TABLE 1.

Indicator	cc. N/10 alkali per 100 cc. blood.						
	over −5 no.	to −5 no.	to −2 no.	−1 to +1 no.	to +2 no.	to +5 no.	over +5 no.
Methyl red	1	7	2	15	3	15	4
Thymolphthalein	3	4	5	8	2	9	16

Negative values have been used where the concentration of alkali was lower in the specimen collected after the meal than it was in the first one.

The titration to the thymolphthalein endpoint is distinctly less accurate than is that to methyl red, but the author feels that in such experiments as are reported here, where the two analyses are run almost simultaneously under comparable conditions, a fair degree of confidence can be placed in the results. Whether the figures obtained at the more strongly alkaline reaction should be regarded as more than simply confirmatory of those obtained with methyl red, is a point which should probably be regarded as open to question. The decrease in difference between the two values implies a decrease in the soluble acid buffers active in the blood, but whether this really occurs, and represents a part of the accommodation of the organism, cannot be considered as definitely established by the figures given.

[1] Sumner, J. B., and Hubbard, R. S., *J. Biol. Chem.*, 1923, lvi, 701.
[2] Brill, I. C., *J. Lab. Clin. Med.*, 1925, viii, 727.
[3] Benedict, S. R., *J. Biol. Chem.*, 1925, civ, 207.

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Chemical Analysis of Incubated Non-Fertile Eggs.

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Fresh eggs, procured from White Leghorn chickens, were analyzed to obtain data on the chemical changes occurring before incubation. Then eggs from the same source were incubated, and the non-fertile ones analyzed at various periods of time, up to 20 days, for carbohydrate, and non-protein nitrogen constituents, using a protein free filtrate prepared by the Folin-Wu method. Table I presents a summary of the data obtained.

TABLE I.
CHEMISTRY OF INCUBATED, NON-FERTILE EGGS
(All eggs tested for sterility before analysis.)

A. ALBUMIN.
Mg. per 100 grams.

Substance Analyzed	0 days	5 days	10 days	20 days
	%	%	%	%
Water	88.21	87.3	86.5	85.3
N. P. N.	7.34	8.97	7.12	13.80
Urea N.	1.92	1.10	0.67	3.17
Uric Acid N.	0.20	0.28	0.23	0.23
Amino Acid N (free)	3.28	4.02	5.34	6.41
Free Sugar	464.	466.	441.	432.
Hydrol. Sugar Folin	221.	172.	176.	154.
Hydrol. Sugar Benedict	405.	359.	366.	356.

B. YOLK.

	%	%	%	%
Water	50.21	49.1	53.6	60.5
N. P. N.	66.7	72.2	64.0	64.7
Urea N.	6.49	5.66	5.52	8.86
Uric Acid N.	0.196	0.15	0.17	0.19
Amino Acid N (free)	49.2	43.3	45.2	47.4
Free Sugar	245.	255.	240.	277.
Hydrol. Sugar Folin	118.	82.	116.	125.
Hydrol. Sugar Benedict	297.	332.	294.	299.

The following conclusions may be drawn:

All (99.2%) of the free sugar of the albumin is fermentable in contrast to the yolk, which contains a small amount of non-fermentable sugar (from 7 to 12%).

The hydrolyzable sugar content of the albumin is greater than that of the yolk. Only a relatively small proportion (40 to 50%) of this is fermentable by yeast.

The free amino acid and non-protein nitrogen content of the yolk is very high, as compared with that of the albumin.

Incubated, sterile, non-fertile eggs do not undergo any appreciable changes in their free sugar, hydrolyzable sugar or non-protein nitrogen constituents, over an incubation period of 20 days.