

Physiologically, as researches of the last twenty years clearly prove, the action of ions is of fundamental significance. The brilliant investigations of J. Loeb, and the long series of studies by various other physiologists of the influence of electrolytes upon colloids form perhaps the most telling evidence for this belief.<sup>1</sup> At all events there is no question that the simple equilibria between acids and bases and salts are of extreme importance in physiological processes. They lie at the very basis of the structure of all protoplasm,

ing dilution the conductance approaches a maximum value, nor, finally, the dilution law, was found to hold. Molecular weight determinations carried out at the same time by the boiling-point method gave normal values for non-electrolytes, and abnormally *large* values for electrolytes, whereas abnormally *small* values would be expected. This indicates that association has taken place, to a considerable extent, which in all probability takes place not only between molecules of dissolved substance, but also between these molecules and those of the solvent. Considering these circumstances, it is very fortunate for the advance of the sciences of chemistry and electro-chemistry that such complications are generally, although not always, absent in the case of aqueous solutions. It is due to this fact that it has been possible to deduce simple laws from a study of such solutions." — LE BLANC, "A Text-book of Electro-Chemistry." New York, 1907, pp. 142-143.

<sup>1</sup> Full discussion of such subjects will be found in the "Dynamics of Living Matter," by Loeb, and in his contribution to Oppenheimer's "Handbuch der Biochemie," as well as in Höber's "Physikalische Chemie der Zelle und der Gewebe."