

Australian Standard™

Coal and coke—Analysis and testing

Part 4: Coke—Proximate analysis



This Australian Standard was prepared by Committee MN-001, Coal and Coke. It was approved on behalf of the Council of Standards Australia on 22 February 2006. This Standard was published on 15 March 2006.

The following are represented on Committee MN-001:

Australian Institute of Mining and Metallurgy
Australian Building Codes Board
Australian Coal Association
Australian Coal Preparation Society
Australian Institute of Energy
CSIRO Energy Technology
Coalfield Geology Council of NSW
Department of Natural Resources and Mines, Qld
Minerals Council of Australia
National Association of Testing Authorities Australia
National Generators Forum
The University of New South Wales
The University of Queensland
University of Newcastle

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1038.4—2006

**Coal and coke—Analysis and testing
Part 4: Coke—Proximate analysis**

RECONFIRMATION NOTICE

Technical Committee MN-001 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 5 October 2016.

The following are represented on Technical Committee MN-001:

Australasian Institute of Mining and Metallurgy
Australian Coal Industry Reference Samples
Australian Coal Preparation Society
Australian Energy Council
Coalfield Geology Council of NSW
CSIRO
Department of Natural Resources and Mines (QLD)
Minerals Council of Australia
National Association of Testing Authorities Australia
The University of New South Wales
The University of Queensland
University of Newcastle

NOTES

Australian Standard™

Coal and coke—Analysis and testing

Part 4: Coke—Proximate analysis

Originated as part of CK2.3—1949.
Previous edition AS 1038.4—1995.
Third edition 2006.

COPYRIGHT

© Standards Australia

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.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia
ISBN 0 7337 7319 2

PREFACE

This Standard was prepared by the Standards Australia Committee MN-001, Coal and Coke, as a revision of AS 1038.4—1995, *Coal and coke—Analysis and testing, Part 4: Coke—Proximate analysis*.

This revision has been editorially updated to bring this Standard into current style.

The objective of this Standard is to provide those responsible for the testing of coke with a standardized method for proximate analysis.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 REFERENCED DOCUMENTS	4
1.3 DEFINITIONS	4
1.4 SAFETY	4
1.5 SAMPLES	4
1.6 REPORTING OF RESULTS	5
1.7 PRECISION	5
1.8 TEST REPORT	5
SECTION 2 DETERMINATION OF MOISTURE IN THE ANALYSIS SAMPLE	
2.1 SCOPE AND INTRODUCTION OF SECTION	6
2.2 DIRECT GRAVIMETRIC METHOD	6
2.3 INDIRECT GRAVIMETRIC METHOD	8
SECTION 3 DETERMINATION OF ASH	
3.1 SCOPE AND INTRODUCTION OF SECTION	14
3.2 PRINCIPLE	14
3.3 APPARATUS	14
3.4 PROCEDURE	14
3.5 CALCULATION	15
SECTION 4 DETERMINATION OF VOLATILE MATTER	
4.1 SCOPE AND INTRODUCTION OF SECTION	16
4.2 PRINCIPLE	16
4.3 REAGENTS	16
4.4 APPARATUS	16
4.5 PROCEDURE	18
4.6 CALCULATION	19

STANDARDS AUSTRALIA

Australian Standard

Coal and coke—Analysis and testing

Part 4: Coke—Proximate analysis

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out methods for the determination of moisture, ash and volatile matter on the analysis sample of coke to obtain its proximate analysis. Residue is calculated by difference.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1038	Coal and coke—Analysis and testing
1038.16	Part 16: Assessment and reporting of results
2418	Coal and coke—Glossary of terms
4264	Coal and coke—Sampling
4264.2	Part 2: Sampling procedures
2706	Numerical values—Rounding and interpretation of limiting values

AS/NZS

2243	Safety in laboratories (series)
------	---------------------------------

1.3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 2418 apply.

1.4 SAFETY

For information on laboratory safety, reference should be made to the relevant parts of AS/NZS 2243.

1.5 SAMPLES

1.5.1 General

The sample shall be the analysis sample prepared to a nominal top size of 212 μm . Sample preparation procedures are described in AS 4264.2.

1.5.2 Equilibration

The moisture content of the sample shall be equilibrated with the laboratory atmosphere by exposure in a thin layer on a tray. Exposure time shall be kept to a minimum. The sample shall be thoroughly mixed immediately before analysis.