3200

A slide test for the diagnosis of syphilis.

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A simple slide test has been developed which seems to possess certain advantages over previously described serum tests. The stock antigen is stable. Inactivation of serum is unnecessary. The time required to make the test is two minutes. No special laboratory equipment or facilities are required.

Antigen preparation: Fresh veal hearts are selected, and the superficial fat removed. The muscle is ground in a sausage grinder, and spread on paper and dried by an electric fan. After it is completely dried, it is powdered in a mortar and extracted with ether. Four hundred cc. of ether are used to each 100 gm. of powdered heart and allowed to act for ten minutes, shaking frequently. The ether is filtered off and 300 cc. are again added to the heart and treated in the same manner. The heart muscle is again treated with 300 cc. of ether, and again a third time, the ether in each instance being filtered and discarded. The heart muscle is now dried free from ether, and for each gram of muscle, 5 cc. of 95 per cent alcohol is added and maceration is allowed to continue for three days at room temperature, after which the alcohol is filtered off and made up to the original volume with 95 per cent alcohol. This constitutes the defatted alcohol heart extract for the antigen. Six decigrams of cholesterol and 3 cc. of glacial acetic acid are added for each 100 cc. of the alcoholic extract. This is filtered after solution is effected and constitutes the finished special antigen for this test. This antigen seems to be stable for at least several weeks.

Technic: One cc. of antigen is measured into a test tube and 2 cc. of distilled water into a second tube (normal saline can be used, but the solution is unstable). Mixing is effected by pouring the solution from one tube to the other at least six times.

Two drops of serum are placed upon a clean slide about the junction of the middle and outer third. With a pipette, used only for the antigen dilution, three drops of the dilution are placed upon the slide near, but not into the serum. These are mixed

on the slide thoroughly with a toothpick, and the slide slowly rocked for two minutes. If the serum is positive, a characteristic granular precipitate which can be easily seen, develops during the rocking process. If negative, no specific precipitate forms within the two minute time limit.

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The nature of the toxic principle of the scarlet fever streptococcus for rabbits.

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In the present communication we wish to report the results obtained in an effort to produce toxic effects in animals with the *streptococcus scarlatinae* and to briefly discuss the toxemia and exanthem of the disease in the light of these experiments. The work was undertaken because of our previous failure to induce acute toxic nephritis in the rabbit either with large doses of viable culture or massive quantities of culture filtrate. In fact we were unable in the earlier experiments to infect the rabbit even with large amounts of scarlet fever streptococci. The fact that in human scarlet fever there is so frequently a nephritic complication, presumably toxic in origin, led us to attempt to induce experimentally the kidney lesion. We assumed at the time the specific streptococcus *in vitro* would yield a soluble toxin.

Three separate isolations of the scarlet fever streptococcus were employed in our present study upon the nature of the toxic principle. Two cultures, one designated "Harrison", the other "Tyler", were supplied us by Dr. Dick of Chicago, while the third culture was one of our own which had been recovered here from the blood of a case of scarlet fever.

EXPERIMENTAL.

Separate series of rabbits were injected subcutaneously, intradermally and intravenously with varying quantities of the filtrate