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**Solid mineral fuels — Coke —  
Determination of moisture in the general  
analysis test sample**

*Combustibles minéraux solides — Coke — Détermination de l'humidité  
de l'échantillon pour analyse*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 687 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 5, *Methods of analysis*.

This third edition cancels and replaces the second edition (ISO 687:2004), of which it constitutes a minor revision.

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## Introduction

The determination of the moisture in the general analysis test sample is required to correct the results of certain analytical determinations, e.g. volatile matter and hydrogen, for the effect of water in the determination and to allow all determinations to be corrected to a dry basis.

Since coke is hygroscopic, its moisture varies with a change in humidity of the atmosphere, and it is required, therefore, that the moisture in the general analysis test sample be determined whenever portions are weighed out for other analytical determinations. If test portions for several analytical determinations are weighed out at the same time, a single simultaneous moisture determination suffices to correct these analyses.

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# Solid mineral fuels — Coke — Determination of moisture in the general analysis test sample

## 1 Scope

This International Standard specifies a method for determining the moisture in the general analysis test sample of coke. It can be used for the determination of moisture in blast-furnace coke, foundry-coke and other high-temperature carbonization products.

## 2 Normative references

The following referenced documents are indispensable for the application 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 1213-2, *Solid mineral fuels — Vocabulary — Part 2: Terms relating to sampling, testing and analysis*

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 1213-2 apply.

## 4 Principle

A known mass of the coke is heated in air at 120 °C to 200 °C and maintained at this temperature until a constant mass is obtained. The moisture content is calculated from the loss in mass of the coke. Coke is not liable to oxidation under the conditions stated.

## 5 Apparatus

**5.1 Analytical balance**, capable of weighing to the nearest 0,1 mg.

**5.2 Oven**, capable of being controlled at a temperature of 120 °C to 200 °C and with a means to allow a flow of air or nitrogen.

**5.3 Weighing dish**, shallow, of glass or of corrosion-resistant metal, with a well fitting cover, of such a size that the coke layer does not exceed 0,20 g/cm<sup>2</sup>.

**5.4 Cooling vessel**, e.g. **desiccator**, without desiccant, containing a porcelain or a metal plate, preferably of aluminium or copper.

The vessel may be provided with the means to pass air or nitrogen through it during the cooling period.