doses in proportion to its smaller molecular weight. Particulars will be reported later. The authors emphasized the fact that these salts are very poisonous when certain maximum doses are exceeded.

42 (88). **"Enzymes and anti-enzymes of inflammatory exudates": EUGENE L. OPIE.**

Exudates obtained by injecting suspensions of aleuronat into the pleural cavities of dogs and rabbits were subjected to autolysis. The Kjeldahl method was used to determine the nitrogen of coagulable proteins converted by digestion into soluble form.

Inflammatory exudates removed one or two days after injection of the irritant undergo very little change, while those removed three or four days after the onset of inflammation exhibit appreciable though slight autolysis. There is no relation between the amount of digestion and the number of cells which are present. If the cells are separated by centrifugalization from the serum and suspended in normal salt solution, well-marked autolysis is demonstrable. By recombining cells and serum it can be shown that the serum inhibits this autolysis. When this inhibitory action is prevented by heating serum to 100° C., leukocytes acting upon the coagulated serum cause very active digestion. In the following experiments nitrogen of uncoagulable substances is represented by cubic centimeters of $\frac{n}{10}$ sulfuric acid:

	c.c. $\frac{n}{10}$ H_2SO_4.
5 c.c. suspension of cells at 37° C., 5 days	9.30
Control	3.60
5 c.c. serum	7.25
5 c.c. cells + 5 c.c. serum, at 37° C., 5 days	10.95
Control	10.85
5 c.c. cells + 5 c.c. coagulated serum, at 37° C., 5 days	23.10

The anti-enzymotic action of the serum is unaffected by a temperature of 65° C., but is prevented at 75° C. The proteolytic ferments of the leukocytes act both in an acid and in an alkaline medium, but are most efficient in the latter. The anti-enzymotic action of the serum is favored by an alkaline reaction, but is completely prevented in an acid medium. The serum of the exudate contains a proteolytic ferment, which is active only in an acid

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.