AS 5013.14—2004
ISO 7218:1996 and
ISO 7218:1996 Amdt 1:2001

Australian Standard™

Food microbiology

Method 14: Microbiology of food and animal feeding stuffs—General rules for microbiological examinations

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FT-004, Food Microbiology, to supersede AS 1766.1.1—1991, *Food microbiology,* Method 1.1: *General procedures and techniques—Samples, materials, equipment, laboratory practice.*

This Standard is identical to and reproduced from ISO 7218:1996, *Microbiology of food and animal feeding stuffs—General rules for microbiological examinations* including Amendment 1:2001, which is added at the end of the ISO text.

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee FT-004. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify general instructions for carrying out microbiological examinations in accordance with specific Standards.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text, 'this International Standard' should read 'this Australian Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

(c) Substitute 'mL' for 'ml' wherever it appears.

References to International Standards should be replaced by references to Australian Standards as follows:

Reference International Standard		*Australian Standard*	
ISO		AS	
6887	Microbiology—General guidance—Preparation of dilutions for microbiological examination	5013	Food microbiology
		5013.11.1	Method 11.1: Microbiology of food and animal feeding stuffs—Preparation of test samples, initial suspension and decimal dilutions for microbiological examination—General rules for the preparation of the initial suspension and decimal dilutions

In Clause 8.2 Transport, the sample temperatures specified are guidelines. The temperature of the sample at the time of receipt, and the time of sampling should be recorded. This information should be taken into account when deciding on the suitability of the sample for testing.

The laboratory should have a clearly defined quality control system to ensure that the apparatus, culture media, reagents and technique are suitable for the test. The use of positive controls is part of this system.

STANDARDS AUSTRALIA

INTRODUCTION

When conducting microbiological examinations, it is especially important

- that only those microorganisms which are present in the samples are isolated or enumerated, and

- that the microorganisms do not contaminate the environment.

In order to achieve this, it is necessary to pay attention to personal hygiene and to use working techniques which ensure, as far as possible, exclusion of extraneous contamination (see clause 5).

Since, in this International Standard, it is possible to give only a few examples of the precautions to be taken during microbiological examinations, a thorough knowledge of the microbiological techniques and of the microorganisms involved is essential. It is important that the analyses be conducted as accurately as possible, including calculation of the number of microorganisms and the variability of the results (part of this is given by the confidence limits; see clause 9).

Ultimately, it is the responsibility of the head of the laboratory to judge whether the manipulations are safe and can be considered to be good laboratory practice.

A large number of manipulations can, for example, unintentionally lead to cross-contamination and the analyst should always verify the accuracy of the results given by his or her technique.

In order to conduct the examinations correctly, it is necessary to take certain precautions when constructing and equipping the laboratory (see clause 3).

Certain precautions must be taken, not only for reasons of hygiene, but also to ensure good reproducibility of the results. It is not possible to specify all the precautions to be taken in all circumstances, but this International Standard at least provides the main measures to be taken when preparing, sterilizing and storing the media and the equipment (see clauses 6 and 7).

If the guidance given in this International Standard is followed, this will also contribute towards the protection of the health of the personnel. Additional information on this subject is to be found in the literature listed in annex C.

1 Scope

This International Standard gives general instructions for carrying out microbiological examinations in accordance with specific standards.

The purpose of this International Standard is to help to ensure the validity of the examinations, to ascertain that the general techniques used for conducting these examinations are the same in all laboratories, to help achieve homogeneous results in different laboratories, and to contribute towards the protection of the health of the laboratory personnel by preventing risks of infection.

This International Standard may be used wholly or partly for the accreditation of a laboratory by national organizations.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6887:1983, *Microbiology - General guidance for the preparation of dilutions for microbiological examination*

3 Premises

3.1 Test areas

The areas required for the specific operation of a microbiology laboratory are as follows:

- receipt, storage, preparation and processing of the samples;

- preparation and sterilization of culture media and equipment;

- performance of analyses: weighing, dilutions, inoculations, subculturing, incubation, preservation of the strains, etc.;

- decontamination and cleaning of equipment, and processing of the analysis waste.