Australian Standard®

Food microbiology

Method 3.17: Examination of specific products—Sweetened condensed milks

PREFACE

This Standard was prepared by the Standards Australia Committee on Food Microbiology as part of a program to issue all Standards pertaining to the microbiological examination of foods (including dairy products) in the series AS 1766, *Food microbiology*.

This Standard supersedes AS 1095.2.9—1977, *Methods of microbiological examination of dairy products and for dairy purposes—Methods for the examination of specific dairy products—Sweetened condensed milks*.

This Standard is one of a series of methods for the microbiological examination of foods for quality control and investigative purposes and, where applicable, for checking that foods comply with regulatory specifications.

FOREWORD

Sweetened condensed milk is not a sterile product. Its keeping quality depends on its low water activity and low head-space in the package. Contamination may arise from container leakage, unsterile packages or contaminated ingredients. Spoilage may result if the sugar-to-water ratio is too low or the head-space is too great. These factors have some relevance in the selection of tests.

METHOD

1 SCOPE This Standard sets out procedures for the microbiological examination of sweetened condensed milks and recombined sweetened condensed milks, flavoured and unflavoured, which may be packaged in cans, in tubes or in bulk containers.

NOTE: The methods are not intended for the examination of long shelf life dairy products in hermetically sealed containers which may have been produced by the traditional canning process or by UHT processing followed by aseptic packaging. Such products are covered by AS 1766.3.16.

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

AS
1166 Milk and milk products—Methods of sampling

AS
1766 Food microbiology
1766.1 Part 1 (series): General procedures and techniques
1766.2 Part 2 (series): Examination for specific organisms
1766.3 Part 3 (series): Examination of specific products
1766.5 Method 5: Preparation of media, diluents and reagents

3 DILUENTS, CULTURE MEDIA AND REAGENTS

3.1 General Formulations and instructions for preparing culture media and diluents are given in AS 1766.5.

3.2 Peptone water, 0.1%

3.3 Plate count agar

3.4 Sucrose malt agar

3.5 Sucrose enriched yeast extract tartaric acid broth

3.6 Nutrient agar

3.7 Tryptone soy broth with 10% sodium chloride

3.8 Baird-Parker agar

3.9 Lactic acid solution, 22 g/L—when preparing this solution make allowance for the actual concentration of the lactic acid reagent which will be less than 100%.

3.10 Gram stain reagents

3.11 Other diluents, culture media and reagents—as specified in parts of AS 1766 referred to in this Standard.

4 APPARATUS

4.1 Sterilization of apparatus All apparatus and equipment shall be sterilized as described in AS 1766.1.

4.2 Can opener

4.3 Scalpel or scissors

4.4 Can opening assembly—consisting of a large autoclavable metal or plastic funnel plugged with non-absorbent cotton wool through which is inserted a sharp stainless steel rod.

4.5 Wide-mouthed jars

5 LABORATORY SAMPLES

5.1 From bulk product Laboratory samples of bulk sweetened condensed milk shall be taken in accordance with AS 1166, each sample being not less than 200 g.

5.2 Retail containers Laboratory samples shall consist of a sufficient number of unopened retail containers.

6 EXAMINATION OF UNOPENED RETAIL CONTAINERS Immediately prior to opening, the containers shall be examined for signs of deterioration or defectiveness such as faulty seams or closures, leakage of contents and blowing of the containers due to gas production. All observations shall be recorded.

Two sets of retail containers shall be subjected to microbiological examination as follows:

(a) One set shall be examined on receipt of sample.

(b) A second set shall be stored unopened at 25 ±1°C for 1 month and then examined.

NOTE: Containers already blown should not be incubated.