

Australian Standard[®]

**Sound laboratory practice in food and
water microbiology laboratories**

**Part 1: Premises, safety, sample
management, regulatory compliance
and record management**

STANDARDS
Australia



This Australian Standard® was prepared by Committees FT-020, Water Microbiology and FT-024, Food Products. It was approved on behalf of the Council of Standards Australia on 2 October 2009.

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The following are represented on Committees FT-020, Water Microbiology and FT-024, Food Products:

- ACT Health
- Australian Chamber of Commerce and Industry
- Australian Food and Grocery Council
- Australian Institute of Food Science and Technology
- Australian Society of Microbiology
- Consumer's Federation of Australia
- Dairy Industry Association of Australia
- Department of Agriculture, Fisheries and Forestry
- Department of Human Services, Vic.
- Food Science Australia
- Food Standards Australia New Zealand
- Food Technology Association of Victoria
- Horticulture Australia
- Institute of Clinical Pathology and Medical Research
- Meat and Livestock Australia
- NSW Health Department
- National Association of Testing Authorities
- National Measurement Institute
- Path West Laboratory Medicine, WA
- Plastics and Chemicals Industries Association
- Queensland Health Scientific Services
- Queensland University of Technology
- Safe Food Queensland
- University of Melbourne
- Water Services Association of Australia

Additional Interests:

- Commercial Testing Laboratories
 - Consulting Laboratories
 - Institute of Medical and Veterinary Science
 - University of South Australia
-

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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PREFACE

This Standard was prepared by the Standards Australia Committee FT-020, Water Microbiology, Committee FT-024, Food Products and Subcommittee FT-024-01, Food Microbiology (Constituted), jointly. It stems from a need, expressed by the Pathology and Scientific Services of Queensland Health and National Association of Testing Authorities Australia for a Standard on various aspects of sound laboratory practice for use in food and water microbiology laboratories.

The objectives of this Standard are to—

- (a) elaborate on the principles that underpin the requirements for sound laboratory practice;
- (b) provide guidance on sound laboratory practice to ensure valid test results and safe operation; and
- (c) establish a ‘road map’ to relevant Standards and references.

This part of the Standard covers general aspects, premises, safety aspects, sample management, regulatory compliance and record management. It is intended to have other separate parts on the following:

- (i) Equipment, consumables (reagents, diagnostic kits), culture collection, sterilization and disinfection.
- (ii) Personnel competency, and training.
- (iii) Test techniques.
- (iv) Validation and verification.
- (v) Analytical quality control.

This Standard is intended for use by—

- (A) food and water laboratories;
- (B) accreditation bodies;
- (C) regulators; and
- (D) educational institutions.

In this Standard the underlying principles of each section are presented, followed by clauses on: definition of the terms used in the section; requirements; guidance with examples of practical application where appropriate; and references to sources of additional information.

The intention of the Standard is not to replace or repeat existing sound laboratory practice in food and water microbiology laboratories, but to acknowledge them by explaining the underlying principles. This Standard outlines the requirements of sound laboratory practice and directs the user to other relevant standards and references. As such, this Standard acknowledges and refers to relevant Technical Notes and other publications of the National Association of Testing Authorities, Australia (NATA) and the Australian Society for Microbiology.

Standards Australia acknowledges the assistance of the Working Group comprising the University of Melbourne, National Association of Testing Authorities Australia, Queensland Health and Scientific Services, Silliker Australia, University of South Australia, EML Consulting Services, and the Australian Water Quality Centre.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides requirements and relevant guidance to food and water laboratories on sound laboratory practice. However, the principles outlined in this Standard are relevant to all microbiological laboratories.

This part provides the requirements for laboratory premises, ensuring the safety of laboratory personnel, the management of samples, regulatory compliance and the management of records.

The documents listed in Clause 1.2 are required for the application of this Standard. Other informative referenced documents and bibliographic references are listed in Appendix A.

1.2 NORMATIVE REFERENCES

The following documents are indispensable for the application of this document.

AS/NZS

- 2243 Safety in laboratories (series)
- 2243.1 Part 1: Planning and operational aspects
- 2243.3 Part 3: Microbiological aspects and containment facilities
- 2982 Laboratory design and construction
- 2982.1 Part 1: General requirements

1.3 DEFINITIONS

For the purposes of this Standard the following definitions apply. Additional definitions are listed under each section of the Standard.

1.3.1 May

Indicates the existence of an opinion.

1.3.2 Shall

Indicates that a statement is mandatory.

1.3.3 Should

Indicates a recommendation.

1.3.4 Sound laboratory practice

Indicates the principles and practices that deliver reliable, high quality test data in a consistent manner.