

two countries in the civilized world which are not metric are the British Empire and the United States; yet even British and American measures are not the same. For instance, our quart is 20 per cent smaller than the British quart. For that reason, in exporting

to Canada special markings of goods is sometimes necessary, since Canada refuses to allow the importation of goods in containers marked in pints or quarts or gallons. Such liquid exports to Canada must be labeled according to weight.

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## BOOK NOTICES AND REVIEWS.

*The Effects of Ions in Colloidal Systems.* By Dr. Leonor Michaelis, University of Berlin; at present Professor of Biochemistry at the Aichi Medical University in Nagoya, Japan. Published by Williams and Wilkins Company, Baltimore, Md., 1925. Price \$2.50.

In this short monograph Michaelis discusses the parts played by ions in the various phenomena exhibited by colloidal systems. He explains the various modes of formation of the double layer: appositional adsorption, dissociation of the colloid, and a group in which neither of these causes accounts for the charge. In this last group comes charcoal, to which a chapter is devoted. The Donnan equilibrium is also taken up as a means of explaining the formation of a surface potential. This is followed by a discussion of the discharge of the particles in adsorption and flocculation. The last two chapters are devoted to the effects of electrolytes on the swelling of agar and kon-yaku, and a brief description of some "antagonism" phenomena in mixtures of electrolytes.

In this not too comprehensive discussion of some of the more important effects of ions on the behavior of colloidal systems, the author has pointed out the necessity of a study of these phenomena as a means of interpreting biological changes in terms of the laws of chemistry and physics. The work is up-to-date and of special interest to biologists.

F. P. NABENHAUER.

*Parry's Cyclopedia of Perfumery.* A Handbook on the raw materials used by the Perfumer, their origin, properties, characters and analysis; and on other subjects of theoretical and scientific interest to the User of Perfume Materials, and to those who have to examine and value such materials. By Ernest J. Parry, B.Sc., F.I.C., F.C.S. Two Volumes. Price, \$10.00. Philadelphia: P. Blakiston's Son & Co. 1925.

The author states that the need for a scien-

tific work of reference devoted to perfumery and its raw materials has long been felt. He has very successfully supplied the want; formulas for finished perfumes are not dealt with—the reasons assigned are that really good formulas are rarely published and the best of these are merely an index to the perfumer.

As far as the subject matter is concerned the author has given comprehensive information; for example, about thirty pages deal with oil of lavender. About the same number of pages are devoted to "Perfume in the Plant." Under this head the author speaks of the genesis and functions of perfumes in plants, admitting, of course, that this branch of physiological botany is still but little understood. A paragraph of this discussion will be of interest.

"Whilst it may be true that the essential oils which constitute the perfume material of plants are, so to speak, by-products of the metabolic processes of cell life, and as such to be classed with alkaloids, tannins, and coloring matters, it is impossible to overlook the enormous importance of the perfume in the plant economy in attracting insects for the purpose of fertilizing the flower. It is, of course, true that some flowers are odorless whilst the green leaves are highly odorous—as in the geranium; and also that the essential oil is frequently to be found in almost all parts of the plant, including the root. But in the former case the insect will be attracted by the perfume of the leaf, and so brought within range of the colored flower which he will then visit; and in the latter case, it may frequently be that the oil is being manufactured by steps in the plant, and its presence in parts of the plant remote from the flower merely indicates one of the steps of its evolution, since the oils from different parts of the same plant are usually different in character."

The materials are treated in alphabetical order in about 900 pages; as indicated, some of the subjects are discussed at length, others are dismissed with a few lines only, according