

common household convenience. This powder owes its insecticidal activity to a mixture of acids and esters which first benumb and subsequently kill the insects brought into contact with it. While it is generally considered to be harmless to the higher animals, a number of cases where it has produced symptoms of a more or less serious nature are recorded.

In the enforcement of the Insecticide Act, insect powder has been found adulterated in a variety of ways.

Physiological, chemical, and microscopical methods which can be used satisfactorily in detecting adulteration with powdered stems, the most common form of sophistication, have not as yet been perfected to such a degree as to make an accurate quantitative determination possible. However, from the data obtained in the examination of hundreds of samples of genuine insect powder, of the materials used for its sophistication, and of commercial samples, the results of which are reported in this bulletin, a formula has been developed by which it is possible to determine in an insect powder the approximate amount of added Pyrethrum stems present.

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#### **SUMMARY OF BUREAU OF CHEMISTRY INVESTIGATIONS OF POISONING DUE TO RIPE OLIVES.\***

**By G. G. DeBord, R. B. Edmondson, and Charles Thom.**

THE Bureau of Chemistry has examined 2161 commercial containers of ripe olives. Of these, 560 were glass and 1601 were tin. Cultural examination of 618 containers checked very closely with odor and appearance as determining the proper condition of the product.

*Bacillus botulinus* was found in material directly concerned in or taken from the pack that caused six groups of poisoning cases during the year. The organism belonged to Type A of Dickson and Burke. The toxic material examined was consistently sufficiently spoiled to be recognized as offensive by odor, especially at the time of opening the can. Emphasis is placed upon the responsibility of the person who opens a sealed container of food for determining its soundness before tasting it or serving it to others. Spoilage in any form condemns the product to destruction.

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With reference to olives, the serious contaminations found were attributed to the practice of pre-fermenting the product by shipping and holding the olives in weak brine. The pre-fermentations encountered in different lots varied from a purely acid type to one pronouncedly putrefactive. All of these products were ultimately processed, and carried their contamination over into the canned product, making sterilization difficult.

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### **SOME PROTEINS FROM THE GEORGIA VELVET BEAN, STIZOLOBIUM DEERINGIANUM.<sup>4</sup>**

By Carl O. Johns and Henry C. Waterman.

[ABSTRACT.]

THE Georgia velvet bean contains 23.6 per cent. of protein ( $N \times 6.25$ ). Salt solutions of optimum concentrations (3 per cent.) extract about 15 per cent. of protein. From such solutions two globulins, designated the  $\alpha$ - and  $\beta$ -globulins, and an albumin may be separated, the first two by fractionation with ammonium sulphate and the last by coagulation from extracts from which the globulins have been precipitated by prolonged dialysis.

The proteins are sharply distinguished by their different sulphur and nitrogen content, by differences in the percentages of the basic amino acids, as determined by Van Slyke's method, and by the fact that the  $\beta$ -globulin does not give the Hopkins-Cole reaction for tryptophane. The latter observation is of particular interest inasmuch as this amino acid has been found in all seed globulins heretofore tested. Both the  $\alpha$ -globulin and the albumin from the Georgia velvet bean contain tryptophane.

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### **THE CHEMICAL COMPOSITION OF COTTONSEED OIL.<sup>5</sup>**

By George S. Jamieson and Walter F. Baughman.

[ABSTRACT.]

AN investigation was undertaken to determine quantitatively the fatty acids occurring in measurable amounts in cottonseed oil, the composition of which has been a subject of controversy for many years. Cold pressed oil from Sea Island cotton, obtained by means of the expeller, was used for this study. It contained

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<sup>4</sup> Published in *J. Biol. Chem.*, **42** (1920), 59.

<sup>5</sup> Published in *J. Am. Chem. Soc.*, **42** (1920), 1197.