STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2300.5.2—1991
Methods of chemical and physical testing for dairying industry
Method 5.2: Condensed milk—Determination of sucrose—Polarimetric method

RECONFIRMATION NOTICE

Technical Committee FT-024 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 22 November 2016.

The following are represented on Technical Committee FT-024:

Australian Chamber of Commerce and Industry
Australian Institute of Food Science and Technology
Meat and Livestock Australia
National Association of Testing Authorities Australia
National Measurement Institute

NOTES

Australian Standard®

Methods of chemical and physical testing for the dairying industry

Method 5.2: Condensed milk—Determination of sucrose—Polarimetric method

PREFACE

This Standard was prepared by the Standards Australia Committee on Chemical Analysis of Dairy Products to supersede a corresponding method previously published in AS N48—1965, *Methods for the chemical analysis of condensed milk.*

This method is based on International Standard, ISO 2911, *Sweetened condensed milk—Determination of sucrose content—Polarimetric method.*

METHOD

1 SCOPE This Standard sets out a polarimetric method for determining the sucrose content of sweetened condensed milk of normal composition which has been prepared from whole, partially skimmed or skimmed milk and sucrose only, and which contains no altered sucrose.

NOTE: It has been found by investigation that sucrose is generally present in an unchanged condition in freshly manufactured product, but that it is sometimes partly altered during storage, and that the altered sucrose is present, in cases that have been examined, not as invert sugar but as a mixture of glucose, fructose and laevan.

The presence of the laevan interferes with the polarimetric and other procedures usually applied to the determination of sucrose.

If the presence of altered sucrose is suspected because of the age of the product, it may be detected with a modified Barfoed reagent (copper acetate and acetic acid) using specified test conditions under which there is no reduction of the copper by sucrose, and the effect of the lactose is negligible, whilst the effects of glucose and fructose remain at a high level. The Barfoed process will detect as little as 0.1 percent of the invert sugars, glucose and fructose.

If no significant sucrose alteration is detected, the method described below for determining sucrose should be used. If the alteration is significant, the method described in *The Analyst** is recommended for the determination of the original sucrose content of the sample.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
2300	Methods of chemical and physical testing for the dairying industry
2300.1.2.1	General methods and principles—Determination of nitrogen—Reference Kjeldahl method
2300.1.3	General methods and principles—Determination of fat—Gravimetric method
2300.5.1	Condensed milk—General information and preparation of samples

3 DEFINITIONS For the purpose of this Standard, the definition below applies.

Sucrose content of sweetened condensed milk—the content of unaltered sucrose, expressed as a percentage by mass, determined by the polarimetric method set out in this Standard.

* MILK PRODUCTS SUBCOMMITTEE TO THE STANDING COMMITTEE ON UNIFORMITY OF ANALYTICAL METHODS, Milk Products Report No 3, 'The Analysis of Sweetened Condensed Milk In Which The Sucrose Has Altered During Storage', *The Analyst*, 1932, Vol. 57, pp 630-652.