

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.

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Australian Building Codes Board
Australian Coal Association
Australian Coal Preparation Society
Australian Institute of Energy
CSIRO Energy Technology
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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1038.4—2006

Coal and coke—Analysis and testing

Part 4: Coke—Proximate analysis

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National Association of Testing Authorities Australia
The University of New South Wales
The University of Queensland
University of Newcastle

NOTES

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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.

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STANDARDS AUSTRALIA

Australian Standard

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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.

1.6 REPORTING OF RESULTS

The results, the means of duplicate determinations, for moisture, ash and volatile matter, shall each be reported to the nearest 0.1%, rounded in accordance with AS 2706. The difference between 100 and the sum of the three results shall be reported as 'residue'.

For the calculation of results to bases other than 'as analysed', reference should be made to AS 1038.16.

1.7 PRECISION

The values for repeatability and reproducibility should not exceed those listed in Table 1.1. Otherwise, reference shall be made to AS 1038.16.

TABLE 1.1
PRECISION DATA FOR MOISTURE, ASH AND
VOLATILE MATTER

Property	Repeatability % absolute	Reproducibility % absolute
Moisture	0.10	Not applicable
Ash		
< 10%	0.15	0.30
≥ 10%	0.20	0.40
Volatile matter	0.20	Not applicable

NOTES:

- 1 For the moisture determinations, the results obtained will depend on the humidity conditions in the different laboratories. Because these conditions will vary, it is not practical to quote limiting values for reproducibility.
- 2 Insufficient evidence is available to enable a value for reproducibility for volatile matter to be quoted.

1.8 TEST REPORT

The test report shall contain the following information:

- (a) Complete identification of the sample tested.
- (b) Reference to this Australian Standard, i.e. AS 1038.4.
- (c) Results for the determinations for moisture, ash, volatile matter and residue, including the basis of reporting, e.g. as-analysed, dry, ash-free, as appropriate.