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**Cereals — Determination of bulk density,  
called mass per hectolitre —**

Part 2:

**Method of traceability for measuring  
instruments through reference  
to the international standard instrument**

*Céréales — Détermination de la masse volumique, dite masse  
à l'hectolitre —*

*Partie 2: Méthode de raccordement des instruments de mesure  
à l'étalon international*



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# Contents

Page

Foreword.....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Requirements .....</b>	<b>2</b>
4.1 Certified international or national standard instrument .....	2
4.2 National standard instrument.....	2
4.3 Secondary or internal standard instrument.....	2
4.4 Routine measuring instrument.....	2
<b>5 Principle .....</b>	<b>3</b>
<b>6 Apparatus .....</b>	<b>3</b>
<b>7 Procedure .....</b>	<b>4</b>
7.1 Traceability of national standard instruments through reference to the certified international or national standard instrument.....	4
7.2 Traceability of the secondary standard instruments through reference to the national standard instrument .....	6
7.3 Verification of instruments in operation.....	7
<b>8 Monitoring of instrument performance.....</b>	<b>9</b>
<b>9 Test reports .....</b>	<b>9</b>
9.1 Analysis certificate .....	9
9.2 Conformity certificate.....	10
<b>10 Identification of traced measuring instruments.....</b>	<b>10</b>
<b>Annex A (normative) Method for calculation of performance parameters of standard instruments and of measurement instruments.....</b>	<b>11</b>
<b>Annex B (informative) Some owners of certified standard measurement instruments.....</b>	<b>18</b>
<b>Bibliography .....</b>	<b>19</b>

## 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 7971 (all parts) was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 338, *Cereal and cereal products*, in collaboration with Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This edition is the second to bear the number ISO 7971-2, but the technical content is new. ISO 7971-3:2009 cancels and replaces the first edition (ISO 7971-2:1995).

ISO 7971 consists of the following parts, under the general title *Cereals — Determination of bulk density, called mass per hectolitre*:

- *Part 1: Reference method*
- *Part 2: Method of traceability for measuring instruments through reference to the international standard instrument*
- *Part 3: Routine method*

# Cereals — Determination of bulk density, called mass per hectolitre —

## Part 2: Method of traceability for measuring instruments through reference to the international standard instrument

### 1 Scope

This part of ISO 7971 specifies a test method for ensuring the traceability of mass per hectolitre measuring instruments through reference to standard measurement instruments. The mass per hectolitre or bulk density is of commercial importance for grain cereals. Several types of instruments with varying performances exist for measuring it.

This part of ISO 7971 also specifies the performances required of national standards instruments, secondary standards instruments, and measuring instruments used in laboratories or in collection or storage silos.

### 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 712, *Cereals and cereal products — Determination of moisture content — Reference method*

ISO 7971-1, *Cereals — Determination of bulk density, called "mass per hectolitre" — Part 1: Reference method*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **bulk density**

##### **"mass per hectolitre"**

⟨cereals⟩ ratio of the mass of a cereal to the volume it occupies after being poured into a container under well-defined conditions

NOTE Bulk density is expressed in kilograms per hectolitre of grains as received.

[ISO 7971-1:2009]

#### 3.2

##### **traceability**

⟨cereals⟩ establishment of a relationship between the usual measuring instrument and the international standard instrument via a chain