

REPORT ON MAPLE PRODUCTS

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The three Associate Referees have conducted active programs during the past year which have resulted in one method being proposed for adoption as official, first action, another that is ready for collaborative tests, and a report of a continuing study that offers considerable promise for identification of the amount of maple in sugar-maple table sirups.

The Associate Referee on Methods of Analysis, Dr. Arthur Wendt, and his co-worker, Mr. Cormack Flynn, have developed a simpler and much more rapid method for the determination of ash in maple products than the current official method 29.117. Their modified method was tested by 15 collaborators who obtained concordant results by both the modified and by the current official method. However, the modified method shortened both the working time and the over-all time to one-fourth that required for the official method for ash in maple products.

The Associate Referee on Microbiological Methods, Mr. John Kissinger, has developed a modification of the resazurin reduction method for counting bacterial cells in milk that is applicable to maple sap. Results obtained by the modified resazurin test were analyzed by a computer using the method of least squares. A good correlation was obtained between the time of reduction of the dye and the number of viable cells present. The test meets a great need for a rapid estimation of the bacterial population of sap since a selective test can be made in less than 2 hours. The Referee recommends that this study be continued and the method tested collaboratively.

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

The Associate Referee on Maple Flavor, Dr. J. C. Underwood, and co-workers have developed a technique for extracting the flavor components from maple sirup and the identification or separation of the major components by GLC. A survey of maple sirups from the different states of the maple producing area has shown that the same constituents exist in the same relative proportions in the sirups irrespective of their point of origin. The Associate Referee is now developing a shorter method for obtaining this flavor profile and it is hoped that this work will lead to a more positive means of identification of the amounts of maple sirup in blended cane-maple table sirups. It is recommended that this work on maple flavor be continued.

Recommendations

The Referee on Maple products makes the following recommendations:

- (1) The modified method developed by the Associate Referee for ash in maple sirup be adopted official, first action.
- (2) The work on the modified resazurin reduction test for measuring the bacterial population in maple sap be continued and tested collaboratively.
- (3) The work on the flavor of maple sirup be continued.
- (4) The method for the determination of yeast counts in maple sirup be adopted as official, final action. This method was adopted official, first action at the 1967 meeting.