the desire to partake of food and the amount of vitamin-B which is ingested. Yeast and tomato juice were used as sources of vitamin-B in his experiments. The increase of appetite which followed the administration of these products was believed to be due to the vitamin-B contained therein since yeast appeared to be less potent in this respect when autoclaved. This conclusion is supported by the results obtained in our experiments in which extracts of rice polishings, wheat embryo and navy bean were tested for the property of promoting appetite in dogs which had been fed on a diet lacking this dietary essential. The administration of any one of these preparations to such a dog was followed by a recovery of appetite which lasted for varying periods. All of these products were demonstrated to contain vitamin-B by tests on polyneuritic animals (pigeons and dogs). The potency of these products in promoting appetite seemed to parallel their potency in relieving symptoms in polyneuritic animals and this parallelism suggests that vitamin-B is the appetite-promoting factor in the preparations used.

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Further studies on the affinity of sheep-corpuscles for anti-sheep hemolysin.

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In previous studies[1] on the rate of absorption of anti-sheep hemolysin by sheep corpuscles, it was shown that 0.05 c.c. of packed sheep-cells added to a saline solution containing 400 units of hemolysin, will absorb as many as 390 units after 10 minutes extraction at room temperature. The hemolysin was obtained by immunizing rabbits with sheep-cells in the usual manner and a unit was taken to be the smallest quantity which

[1] Kahn, R. L., and Lyon, D. S., *Proceed. Soc. of Amer. Bacter.*, Lansing Branch, 1920; *Abst. of Bacter.*, 1921, v, 23.

hemolyzed 0.1 c.c. of a 5 per cent. suspension of packed sheep-cells in the presence of 0.1 c.c. (2 units) of pooled guinea-pig complement after 15 minutes incubation in the water-bath. It was observed also that extraction periods of 5, 10, 15 and 20 minutes did not show any marked differences in the number of hemolysin units extracted by the corpuscles. A study of the effect of temperature on the rapidity of hemolysin extraction, indicated but a small increase in the number of units extracted at water-bath as compared with ice-box temperature.

With this data on hand, a quantitative study was undertaken of the hemolysin absorption capacity of 0.05 c.c. of packed sheep-cells when employing different concentrations of hemolysin. Accordingly 0.05 c.c. quantities of centrifugalized cells were added to a series of tubes each containing different quantities of hemolysin in 1 c.c. quantities of saline. The extractions were carried out for 10 minutes at room-temperature, after which period the cells were thrown down by rapid centrifugation and the number of unabsorbed hemolysin units remaining in the supernatant fluid, determined. The following table gives the results obtained in one of a series of such experiments.

TABLE SHOWING THE EFFECT OF THE CONCENTRATION OF HEMOLYSIN ON THE ABSORPTION CAPACITY OF 0.05 C.C. OF PACKED SHEEP-CELLS.

Tube No.	No. of Units Per c.c.		No. of Units in Supernatant fluid.	No. of Units Extracted.
1	14,300	0.05 c.c. packed sheep-cells added to each tube and extraction permitted for 10 minutes at room-temperature, followed by rapid centrifugation.	5,550	8,750
2	10,725		2,500	8,225
3	7,150		1,250	5,900
4	3,575		199	3,376
5	2,860		150	2,710
6	2,145		67	2,078
7	1,430		33	1,397
8	715		10	705
9	357		1	356
10	178		0	178

The marked affinity of sheep-cells for anti-sheep hemolysin is well illustrated in this table. In similar studies by Morgenroth and Arrhenius,[2] an hour extraction period was employed, while the quantity of sheep-cells used for extraction is not stated.

[2] Arrhenius, S., "Immunochemistry," 1907, p. 150.

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.