International Standard

ISO 1017

Brown coals and lignites — Determination of acetone-soluble material ("resinous substance") in the benzene-soluble extract

Charbons bruns et lignites — Détermination des matières solubles dans l'acétone de l'extrait au toluène soluble ("substances résineuses")

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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 document 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 fourth edition cancels and replaces the third edition (ISO 1017:2006), which has been technically revised.

The main changes are as follows:

— replaced “solid mineral fuels” with “coal and coke”;

— added Clause 3;

— replaced “content” with “mass fraction”;

— added “6.8 Analytical balance” and “6.9 Thermometer” to Clause 6.

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

Brown coals and lignites — Determination of acetone-soluble material ("resinous substance") in the benzene-soluble extract

1 Scope

This document specifies a method of determining the mass fraction of acetone-soluble material (“resinous substance”) in the benzene-soluble extract from brown coals and lignites.

NOTE The acetone extract also contains a mass fraction of wax dissolved simultaneously with the "resinous substance".

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.

ISO 975, *Brown coals and lignites — Determination of yield of benzene-soluble extract — Semi-automatic method*

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 Principle

The sample of benzene-soluble extract from brown coal or lignite obtained by the procedure described in ISO 975 is extracted with acetone at a temperature of 18 °C to 22 °C. The soluble fraction is filtered or centrifuged off and, after evaporation of the solvent, dried to a constant mass.

The mass fraction of acetone-soluble material is calculated from the mass of the residue after drying.

5 Reagent

Acetone, of analytical reagent grade.

WARNING — Acetone is flammable, and toxic by inhalation, ingestion or skin absorption

6 Apparatus

6.1 Centrifuge, capable of operating at 1 600 r/min.

The rotational frequency of the centrifuge shall be sufficient to ensure separation of the soluble fraction from the parent coal.