

The Associate Referee for Phosphorus has a collaborative study in progress. Results have been received from all the collaborators, but there has been insufficient time to evaluate them.

The Associate Referee for Sugars did some preliminary work on possible improvements in the existing methods, working mainly with thin layer chromatography. However, he resigned early in the year before any real progress was made. The following recommendations are made for this topic: Adoption as official final action of the following official first action methods for gelatin dessert powders: Sucrose, 21.013 and 21.014, and Dextrose, 21.015, and the following

official first action methods for starch dessert powders: Sucrose and Dextrose, 21.020, and Starch, 21.021; and discontinuation of topic.

Recommendations

The recommendations of the Referee are those given in the report of Subcommittee C; see *This Journal* 52, 330 (1969). However, the Subcommittee recommended continued study of the topic of Sugars.

This report of the General Referee was presented at the 82nd Annual Meeting of the Association of Official Analytical Chemists, Oct. 14-17, 1968, at Washington, D.C.

Report on Meat and Meat Products

By R. H. PHILBECK (Technical Services Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250)

Identification of Meats (Serological Tests): A collaborative study of the serological method for the detection of horsemeat, *This Journal* 37, 843-845 (1954), should be initiated.

Nitrates and Nitrites: A collaborative study of modified method for nitrates and nitrites, *This Journal* 49, 875-877 (1966), should be initiated and the proposed modification of the official first action xylenol method for nitrates, 23.010-23.012, should be studied further.

Pesticides: The Associate Referee recommends completion of collaborative study on the separation of fat from adipose tissue for the analysis of BHC and of total DDT metabolites. The General Referee concurs.

Phosphorus, Total, Sample Preparation for:

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The Associate Referee recommends that the proposed method for sample preparation and use of 2.025(b) for determination be adopted as official first action and that the present official methods be retained as alternative procedures.

Because of increasing interest, the topics of Automated Methods and Detection of Added Coloring Matter and Blood in Chopped Meat should be initiated. The topic of Moisture and Fat should be discontinued.

Recommendations

The recommendations of the Referee are those given in the report of Subcommittee C; except that both the Subcommittee and the Association recommended that the proposed method for sample preparation for total phosphorus and use of 2.025(b) be adopted as alternatives for the present official final action method, 23.008. See *This Journal* 52, 330-331 (1969).

Report on Microchemical Methods

By C. L. OGG (Eastern Utilization Research and Development Division, Agricultural Research Service, U.S. Department of Agriculture, 600 E. Mermaid Lane, Philadelphia, Pa. 19118)

A collaborative study was conducted during the year on the determination of molecular weight by the thermoelectric-vapor pressure method described in 1967, *This Journal* 51, 1231-

1236 (1968). Thirteen collaborators analyzed seven samples, six of which were in the molecular weight range below 500. Since solvents and standards were recommended in general terms, each

collaborator decided which solvent and standard to use, as if he were applying the method to an unknown sample.

One of the possible solvent choices was methanol. Results with this solvent were generally poor, so it has been eliminated from the permissible solvents listed in the method. Agreement among laboratories was satisfactory when data obtained using methanol as solvent and a few other outliers were eliminated. The method is being recommended for adoption as official first action for samples with a number average molecular weight below 500. Studies to test the method with higher molecular weight material (500–20,000) are being planned for next year.

The official first action method for fluorine,

38.009–38.011, has been in use for seven years without any adverse criticism. It is recommended, therefore, that it be raised to official final action status. The Referee also recommends continued study of the oxygen flash method for chlorine, bromine, and iodine and initiation of study of the oxygen flash combustion method for sulfur.

Recommendations

The recommendations of the Referee are those given in the report of Subcommittee C; see *This Journal* 52, 331 (1969).

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Report on Mycotoxins

By A. D. CAMPBELL (Division of Food Chemistry and Technology, Food and Drug Administration, Washington, D.C. 20204)

Following the meeting last year there was a redistribution of Associate Referee assignments with two new participants being brought into the group. Mr. Nesheim relinquished the topic of "Aflatoxins in Cocoa, Coffee, and Tea" and was appointed as the Associate Referee on Aflatoxin M, succeeding Mr. Beckwith who had resigned; Dr. Colette Levi of General Foods Corporation accepted the assignment of "Coffee," and Dr. Peter Scott of the Canadian Food and Drug Directorate the assignment of "Cocoa and Tea"; the Associate Refereeship on "Aflatoxin Standards", established at the last meeting, was accepted by Dr. Joseph Rodricks of the Food and Drug Administration; Dr. Virgil Hill of Ralston Purina Company agreed to be Associate Referee on "Mycotoxins in Mixed Feeds," Dr. Odette Shotwell of the USDA, ARS, Northern Regional Research Laboratory agreed to be Associate Referee on "Mycotoxins in Grains," and Mr. Fred Baur of the Proctor and Gamble Company agreed to be Associate Referee on "Copra and Coconut," these last three being new topics. Mr. Walter Pons, Jr. of the USDA Southern Regional Laboratory has accepted the Associate Refereeship on "Densitometric Measurement Techniques," in addition to his Refereeship on "Mycotoxins in Cottonseed Products."

Aflatoxin Standards: Inquiries by two labora-

tory supply houses concerning techniques for producing pure aflatoxins and the potential market for the products have as yet resulted in no concrete offers to make purified aflatoxins commercially available.¹ Present sources of supply for the Americas remain the USDA, ARS Southern Regional Research Laboratory for standards and the Northern Regional Research Laboratory for larger quantities; for Europe, Africa, and Asia, aflatoxin B₁ only is available from the Department of Oil and Fats Research, Rijks Institute Voor de Volksgesandheid, Utrecht, Netherlands.

The best available criterion of purity for aflatoxins B₁, B₂, G₁, and G₂ is the ultraviolet absorptivities. Agreement is close enough to allow use of the absorptivity data for determining the concentration of aflatoxin standard solutions. A procedure, including instrument calibration and thin layer chromatography as a measure of

¹ Subsequent to the presentation of this report it was learned that aflatoxins are now commercially available from the following sources: crystalline aflatoxins B₁ and G₁—Calbiochem, Los Angeles, Calif. 90063; crystalline B₁ and a partly purified mixture of B₁, B₂, G₁, and G₂ (analysis provided)—Yissum Research Development Company of the Hebrew University of Jerusalem, Jerusalem, Israel; aflatoxin standards—Carl Roth Company, Karlsruhe, Germany.