Although the final results are read after overnight incubation, it will be found that the strongly positive serums either react spontaneously after adding antigen or show the presence of definite precipitates after several hours incubation. From fifteen to seventeen hours is more than ample for incubation. Prolonged incubation beyond these hours is to be avoided. An element which will give false weak reactions particularly after prolonged incubation is the employment of tubes which will permit considerable evaporation of the serum during the incubation period. Agglutination tubes having an inner diameter of about 0.8 cm. will be found to give best results.

We have not found it necessary to employ sterile salt solution. Chemically clean but not sterile precautions are required in this test.

STATUS OF IMPROVED PROCEDURE.

The combination of the two steps outlined, together with proper negative and positive controls, forms in our experience a more dependable test than that originally described.

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Dilution of antigen for Wassermann test.

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In the previous communication, the author described a method for preparing antigen for the Kahn Precipitation Test and showed (Procedure II) that the sediment formed on mixing and centrifuging equal quantities of antigen and salt solution may be redissolved in salt solution and employed in the above test for syphilis. The question came up whether the same sediment taken up in salt solution may not be used as an antigen in the Wassermann test and the following experiments were carried out accordingly.

A cholesterinized extract regularly used in the Wasserman test in a dilution of 1 : 70 with salt solution was employed. One c.c. of this extract was measured into a small tube and one c.c. of salt solution added to it. This was mixed and centrifuged, after which the supernatant fluid was poured off and the sediment suspended in 70 c.c. salt solution. This mixture was tested for anti-complementary, hæmolytic and antigenic properties side by side with a suspension prepared by slowly adding 70 c.c. saline to 1 c.c. antigen.

It was found that the suspension prepared from the sediment which resulted from mixing equal amounts of salt solution and antigen was considerably less anticomplementary as well as less hæmolytic than the suspension prepared by adding salt solution to antigen in the regular manner. It was further found that the antigenic properties of the suspensions resulting from either of the two modes of mixing with salt solution was about the same. Similar experiments gave the same results.

Clinical studies may ultimately establish that salt solution suspensions of the lipoid sediment possess high specificity and that the occasional non-specific Wassermann reaction given by cholesterinized antigens may be avoided by employing resuspended antigen-salt solution sediments.

161 (2121)

A phyto-pharmacological study of some heart drugs.

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A number of heart drugs or poisons belonging to the digitalis group were examined in respect to their toxicity for plant protoplasm. The method used was the same as that followed by the authors in a study of cocaine, alcohols, quinine alkaloids, etc.[1]

[1] Macht, D. I., and M. Livingston, *J. Gen. Physiol.*, 1922, iv, 573.