

AS 4323.1:2021



Stationary source emissions

Method 1: Selection of sampling positions and measurement of velocity in stacks



AS 4323.1:2021

This Australian Standard ® was prepared by EV-007, Methods for Examination of Air. It was approved on behalf of the Council of Standards Australia on 13 September 2021.

This Standard was published on 24 September 2021.

The following are represented on Committee EV-007:

- ACT Health
- Australian Aluminium Council
- Australian Industry Group
- Australian Institute of Refrigeration Air Conditioning and Heating
- Clean Air Society of Australia and New Zealand
- Department of Environment and Science, Qld
- Department of Planning, Industry and Environment, NSW
- Department of Water and Environmental Regulation, WA
- Environment Protection Authority, Vic.
- National Association of Testing Authorities Australia
- RMIT University

Additional Interests

- Assured Environmental
- Ektimo
- Environment Canterbury (NZ)
- Helix Environmental
- International Accreditation New Zealand
- K2 Environmental, New Zealand
- Ministry for the Environment New Zealand
- NSW Environment Protection Authority
- Waikato Regional Council (NZ)
- Watercare Laboratory Services, New Zealand

This Standard was issued in draft form for comment as DR AS 4323.1:2020.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

Stationary source emissions

Method 1: Selection of sampling positions and measurement of velocity in stacks

Originated as AS 4323.1—1995.
Second edition AS 4323.1:2021.

© Standards Australia Limited 2021

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

Contents

Preface	iii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Sampling plane selection	3
4.1 Location.....	3
4.2 Ideal, non-ideal and non-conforming sampling planes.....	4
4.2.1 General.....	4
4.2.2 Ideal sampling plane.....	5
4.2.3 Non-ideal sampling plane.....	6
4.2.4 Non-conforming sampling plane.....	6
5 Number and location of sampling points	7
5.1 General.....	7
5.2 Number of sampling points.....	7
5.3 Location of sampling points.....	8
5.3.1 General.....	8
5.3.2 Circular sampling planes.....	8
5.3.3 Rectangular sampling planes.....	10
6 Sampling access holes	11
7 Work platform requirements	13
7.1 Work platform.....	13
7.2 Access to platform.....	14
7.3 Services.....	14
8 Measurement of velocity and volume flowrate	15
8.1 General.....	15
8.2 Apparatus.....	15
8.2.1 General.....	15
8.2.2 Type L pitot tube.....	15
8.2.3 Type S pitot tube.....	17
8.2.4 Ancillary equipment.....	21
8.3 Pitot tube calibration factor.....	22
8.4 Test procedure.....	22
9 Calculations	24
10 Measurement uncertainty	25
11 Test report	25
Appendix A (informative) Sampling of emissions from cyclones	27
Appendix B (informative) Sampling point calculation examples	31
Appendix C (normative) Alternative procedure for confirming sampling plane classification	32
Appendix D (normative) Gaseous pollutant emission sampling	34
Appendix E (normative) Pitot tube calibration	35
Bibliography	38

Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee EV-007, Methods for Examination of Air, to supersede AS 4323.1:1995, *Stationary source emissions, Method 1: Selection of sampling positions*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

Standards Australia wishes to acknowledge the contribution of the EV-007-01 Stationary Source Emission Testing Subcommittee to the development of this document.

The objective of this document is to provide regulatory and testing bodies with procedures for selecting sampling positions for stacks (including exhaust ducts and other similar outlets) in order to obtain representative velocity, temperature, flowrate, pollutant concentration and mass rate of emission measurements. This document also describes the apparatus, procedures and calculations required to measure gas velocity and flowrate.

A list of all parts in the AS(AS/NZS) 4323 series can be found in the Standards Australia online catalogue.

The major changes in this edition are as follows:

- (a) Clarification of aspects associated with sampling plane section.
- (b) Addition of the procedures to be followed when measuring exhaust gas velocity and flowrate.

Standards Australia thanks the International Organization for Standardization (ISO) for permission to reproduce figures and text from ISO 10780:1994. ISO 10780:1994 is copyright of ISO, Geneva, Switzerland. All rights reserved.

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

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-