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METHODS FOR THE ANALYSIS OF DRIED MILK AND WHEY

Section 3—PHYSICAL EXAMINATION

Method 5—DETERMINATION OF THE VISCOSITY INDEX OF DRIED SKIM MILK

STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Dairy Products Standards Organization
Australian Society of Dairy Technology
Confederation of Australian Industry
Council of Australian Food Technology Associations Inc.
CSIRO, Division of Food Research
Dairy Industry Authority of New South Wales
Department of Primary Industry
Department of Science
Departments of Agriculture
National Health and Medical Research Council
Royal Australian Chemical Institute
State Government Laboratories

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To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

PREFACE

This standard was prepared by the Association's Committee on Chemical Analysis of Dairy Products, under the direction of the Dairying Standards Board, as an addition to the methods included in AS 1629—1974, Methods for the Analysis of Dried Milk and Whey, Section 3—Physical Examination.

This standard requires reference to the following Australian standards:

AS 1517 Tinplate and Blackplate
Part 2—Coil

AS 1699 Dimensions and Capacities of Hermetically Sealed Cylindrical Food Cans for Packaging Products Sold by Mass

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Australian Standard

METHODS FOR THE ANALYSIS OF DRIED MILK AND WHEY

SECTION 3—PHYSICAL EXAMINATION

METHOD 5—DETERMINATION OF THE VISCOSITY INDEX OF DRIED SKIM MILK

1 SCOPE. This standard describes the method for determining the viscosity index of dried skim milk. The result provides an indication of the suitability of the dried skim milk for use in recombined, sweetened, condensed milk.

2 PRINCIPLE. A sample of dried skim milk is recombined, under specific conditions of mixing and heating, with water and sugar into sweetened, condensed milk and the apparent viscosity of the mixture is measured.

NOTE: The viscosity index thus obtained provides an indication of the suitability of the dried skim milk for use in recombined sweetened condensed milk.

3 REAGENT AND MATERIALS. The following reagent and materials are required:

(a) *Sugar,* white, 1A commercial grade, not less than 99.5 percent sucrose.

(b) *Reference samples of skim milk powder,* which shall be retained in the laboratory under cool, dry conditions in moisture-sealed containers, and tested on a daily basis to ensure that drifts in method accuracy do not occur.

4 APPARATUS. The following apparatus is required:

(a) *Laboratory mixer* (for dissolving skim milk powder), top drive, variable speed.

(b) *Laboratory mixer* (to aid cooling of the condensed milk), top drive, variable speed, with adequate torque necessary to stir the viscous mix.

(c) *Vacuum desiccator.*

(d) *Vacuum pump.*

(e) *Ultra-Turrax mixer;* model T45 with a T45 G6 Generator (see Notes 1 and 2) or apparatus giving equivalent mixing (see Notes 1 and 2).

(f) *Thermometer,* graduated at 0.1°C intervals and covering the range 80°C to 90°C.

(g) *Brookfield RVT viscometer* (see Note 3).

(h) *Stainless steel beaker,* 800 mL capacity, 95 ± 10 mm in diameter.