

Australian Standard®

Methods of chemical and physical testing for the dairying industry

Method 1.1: General methods and principles— Determination of total solids and moisture

PREFACE

This Standard was prepared by the Standards Australia Committee, FT-024, Food Products and Subcommittee FT-024-05, Dairy Products to supersede AS 2300.1.1—1988, as a general method for testing a range of dairy products for total solids and moisture content.

The Committee did not recommend the adoption of ISO Standards, which were outdated and published in 1977. ISO Standards are product specific standards and, for some products there are no ISO standards. Hence, it recommended to revise the Australian Standard with the following technical changes:

- (a) Clause 13.5, Evaporated milk—Method B was deleted.
- (b) Clause 13.6, Cheese—Whey cheese was included under this Clause with the drying conditions.
- (c) Clause 13.7, Ice cream and frozen milk products (total solids)—More details were included for the preparation of test samples.
- (d) Clause 13.11, Yoghurts—Frozen milk desserts were included.

AS 2300 comprises a series of methods and related Standards for chemical and physical testing of milk and dairy products, including the preparation of samples for testing.

Standards in the AS 2300 series are divided into categories according to type of product to be tested, as follows:

AS

- 2300.1 General methods and principles
- 2300.2 Liquid milks
- 2300.4 Dried milk and dried milk products
- 2300.5 Condensed milk
- 2300.6 Cheese
- 2300.7 Butter
- 2300.8 Anhydrous milk fat
- 2300.9 Analysis of ice-cream and frozen milk products
- 2300.10 Caseins, caseinates and coprecipitates
- 2300.11 Cultured milk products

METHOD

1 SCOPE

This Standard sets out two methods for the determination of total solids and moisture contents of dairy products as follows:

Method A—requires the use of sand as a drying aid.

Method B—does not require the use of sand.

The preparation of test samples of specific products for testing by the methods is also given.

2 APPLICATION

The methods are applicable to a wide range of liquid and solid dairy products. The use of sand as a drying aid (Method A) is necessary for some products.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS

1152 Specification for test sieves

1166 Milk and milk products—Guidance on sampling

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Total solids content

The percentage by mass of residue obtained on drying the material in accordance with the procedure described.

4.2 Moisture content

The percentage decrease in mass obtained on drying the material in accordance with the procedure described.

5 PRINCIPLE

A prescribed amount of sample is dried at specified temperature to constant mass. Admixture with sand to promote complete drying, or preliminary drying of high moisture products on a steam bath, is sometimes necessary.

6 REAGENTS

The following reagents are required:

6.1 Water

Use only freshly distilled, or water of equivalent purity.

6.2 Sand

Use only quartz sand, substantially free from iron, which passes through a sieve with openings of 500 μm and is retained by a sieve with openings of 180 μm (see AS 1152).

Prepare the sand by heating with portions of concentrated hydrochloric acid until the acid liquor is nearly colourless, removing the acid by decantation. Rinse once with dilute hydrochloric acid, then thoroughly with water. Dry the sand and heat to dull red heat.