

Australian Standard® 1038.16—1986

METHODS FOR THE ANALYSIS AND TESTING OF COAL AND COKE Part 16—ACCEPTANCE AND REPORTING OF RESULTS



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The following interests are represented on Committee MN/1:

Australasian Institute of Mining and Metallurgy
Australian Coal Association
Australian Coal Industry Research Laboratories Ltd
Australian Institute of Energy
Bureau of Steel Manufacturers of Australia
Coal Preparation Societies of New South Wales and Queensland
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PREFACE

This edition of this standard was prepared by the Association's Subcommittee on Coal Evaluation under the supervision of the Committee on Coal and Coke and the direction of the Minerals Standards Board as a replacement for AS 1038.16—1981. The principal differences from AS 1038.16—1981 are as follows:

- (a) This standard is applicable to the AS 1038 series of methods for the analysis and testing of coal and coke, as well as associated standards, including the AS 2434 series of methods for the analysis and testing of lower rank coal and its chars. The presentation has been revised and the technical coverage, though similar, has been expanded.
- (b) Some inaccuracies in formulas, calculations and precision statistics have been corrected.
- (c) Revised, restructured, and additional parts of AS 1038 and associated standards have been referenced.
- (d) Repeatability and reproducibility data have been adjusted to accommodate the common experience of Australian coal testing laboratories, particularly for proximate and ultimate analysis results which were previously based on precision statistics presented in the corresponding British Standard.

This standard will be continuously revised because of ongoing development and updating of all other standards in the AS 1038 series and associated standards. For this reason, information presented in each edition of AS 1038.16 may at any given time be ahead of or behind the actual state of development or updating of other standards. It is therefore recommended that this standard be used only in conjunction with other appropriate standards.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

METHODS FOR THE ANALYSIS AND TESTING OF COAL AND COKE

PART 16—ACCEPTANCE AND REPORTING OF RESULTS

1 SCOPE. This standard provides procedures and information for the reporting of results obtained by the use of methods detailed in the AS 1038 series and associated standards. Technical aspects relevant to the derivation of formulas required for calculation and to the acceptance of analytical results are also provided.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

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|-----------|---|-----------|---|
| AS 1038 | Methods for the Analysis and Testing of Coal and Coke | | |
| Part 1 | Total Moisture in Hard Coal* | Part 14.2 | Analysis of Higher Rank Coal Ash and Coke Ash (Acid Digestion—Flame Atomic Absorption Spectrometric Method) |
| Part 2 | Total Moisture in Coke* | Part 15 | Fusibility of Coal Ash and Coke Ash* |
| Part 3 | Proximate Analysis of Hard Coal* | Part 17 | Determination of Moisture Holding Capacity (Equilibrium Moisture) of Higher Rank Coal† |
| Part 4 | Proximate Analysis of Coke* | Part 19 | Determination of Abrasion Index of Higher Rank Coal† |
| Part 5 | Gross Specific Energy of Coal and Coke* | Part 20 | Determination of the Hardgrove Grindability Index of Hard Coal* |
| Part 6 | Ultimate Analysis of Higher Rank Coal | Part 21 | Determination of the Relative Density and Apparent Relative Density of Hard Coal |
| 6.1 | Determination of Carbon and Hydrogen | Part 22 | Direct Determination of Mineral Matter and Water of Hydration of Minerals in Hard Coal |
| 6.2 | Determination of Nitrogen | Part 23 | Determination of Carbonate Carbon in Higher Rank Coal |
| 6.3.1 | Determination of Total Sulphur (Eschka Method) | AS 1152 | Test Sieves* |
| 6.3.2 | Determination of Total Sulphur (High Temperature Combustion Method) | AS 1661 | Method for Float and Sink Testing of Hard Coal and Presentation of Results* |
| 6.3.3 | Determination of Total Sulphur (Infrared Method) | AS 2137 | Hard Coal—Determination of Plastic Properties by the Gieseler Plastometer |
| Part 7 | Ultimate Analysis of Coke | AS 2418 | Glossary of Terms Relating to Solid Mineral Fuels |
| Part 8 | Chlorine in Coal and Coke | AS 2434 | Methods for the Analysis and Testing of Lower Rank Coal and its Chars |
| Part 9 | Phosphorus in Coal and Coke | Part 1 | Determination of the Moisture Content of Brown Coal |
| 9.1 | Dry Oxidation Method* | Part 2 | Determination of the Volatile Matter in Low Rank Coal |
| Part 10 | Arsenic in Coal and Coke* (to be revised as AS 1038.10.2) | Part 3 | Determination of the Moisture Holding Capacity of Lower Rank Coals |
| 10.1 | Determination of Trace Elements—Determination of Eleven Trace Elements in Coal, Coke and Fly-Ash—Flame Atomic Absorption Spectrometric Method | Part 4 | Determination of the Apparent Density of Dried Lower Rank Coal and Its Chars (Mercury Displacement Method) |
| Part 11 | Forms of Sulphur in Coal | Part 5 | Determination of Moisture in Bulk Samples and in Analysis Samples of Char from Lower Rank Coal |
| Part 12.1 | Determination of Crucible Swelling Number of Coal | Part 6.1 | Ultimate Analysis of Lower Rank Coal—Classical Methods |
| 12.2 | Assessment of Caking Power of Hard Coal: Gray-King Coke Type Test | Part 7 | Determination of Moisture in the Analysis Sample of Lower Rank Coal |
| 12.3 | Determination of the Dilatometer Characteristics of Higher Rank Coal | | |
| Part 13 | Tests Special to Coke* | | |
| Part 14.1 | Analysis of Coal Ash, Coke Ash and Mineral Matter (Borate Fusion—Flame Atomic Absorption Spectrometric Method) | | |

* In course of revision.

† In course of preparation.