STANDARD METHODS FOR THE EXAMINATION OF DAIRY PRODUCTS

Tenth Edition
1953

STANDARD METHODS

FOR

THE EXAMINATION OF DAIRY PRODUCTS

MICROBIOLOGICAL AND CHEMICAL

Tenth Edition

Microbiological Methods formulated by Committees of the American Public Health Association and approved for publication by the American Public Health Association,

Chemical Methods compiled by the Committee on Editing Methods of Analysis of the Association of Official Agricultural Chemists and approved for publication by that Association, including current changes to date of last Annual Meeting in Washington, September 29–October 1, 1952

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PREFACE TO TENTH EDITION

Standard Methods for the Examination of Dairy Products represents a compilation of methods of analysis prepared jointly or separately by Committees of the Laboratory and the Food and Nutrition Sections of the American Public Health Association, and selected methods reproduced by permission of the Board of Editors from the seventh edition of *Official Methods of Analysis* of the Association of Official Agricultural Chemists.

The primary aim in the new edition has been to aid the laboratory and field worker by maintaining uniformity of arrangement and style of presentation, by using a simple cross-reference system and by a more complete method of indexing. Chapter 1 of this edition provides suggestions to guide administrators on the Selection and Interpretation of Quality Tests. Directions are more clearly stated to distinguish between mandatory and optional procedures. While some historical matter has been sacrificed, the use of bibliographical references will adequately furnish the critical investigator and administrator with explanations for selecting the procedures outlined herein.

Among those assisting in preparing the tenth edition are: C. A. Abele, L. A. Black, L. Buchbinder, E. K. Borman, B. S. Levine, W. D. Tiedeman, C. K. Johns, F. L. Mickle, R. V. Stone, L. H. Burgwald, M. H. McCrady, J. Archambault, E. H. Parfitt, D. Bergsma, Angel de la Garza Brito, R. F. Cowley, James Gibbard, C. R. Joiner, S. R. Damon, P. S. Prickett, W. C. Bartsch, W. A. Cordes, F. W. Fabian, J. H. Shrader, J. D. Ingle, I. F. Huddleson, W. A. Hagan, G. J. Hucker, A. H. White, M. T. Bartram, R. S. Breed, M. J. Prucha, H. H. Hall, K. G. Weckel, G. G. Slocum, W. A. Queen, and A. H. Robertson, Chairman.

The Association is indebted to Miss Vivian Pessin for her statistical analysis of plate counts in which media of different compositions were compared, and to Nathan Mantel for his statistical analysis of microscopic counts on films treated with different staining procedures.

Selected methods for the chemical analysis of dairy products have been quoted from the seventh edition of *Official Methods of Analysis* (including annual changes to date) by permission of the Board of Editors of the Association of Official Agricultural Chemists. These

have been edited with the help of H. A. Lepper, William Horwitz, and A. H. Robertson. Although included herein for guidance of public health workers, these methods do not originate with APHA committees and consequently approval by the Governing Council for their official use has not been given and is not required. These chemical methods are appropriately and distinctively identified as "AOAC," whenever applicable hereinafter.

At annual meetings of the Association of Official Agricultural Chemists, official changes to improve the methods are authorized to become effective on the thirtieth day following each February 15. In order that analysts in public health laboratories may keep informed, a record of relevant AOAC changes will follow the summarized report of the Chairman of the Subcommittee on Standard Methods for the Examination of Dairy Products, as published in successive editions of the APHA *Year Book*.

For vitamin assay methods and for procedures to determine filth and extraneous matter in dairy products, exclusive of sediment in milk and light cream, analysts are referred respectively to official procedures in the latest edition of the *United States Pharmacopoeia* by the Board of Trustees of the United States Pharmacopoeial Convention and to *Official Methods of Analysis,* by the Association of Official Agricultural Chemists.

In the tenth edition, changes include recognition of two milk-free plating media of different compositions (total colony productivities on each of which, when compared with that on the former official milk-containing media, were practically indistinguishable), to be substituted for the former milk-containing media, substitution of improved staining procedures for those previously recognized for the direct microscopic method, improved methods for determining sediment in retail milk, introduction of a transfer syringe for 0.01 ml quantities of milk and cream for the microscopic technic, a clarification of dilution procedures for dried milk products, and a modified Babcock method for fat in homogenized milk.

The record in the paragraph above condenses the results of an enormous amount of collaborative studies in which workers in both public health and industrial laboratories have actively participated. To all who have assisted, the committee and the Association extend their warmest thanks.

A few of the pioneers and their noteworthy contributions relating to the early sanitary control of dairy products in this country are identified in the subsequent Historical Introduction.

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TABLE OF CONTENTS

CHAPTER 5. MICROBIOLOGICAL METHODS FOR CHEESE

CHAPTER 6. MICROBIOLOGICAL METHODS FOR INGREDIENTS USED IN FROZEN DAIRY FOODS