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# Australian Standard 1038, Part 4—1979

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## METHODS FOR THE ANALYSIS AND TESTING OF COAL AND COKE Part 4—PROXIMATE ANALYSIS OF COKE

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Australian Coal Association  
Australian Institute of Energy  
Australasian Institute of Mining and Metallurgy  
Bureau of Steel Manufacturers of Australia  
Coal Preparation Societies of NSW and Queensland  
Confederation of Australian Industry  
Department of Minerals and Energy, Victoria  
Department of Mineral Resources and Development  
Department of National Development  
Electricity Supply Association of Australia  
Institution of Engineers, Australia  
Joint Coal Board  
Queensland Coal Board  
Royal Australian Chemical Institute  
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**AUSTRALIAN STANDARD**

**METHODS FOR THE  
ANALYSIS AND TESTING OF  
COAL AND COKE**

**Part 4  
PROXIMATE ANALYSIS  
OF COKE**

**AS 1038, Part 4—1979**

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## PREFACE

This standard was prepared by the Association's Committee on Coal and Coke as a revision of AS K152, Part 4—1968, which it accordingly supersedes. AS K152, Part 4 was BS 1016: Part 4: 1965 endorsed subject to Australian amendment. This revision is based on the 1973 edition of BS 1016: Part 4 and on ISO 687, and has been carried out as part of the process of revision and metrication of methods for the analysis and testing of coal and coke.

This standard requires reference to the following standards:

- AS 1038    Methods for the Analysis and Testing of Coal and Coke  
          Part 16—Reporting of Results
- AS 1152    Test Sieves
- AS 1898    Methods for the Sampling of Coke
- BS 1453    Filler Materials for Gas Welding
- ISO 687    Coke—Determination of Moisture in the Analysis Sample

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# STANDARDS ASSOCIATION OF AUSTRALIA

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## Australian Standard METHODS FOR THE ANALYSIS AND TESTING OF COAL AND COKE

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### PART 4—PROXIMATE ANALYSIS OF COKE

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**1 SCOPE.** This standard sets out methods for determining moisture, volatile matter and ash in the analysis sample of coke.

**2 DEFINITIONS.** For the purpose of this standard, the following definitions apply:

*Ash*—the inorganic matter remaining after the coke has been incinerated to constant mass under standardized conditions.

*Coke*—the solid residue of the distillation of coal at high temperature (above 800°C).

*Moisture in the analysis sample*—the moisture in the coke sample as analysed.

*Proximate analysis*—the analysis of coke expressed in terms of moisture in the analysis sample, volatile matter, ash and 'residue'.

*Repeatability*—the maximum acceptable difference between duplicate determinations carried out in the same laboratory, on the same analysis sample.

*Reproducibility*—the maximum acceptable difference between the mean of duplicate determinations carried out in one laboratory and the mean of duplicate determinations carried out in any other laboratory, on representative samples taken from the same bulk sample, after the last stage of the reduction process.

*Volatile matter*—the loss in mass, less that due to moisture, that occurs when the coke is heated out of contact with air under standardized conditions.

**3 SAMPLES.** The coke used for the analysis shall be the analysis sample of 60 g of coke, taken and prepared according to AS 1898 and ground to pass a 212  $\mu\text{m}$  test sieve complying with AS 1152.

The sample shall be thoroughly mixed, preferably by mechanical means, immediately before analysis.