

action in the oceans, lakes, and streams. In truth, so close is the association between these two substances that it is scarcely correct logically to separate them at all; together they make up the real environment and they never part company. Carbonic acid thus possesses the first great qualification of a food: its occurrence is universal and its mobility a maximum. This is due to the fact that its absorption coefficient is on the average approximately one, the most favorable value.

Needless to say the absorption coefficient of carbonic acid is also of great importance in many physiological processes, chiefly perhaps in excretion. In the course of a day a man of average size produces, as a result of his active metabolism, nearly two pounds of carbon dioxide. All this must be rapidly removed from the body. It is difficult to imagine by what elaborate chemical and physical devices the body could rid itself of such enormous quantities of material were it not for the fact that, in the blood, the acid can circulate partly free¹ and, in the lungs, by a process which under ordinary circumstances has all the appearances of a simple physical phe-

¹ Of the total carbonic acid of the blood 5-10 per cent exists as the free acid, partly in the plasma, partly in the corpuscles.