NOTES FROM THE U. S. BUREAU OF CHEMISTRY.*

CRYSTALLINE CHLORO-TETRA-ACETYL MANNOSE.¹

By D. H. Brauns.

[ABSTRACT.]

CHLORO-TETRA-ACETYL mannose, hitherto known only in the form of a syrup, has been obtained in crystalline form.

The behavior of the crystalline substance toward methyl alcohol and silver carbonate (reaction of Koenigs and Knorr) is analogous to that of bromo-tri-acetyl rhamnose. This is well accounted for by their structural formulas.

In the case of chloro-tetra-acetyl mannose, this reaction leads to various methyl tetra-acetyl derivatives and in this respect chloro-tetra-acetyl mannose differs from the corresponding derivatives of glucose and galactose, which yield only one methyl tetra-acetyl derivative.

This difference in behavior may lead to a more detailed knowledge of the arrangement of the constituent parts of their molecules.

OBSERVATIONS UPON THE RESISTANCE OF THE RAT TO CONSECUTIVE INJECTIONS OF STRYCHNINE.²

By E. W. Schwartze.

[ABSTRACT.]

THE tolerance of the rat to repeated subcutaneous injections of strychnine has been studied. Evidence has been adduced to show that the coefficients of disposal which are necessarily expressed in terms of percentage of minimum lethal dose per given period of two hours are too low. They should be reinterpreted to fit the case of oral administration in which large amounts are administered at once and in which type of experimentation the absorption of strychnine has an opportunity to keep pace with the disposal. Accordingly, the coefficient of disposal has been

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¹ Published in *J. Am. Chem. Soc.*, **44** (1922), 401.

² Published in *J. Pharmacol.*, **19** (1922), 49.

regarded as constant and the absolute amount disposed of as a variable depending on the amount present. On this basis the disposal of strychnine by the rat may reach at least 1 mgm. per kilo per hour. This occurs only when the strychninization is kept constantly very close to the maximum limit, by absorption from the gastro-intestinal tract.

The coefficients as determined arithmetically have been checked by a new experimental criterion, namely, the relation of survivals to fatalities in a given uniformly treated series and comparison of one such series with another.

The extremely high tolerance of the rat (as well as of other animals) to consecutive injections of strychnine would seem to be significant with respect to the possibility of correlating this with the failure to demonstrate as yet an habituation to this drug.

BOTULISM FROM THE REGULATORY POINT OF VIEW.³

By Charles Thom.

[ABSTRACT.]

TRANSFORMED into concrete suggestions, responsibility for food poisoning, in so far as canned goods are concerned, rests about equally upon the dealer and upon the household. Every dealer should be made to feel a direct and positive obligation to remove from sale any can of food which shows sign of spoilage, and to condemn as dangerous and return to the packer any lot in which spoilage appears in considerable percentage. Correspondingly, some one, at least, in every household, should definitely understand the dangers of spoiled food, canned or uncanned, make intelligent examination of all food bought and apply discriminating care to all food stored in the home.

As a basis for propaganda to eliminate the danger of poisoning cases, these recommendations may be given the widest publicity.

(1) Clean, fresh, sound food will not cause botulism.

(2) Food freshly heated to the boiling point will not cause botulism.

(3) Recooking is advised whenever opportunity for microbial activity has been given, but only before spoilage becomes evident by appearance, odor or taste. Food showing signs of decom-

³ Published in *Am. J. Public Health*, 12 (1922), 49.