The next step undertaken was to determine the stability of the sheep-cell-hemolysin union. This is of practical importance inasmuch as many workers "sensitize" sheep-cells by placing a mixture of cells and hemolysin for 1 hour in the water-bath, while our studies suggested the possibility of dissociation of cells and hemolysin during this period.

Our findings indicate that there is little difference between the quantity of hemolysin absorbed after 10 minutes extraction at room-temperature as compared with 1 hour extraction in the water-bath. In a few cases, less extraction was observed at the latter time and temperature compared with the short extraction period at room temperature. There are two probable explanations for this finding; first, the dissociation of cells and hemolysin after prolonged exposure at warm temperature; second, the hemolysis of a small number of corpuscles due to agitation, causing some absorbed hemolysin to get back into solution.

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The effect of heat on specific complement fixing antibodies.

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The comparative thermostability of specific complement fixing antibodies resulting from protein immunization, and thermolability of so called complement fixing antibodies present in syphilitic sera, was recently reported by one of us[1] in these PROCEEDINGS. The former antibodies were found to withstand a temperature of 70 degrees C., while the latter were destroyed between 62 and 65 degrees C. In view of the fact that more and more interest is being developed in complement fixation in connection with bacterial diseases, these studies were extended to complement fixing antibodies resulting from bacterial immunization.

[1] Kahn, R. L., PROCEED. SOC. EXP. BIOL. AND MED., 1921, xviii, 171.

Three antisera were employed: (1) Antityphoid (rabbit) serum, (2) antiabortion (ox) serum and (3) antimallei (rabbit) serum. The antigens were bacillary suspensions of the specific organisms titrated in accordance with standard technique. The complement fixation tests were carried out in each case with unheated serum and the same immune serum subjected to different temperatures up to 85 degrees C., for varying intervals.

It was found after subjecting these sera to a water-bath temperature of 65 degrees C. (the thermal destructive temperature of syphilitic sera) for 1 hour, that the antibodies remained in tact. Higher temperatures showed varying degrees of antibody destruction depending particularly on the time of exposure. One hour heating at 70 degrees C. caused between 20 and 60 per cent. of antibody destruction. Thirty minutes exposure at 75 degrees C. caused between 80 to 90 per cent. of destruction. Fifteen minutes at 80 degrees C. destroyed the antibodies completely.

151 (1733)

On the persistence of complement fixing antibodies in the serum of rabbits immunized with purified proteins.

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This report is based on two experiments: Rabbit A was immunized intravenously with edestin and Rabbit B, intraperitoneally with phaseolin. Rabbit A received the first injection of protein November 15, 1920, and the last, eight days later. The quantities injected were 50, 75, 100, 125 and 150 mgm.—a total of 0.5 gm. Rabbit B received its injections between December 28, 1920, and January 5, 1921; the quantities were 100, 150, 200, 250 and 300 mgm. of protein—a total of 1 gm. The sera of these rabbits were examined from time to time for the presence of specific complement fixing antibodies, the last examination having been made on May 5, 1921. The results showed a gradual de-