

Ringer's solution (Table II., Fig. 2). In the small quantities of fluid a strong acid reaction developed during the hour. This led to rigor and opacity of the muscle by the end of the fourth hour. This change was accompanied by a marked increase in the rate of acid output not only in the muscle but in the medulla and in the sciatic nerves. Probably death changes were also occurring in the nervous tissues. Where sufficient solution was present to maintain neutrality, no secondary maximum of acid production developed.

It will be noted from the graphs and tables that a marked fall in rate occurs during the first hour, and that the medulla has a higher rate of acid production than muscle while the sciatic nerve has an extremely low rate. Under appropriately headed columns of the tables are given the ratios of rate of acid output in the sciatic nerves to that of the medulla and to that of the muscle of the same animal. In view of the fact that Mathews¹ states that the respiratory rate of nerve fibers is "higher than that of any other tissue examined," it is interesting to note that under identical conditions of experiment, nerve fibres produce carbon-dioxide at 10-20 per cent. of the rate of the medulla and at 15-30 per cent. of the rate of muscle.

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Volumetric analysis of ion-protein compounds.

By JACQUES LOEB.

[*From the Laboratories of the Rockefeller Institute for Medical Research, New York.*]

The speaker demonstrates that gelatin at $\text{pH} > 4.7$ combines only with cations and at $\text{pH} < 4.7$ only with anions, while at the isoelectric point ($\text{pH} = 4.7$) it combines with neither anion nor cation.

He shows further that the curves representing the influence of monovalent anions or cations upon the swelling, osmotic pressure and viscosity of gelatin are always approximately parallel with the curves representing the amount of anion or cation found in chemical combination with the gelatin.

¹ Mathews, A. P., "Physiological Chemistry, p. 590, 1915.