AS 19880.9:2025

Australian STANDARD®

STANDARDS Australia

Gaseous hydrogen — Fuelling stations

Part 9: Sampling for fuel quality analysis (ISO 19880-9:2024, MOD)

AS 19880.9:2025

This Australian Standard® was prepared by ME-093, Hydrogen Technologies. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 31 October 2025.

This Standard was published on 14 November 2025.

The following are represented on Committee ME-093:

- Australia New Zealand Industrial Gas Association
- Australian Gas Association
- Australian Hydrogen Council
- Australian Industry Group
- Chemistry Australia
- Energy Networks Australia
- Engineers Australia
- Gas Energy Australia
- Gas Technical Regulators Committee
- Institute of Electrical Inspectors
- National Association of Testing Authorities Australia
- The University of Adelaide

This Standard was issued for comment as DR AS 19880.9:2025

ISBN: 978 1 76175 459 3

Australian Standard®

Gaseous hydrogen — Fuelling stations

Part 9: Sampling for fuel quality analysis (ISO 19880-9:2024, MOD)

First published as AS 19880.9:2025.

How to read this Standard

This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

(a) "should" means that something is recommended.

(b) "may" means that something is permitted.

(c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

(i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.

(ii) The Scope states what the Standard is about, what it covers and what it does not cover.

(iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.

(iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

(1) A normative appendix sets additional requirements that need to be conformed to.

(2) An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply.

(3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

This Standard is a modified adoption of an International Standard. It makes changes to the international text.

The changes to the international text are shown in boxes in the text. These boxes have the heading "National Variations".

To use this Standard in Australia/New Zealand, the changes in the national variation boxes need to be followed.

Preface

This Standard was prepared by the Standards Australia Committee ME-093, Hydrogen Technologies.

The objective of this document is to outline requirements for sampling from hydrogen fuelling stations for samples taken at the dispenser. The document defines the best practice for sampling at the nozzle of a hydrogen fuelling station as part of the fuelling station acceptance testing, and ongoing operation.

Further, the document describes the minimum safety requirements for sampling.

This document is targeted for the sampling from the hydrogen fuelling station dispenser. Many of the generic requirements within this document are applicable to sampling at other locations within the hydrogen fuelling station, which can be carried out for hydrogen quality assurance, see ISO 19880-8, however, further specific requirements that can be necessary for safe sampling are not addressed in this document.

The intention of sampling hydrogen is to enable analysis against the requirements of ISO 14687, and by analytical methods validated by protocols described in ISO 21087.

This document supersedes, and is an extension to, the guidance published in ISO 19880-1:2020, Annex K.

This document is an adoption with national modifications, and has been reproduced from, ISO 19880-9:2024, *Gaseous hydrogen — Fuelling stations — Part 9: Sampling for fuel quality analysis*.

The modifications are additional requirements and are set out in national variation boxes (NVBs) which give instructions where the content is to be modified for use in Australia. For copyright reasons, it is not possible to directly modify the international content.

As this document has been reproduced from an international document, a comma is to be read as a full point when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 197, *Hydrogen technologies*.

A list of all parts in the ISO 19880 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Australian Standard®

Gaseous hydrogen — Fuelling stations

Part 9: Sampling for fuel quality analysis (ISO 19880-9:2024, MOD)

WARNING The use of sampling apparatuses, such as those described in the annexes to this document, is associated with the safety risks associated with high pressure flammable gases. This document explains the general concepts of how gaseous and particulate samples may be taken. Sampling should be performed only by highly trained technicians experienced with the hazards of high-pressure hydrogen.

1 Scope

This document outlines requirements for sampling from hydrogen fuelling stations for samples taken at the dispenser. The document defines the best practice for sampling at the nozzle of a hydrogen fuelling station as part of the fuelling station acceptance testing, and ongoing operation.

Further, the document describes the minimum safety requirements for sampling.

This document is targeted for the sampling from the hydrogen fuelling station dispenser. Many of the generic requirements within this document are applicable to sampling at other locations within the hydrogen fuelling station, which can be carried out for hydrogen quality assurance, see ISO 19880-8, however, further specific requirements that can be necessary for safe sampling are not addressed in this document.

The intention of sampling hydrogen is to enable analysis against the requirements of ISO 14687, and by analytical methods validated by protocols described in ISO 21087.

This document supersedes, and is an extension to, the guidance published in ISO 19880-1:2020, Annex K.

NOTE Analytical methods are divided into on-line analyses and off-line analyses. On-line analysis allows for real time analysis at hydrogen stations and is not covered in this document.

2 Normative references

NATIONAL VARIATIONS

1. In Clause 2, after the first paragraph, *add* the following:

The Australian Standard listed below is a modified adoption of, or not equivalent to, the ISO normative references and is required for the application of this document. All references in the source text to that ISO normative reference shall be replaced by referenced to the corresponding Australian Standards.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably.

2. *Delete* "ISO 19880-1, *Gaseous hydrogen — Fuelling stations — Part 1: General requirements*" and *replace* with the following:

AS 19880.1:2023, *Gaseous hydrogen — Fuelling stations, Part 1: General requirements (ISO 19880-1:2020, MOD)*