

Australian Standard™

**Wastes, sediments and
contaminated soils**

**Part 1: Preparation of leachates—
Preliminary assessment**

This Australian Standard was prepared by Committee CH/35, Examination of Wastes. It was approved on behalf of the Council of Standards Australia on 11 December 1998 and published on 5 March 1999.

The following interests are represented on Committee CH/35:

Australian Aluminium Council
Department of Environment, Heritage and Aboriginal Affairs, S.A.
Environment Protection Authority of N.S.W.
Environment Protection Authority of Victoria
Griffith University
National Association of Testing Authorities
Plastics and Chemicals Industry Association
Queensland Health Scientific Services
Sydney Water Corporation
Victorian University of Technology

Review of Australian Standards. *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 98314.

AS 4439.1—1999

Australian Standard™

**Wastes, sediments and
contaminated soils**

**Part 1: Preparation of leachates—
Preliminary assessment**

First published as AS 4439.1—1999.

Published by Standards Australia
(Standards Association of Australia)
1 The Crescent, Homebush, NSW 2140

ISBN 0 7337 2550 7

PREFACE

This Standard was prepared by the Standards Australia Committee CH/35, Examination of Wastes.

This Standard is part of a series as follows:

AS

4439 Waste, sediments and contaminated soils

4439.1 Part 1: Preparation of leachates—Preliminary assessment (this Standard)

4439.2 Part 2: Preparation of leachates—Zero headspace procedure

4439.3 Part 3: Preparation of leachates—Bottle leaching procedures

Where appropriate regulatory authorities have prescribed documentation for assessment of wastes, it should be used in conjunction with this set of Standards.

The objective of this Standard is to provide an outline for the preliminary assessment of the potential for liquid or solid waste, sediments, sludges and soils to contaminate groundwater.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

CONTENTS

	<i>Page</i>
1 SCOPE	3
2 REFERENCED DOCUMENTS	3
3 PRINCIPLE	3
4 DEFINITIONS	3
5 SAMPLING AND SAMPLE PREPARATION	3
6 PROCEDURE	3
APPENDIX A PROCEDURE FLOWSHEET	5

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS AUSTRALIA

Australian Standard

Wastes, sediments and contaminated soils

Part 1: Preparation of leachates—Preliminary assessment

1 SCOPE This Standard provides an outline for preliminary assessment of the potential for liquid or solid waste, sediments, sludges and soils to contaminate groundwater. It deals with the preliminary procedure to determine whether the preparation of leachates, as set out in AS 4439.2 and AS 4439.3, is necessary. This Standard must be used in conjunction with these two Standards.

This procedure is not applicable to encapsulated wastes which cannot be reduced in particle size without breaking the integrity of encapsulation.

These Standards should only be used in consultation with appropriate regulatory authorities responsible for the assessment for disposal of wastes and soils.

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

AS

4439 Waste, sediments and contaminated soils

4439.2 Part 2: Preparation of leachates—Zero head space procedure

4439.3 Part 3: Preparation of leachates—Bottle leaching procedure

3 PRINCIPLE A test portion is analysed by appropriate test methods for total concentration of analytes, as determined in consultation with appropriate regulatory authorities, to determine whether preparation of leachates may be required.

A flowsheet outlining the procedure is shown in Appendix A.

4 DEFINITIONS For the purposes of this Standard, the definitions in AS 4439.2 and AS 4439.3 apply.

5 SAMPLING AND SAMPLE PREPARATION All sampling and sample preparation requirements as set out in AS 4439.2 and AS 4439.3 shall be followed.

6 PROCEDURE

6.1 General Wastes may comprise both solid and liquid phases, either or both of which may contain contaminants. The distribution of contaminants between phases may be relevant in determining treatment or disposal options. If so, analysts may elect to separate the phases using pressure filtration as described in AS 4439.2 or AS 4439.3 followed by analysis of total contaminants in each phase. Otherwise, wastes as received should be analysed for total contaminants.

6.2 Analysis The laboratory sample, or the solids and liquid(s) obtained after pressure filtration, shall be analysed for the analytes of interest. The analysis procedure(s) used shall be appropriate for each of the analytes and phases.