
Coal — Determination of moisture- holding capacity

Charbon — Détermination de la capacité de rétention d'humidité

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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 27, *Coal and coke*, Subcommittee SC 5, *Methods of analysis*.

This third edition cancels and replaces the second edition (ISO 1018:2019), of which it constitutes a minor revision. The changes are as follows:

- the scope and title were widened to coal as in the referenced ASTM D1412.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The moisture-holding capacity indicates the rank of coals and is used in coal classification for correcting the calorific value of the sample to the moist mineral matter-free basis. The full moisture-holding capacity is that of the coal in equilibrium with an atmosphere saturated with water vapour. Since there are insuperable experimental difficulties in working with such an atmosphere, the determination is carried out at 96 % to 97 % relative humidity.

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Coal — Determination of moisture-holding capacity

1 Scope

This document makes reference to ASTM D1412 as a method of determining the moisture-holding capacity of coal.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ASTM D1412, *Standard Test Method for Equilibrium Moisture of Coal at 96 to 97 Percent Relative Humidity and 30 °C*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Sampling

Samples should be collected following the specifications given in ISO 13909, ISO 14180 or ISO 18283, as applicable.

5 Principle

The method is specified for wetted and unwetted coal. Coal is wetted by immersion in water and the subsequent removal of excess water.

The coal is brought to equilibrium over a saturated solution of potassium sulfate at 30 °C. The conditioning of the coal is carried out under reduced pressure. Afterwards, the sample is dried to constant mass at 105 °C.

The moisture-holding capacity is reported as percent mass fraction of the conditioned moist coal.

All the related equipment requirements, sample preparation, test procedure and reporting shall be in accordance with ASTM D 1412.

Bibliography

- [1] ISO 13909, *Coal and coke — Mechanical sampling*
- [2] ISO 14180, *Coal — Guidance on the sampling of coal seams*
- [3] ISO 18283, *Coal and coke — Manual sampling*

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