
Rubber, raw — Determination of volatile-matter content —

Part 2:
Thermogravimetric methods using an automatic analyser with an infrared drying unit

Caoutchouc brut — Détermination des matières volatiles —

Partie 2: Méthodes thermogravimétriques utilisant un analyseur automatique avec une unité de séchage infrarouge

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 248-2 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

ISO 248 consists of the following parts, under the general title *Rubber, raw — Determination of volatile-matter content*:

- *Part 1: Hot-mill method and oven method*
- *Part 2: Thermogravimetric methods using an automatic analyser with an infrared drying unit*

Rubber, raw — Determination of volatile-matter content —

Part 2:

Thermogravimetric methods using an automatic analyser with an infrared drying unit

WARNING — Persons using this part of ISO 248 should be familiar with normal laboratory practice. This part of ISO 248 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

CAUTION — Certain procedures specified in this part of ISO 248 could involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

1.1 This part of ISO 248 specifies two thermogravimetric methods for the determination of moisture and other volatile-matter content in raw rubbers by using an automatic analyser with an infrared drying unit.

1.2 These methods are applicable to the determination of volatile-matter content in synthetic rubbers (SBR, NBR, BR, IR, CR, IIR, halogenated IIR and EPDM) listed in ISO 1629 and to various forms of raw rubber, such as bale, block, chip, pellet, crumb, powder and sheet. These methods might also be applicable to other raw rubbers, but in such cases it is necessary to prove that the change in mass is due solely to loss of original volatile matter and not to rubber degradation.

1.3 The methods are not applicable to raw rubbers which need homogenizing as specified in ISO 1795.

1.4 The hot-mill method and the oven method specified in ISO 248-1 and the methods specified in this part of ISO 248 might not give identical results. In cases of dispute, therefore, the oven method, procedure A, specified in ISO 248-1:2011 shall be the referee method.

NOTE These methods can be useful for routine determinations, e.g. quality control, when the measurement conditions for the automatic analyser are fixed for a particular raw rubber or grade of raw rubber.

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 248-1:2011, *Rubber, raw — Determination of volatile-matter content — Part 1: Hot-mill method and oven method*

ISO 1629, *Rubber and latices — Nomenclature*

ISO 1795, *Rubber, raw natural and raw synthetic — Sampling and further preparative procedures*

3 Principle

A test portion is continuously weighed to constant mass by a thermogravimetric method using an automatic analyser with infrared drying. The volatile-matter content is calculated as the mass lost during this procedure.