medium. These facts are illustrated by the following summary of an experiment, in which 5 c.c. of a suspension of cells with serum, of cells with heated serum, and of serum alone, were kept at 37° C. for five days:

	Cells + Serum. c.c. $\frac{n}{10}$ H_2SO_4.	Cells + Coagulated Serum. c.c. $\frac{n}{10}$ H_2SO_4.	Serum. c.c. $\frac{n}{10}$ H_2SO_4.
With 0.2 per cent. sodium bicarbonate.	8.0	35.15	6.25
Reaction unchanged.....	9.9	27.00	4.60
With 0.2 per cent. acetic acid.....	33.8	26.30	13.75

The anti-enzymotic power exhibited by the serum of the inflammatory exudate is possessed by the serum of the blood, from which it doubtless passes into the exudate. In the later stages of inflammation produced by aleuronat, and in exudates caused by bacteria, there is some diminution of the anti-enzymotic action.

43 (89). **"Shallow well-waters of Brooklyn": JAMES P. ATKINSON.**

Many streets of Brooklyn are without a public water-supply and a sewage system. The residents of these streets are therefore dependent upon wells for their water-supply, and upon privy vaults and cesspools to remove the sewage and waste water of their homes. The soil is uniformly sandy and water may be had by driving a pipe or digging a few feet below the surface. The water obtained is to a certain extent surface water. The underground water is necessarily influenced by the sea water. This influence is very marked in some instances, as is shown by the high chlorin content, accompanied by the low contents of other constituents that could indicate sewage contamination.

The following tables present average analytic data regarding condemned shallow wells, also regarding wells considered to be of a suspicious quality and wells which were passed as being of fair quality. Very few of the latter class were considered to be of good quality, and some might possibly have been classed as suspicious upon their high nitrate contents, considered with the proximity of the sources of contamination.

Tables giving average, and high and low results of analyses of 438 shallow wells in Brooklyn, N. Y., which are used for domestic purposes; also similar analytic data obtained for 14 deep wells used for manufacturing purposes. The figures represent parts in 100,000.

A.—82 CONTAMINATED WELL WATERS.

	Cl.	NO_2.	NO_3.	Free NH_3.	Alb. NH_3.	Total Solids.	Loss on Ignition.	Depth of Well.	Distance From Source of Contamination.
A	4.64	0.0018	0.70	0.0236	0.0045	31.92	5.20	29 feet.	47 feet.
L	0.70	.0001	0.30	Trace.	.0004	12.30	1.30	15 "	10 "
H	9.00	.0100	3.60	.4900	.0400	60.80	17.00	65 "	150 "

B.—59 SUSPICIOUS WELL WATERS.

A	5.33	0.0006	0.634	0.0057	0.0035	34.82	5.49	27 feet.	45 feet.
L	0.80	.0004	Trace.	Trace.	Trace.	7.90	0.40	8 "	20 "
H	32.00	.0025	2.400	.0875	.0180	222.90	34.40	45 "	75 "

C.—297 UNCONTAMINATED WELL WATERS.

A	2.94	Trace.	0.582	0.0026	0.0031	28.41	4.86	27 feet.	43 feet.
L	0.40	None.	Trace.	Trace.	Trace.	7.50	0.30	6 "	10 "
H	12.10	.0003	3.600	.0190	.0270	101.50	39.50	52 "	100 "

D.—14 UNCONTAMINATED DEEP WELL WATERS FOR BREWERY AND FACTORY USE.

A	5.60	Trace.	0.300	0.0010	0.0020	50.20	15.00	100 feet.	
L	0.80	None.	0.040	Trace.	Trace.	13.70	4.90	55 "	
H	17.00	.0002	0.400	.0030	.0065	101.90	30.70	227 "	

A, average figure. L, lowest figure used in average. H, highest figure used in average.

The highest and lowest figures which enter into the averages are also given. These figures do not represent any particular analyses, but are selected from the different results from which the averages were made. Table D gives the average data for deep wells that supply water for manufacturing purposes. These data may be used as standards in judging the purity of wells whose waters are used for domestic purposes.

Of these waters, 67.9% were considered to be of good quality; 13.4% were considered to be of suspicious quality; 18.7% were considered to be contaminated and unfit for domestic purposes. It was found impossible, as a rule, to use the figures for chlorin and ammonia contents of these Brooklyn waters in judging their purity. The nitrates might give some clue to the condition, but it was mainly upon the nitrites that one had to depend. There was in each case of condemnation ample chance of pollution through

privy or cesspool, and in many cases there were other sources, such as stables for horses and cows, pig sties, chicken yards, etc. When the nitrites were as high as 0.001 parts per 100,000 the water was condemned. When the nitrites ranged between 0.0003 and 0.001 parts per 100,000, the water was considered to be of suspicious quality and warning was given to boil before using for domestic purposes. In Brooklyn and Queens there are waters of known purity which show nitrites as high as 0.0003 parts per 100,000. Therefore, when nitrites amounting to 0.0003 parts per 100,000 were found, with other constituents of the water suitably low, such waters were passed as fit for domestic purposes.

It will be noticed on comparing the average figures in tables A, B and C, that nitrites decrease with ammonia, and that the figures for nitrates are about the same in each table. The average chlorin in table C is much lower than in tables A and B, while the average depths of the wells and their average distances from the sources of contamination are about the same. The nitrogen averages in table C approach those in table D. If one takes the nitrogen figures of the deep wells as a standard, the conclusion may be drawn (1) that the sandy soil of Brooklyn cannot be relied upon as a safe filter; (2) that Brooklyn soil in populous districts, so far as the author's evidence goes, seems to be nearing the saturation point with sewage; and (3) that, consequently these shallow wells are in growing danger of pollution.

44 (90). **"The influence of the external temperature upon the viscosity of the blood": RUSSELL BURTON-OPITZ.**

It was proved by a series of determinations that the viscosity of the "living" blood can be greatly influenced by changing the temperature of the surrounding medium. The viscosity was found markedly increased, if the dogs used in the experiments were immersed in water at 25° C. Warm water baths (42° C. to 45° C.) produced a corresponding decrease in the viscosity. The specific gravity of the blood was changed in a corresponding manner.

45 (91). **"The changes in the viscosity of the blood during narcosis": RUSSELL BURTON-OPITZ.**

Determinations of the viscosity of the "living" blood were made during deep and light ether and chloroform narcosis. It