

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 3580.8.1—1990

Methods for sampling and analysis of ambient air

Method 8.1: Determination of hydrogen sulphide—Automatic intermittent sampling—
Gas chromatographic method

RECONFIRMATION NOTICE

Technical Committee EV-007 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 9 September 2014.

The following are represented on Technical Committee EV-007:

Australian Aluminium Council
Australian Bureau of Meteorology
Australian Chamber of Commerce and Industry
Australian Industry Group
Clean Air Society of Australia and New Zealand
CSIRO Marine and Atmospheric Research
Department of Environment and Conservation, WA
Department of Science, Information Technology, Innovation and the Arts, Qld
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National Association of Testing Authorities Australia
Office of Environment and Heritage, NSW

NOTES

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**Methods for sampling and analysis of
ambient air****Method 8.1: Determination of hydrogen
sulfide—Automatic intermittent
sampling—Gas chromatographic
method**

PREFACE

This Standard was prepared by the Standards Australia Committee on methods for examination of air under the direction of the Chemical Standards Board, to supersede AS 2330—1980, *Ambient air—Determination of hydrogen sulphide—Automatic intermittent sampling—Gas chromatographic method*. This Standard is technically identical with AS 2330 with only editorial and formatting changes being made.

METHOD

1 SCOPE. This Standard sets out a gas chromatographic method for measuring the concentration of hydrogen sulfide in ambient air using an automatic intermittent sampling procedure. The method is applicable to ambient air having a concentration of hydrogen sulfide within the approximate range 0.003 p.p.m. to 2 p.p.m. ($5 \mu\text{g}/\text{m}^3$ to $3000 \mu\text{g}/\text{m}^3$) and is specific to hydrogen sulfide.

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

AS	
2922	Ambient air—Guide for the siting of sampling units
3580	Methods for sampling and analysis of ambient air
3580.2.1	Method 2.1: Preparation of reference test atmospheres—Permeation tube method
3580.4.1	Method 4.1: Determination of sulfur dioxide—Direct reading instrumental method

3 DEFINITIONS. For the purpose of this Standard the definitions in AS 3580.4.1 apply.

4 PRINCIPLE. Measured test portions of sampled air are drawn off and delivered at regular intervals into a gas chromatographic system. Hydrogen sulfide is separated from other sulfur compounds, and is detected and measured flame-photometrically at a wavelength specific for sulfur.

5 APPARATUS.

5.1 Gas chromatograph—designed to automatically sample air at least 10 times per hour, fitted with a flame photometric detector and a column to separate hydrogen sulfide from other sulfur compounds. The components of the apparatus coming into contact with the sample shall be manufactured from material which is demonstrably unreactive with the sample.

The range, sensitivity, zero drift, span drift and repeatability shall be appropriate to the concentration of hydrogen sulfide being measured. However, the following minimum requirements shall apply:

- (a) Ranges 0 to $300 \mu\text{g}/\text{m}^3$ and 0 to $3000 \mu\text{g}/\text{m}^3$.
- (b) Limit of detection $6 \mu\text{g}/\text{m}^3$.