated according to the method used by Mills[5] it is seen that the heated extract is at least as capable of activation as the fresh unheated extract.

These data suggest that cephalin is the factor present in tissue extract which renders it capable of activation. This conclusion is in accord with facts developed by previous workers.

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Notes on Ultra-Violet Transmission of New and Used Dyed Cellophane Light Filters.

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Withrow[1] has described a series of dyed cellophane light filters for securing several sharp cut-offs in the ultra-violet region, and states that 2 sheets of cellophane soaked in sodium benzoate will absorb all radiations shorter than 2890 A.U., 2 sheets soaked in potassium acid phthalate absorbing all radiations shorter than 3130 A.U.,

[1] Withrow, R. B., *Bull. Bas. Sci. Res.*, 1931, **3**, 82.