
International Standard



5068

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Brown coals and lignites — Determination of moisture content — Indirect gravimetric method

Charbons bruns et lignites — Détermination de l'humidité — Méthode gravimétrique indirecte

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5068 was developed by Technical Committee ISO/TC 27, *Solid mineral fuels*, and was circulated to the member bodies in January 1982.

It has been approved by the member bodies of the following countries :

Australia	Egypt, Arab Rep. of	South Africa, Rep. of
Austria	Germany, F.R.	Spain
Belgium	India	Thailand
Bulgaria	Japan	Turkey
Canada	New Zealand	USSR
China	Poland	Yugoslavia
Czechoslovakia	Romania	

No member body expressed disapproval of the document.

Brown coals and lignites — Determination of moisture content — Indirect gravimetric method

0 Introduction

Brown coals and lignites are hygroscopic and therefore their moisture content varies with change of humidity of the atmosphere. Hence, the moisture content of the analysis sample is determined whenever test portions are weighed out for other analytical determinations, for example volatile matter, calorific value, carbon and hydrogen, etc.

1 Scope and field of application

This International Standard specifies methods for the determination of the moisture content of brown coals and lignites using an indirect gravimetric method. An alternative direct volumetric procedure is specified in ISO 1015.

This International Standard specifies two basic procedures :

- a) A single-stage method which can be used for determination of the total moisture content of the special moisture sample or of a moisture sample taken from a common sample.
- b) A two-stage method which can be used for determination of the residual moisture content and, if required, also the total moisture content of a special moisture sample or of a moisture sample taken from a common sample.

The moisture content of an analysis sample (see clause 0) is determined using a variation of the single-stage method.

2 References

ISO 1015, *Brown coals and lignites — Determination of moisture content — Direct volumetric method*.

ISO 5069, *Brown coals and lignites — Principles of sampling and sample preparation*

Part 1 : Sampling for determination of moisture content and for general analysis.¹⁾

Part 2 : Sample preparation for determination of moisture content and for general analysis.¹⁾

3 Principle

3.1 Single-stage method

A sample, prepared using a closed mill, is dried to constant mass at a temperature of 105 to 110 °C in a nitrogen oven in an atmosphere of nitrogen free of moisture and oxygen, and the total moisture content calculated from the loss in mass of the sample.

3.2 Two-stage method

A sample is coarsely ground and is then allowed to dry, either in air at ambient temperature or at a higher temperature not exceeding 40 °C, in order to reach equilibrium with the atmosphere. (If the total moisture content of the sample is required, the loss in mass in this initial drying stage is determined.) The sample is then dried to constant mass in the conditions described in 3.1 and the residual moisture content calculated from the loss in mass of the sample during this final drying stage. (The total moisture content is calculated from the losses in mass during the two drying stages.)

3.3 Method for moisture content of an analysis sample

A test portion of the sample to be used for other determinations (see clause 0) is dried to constant mass in the conditions described in 3.1 and the moisture content is calculated from the loss in mass of the test portion. The moisture content is used in calculating the results of the other determinations on a dry basis.

¹⁾ At present at the stage of draft.