
**Wheat and wheat flour — Gluten
content —**

Part 1:
**Determination of wet gluten by a manual
method**

Blé et farines de blé — Teneur en gluten —

Partie 1: Détermination du gluten humide par une méthode manuelle



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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 21415-1 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*.

This first edition of ISO 21415-1, together with ISO 21415-2 (to be published), cancels and replaces ISO 5531:1978, which has been technically revised.

ISO 21415 consists of the following parts, under the general title *Wheat and wheat flour — Gluten content*:

- *Part 1: Determination of wet gluten by a manual method*
- *Part 2: Determination of wet gluten by mechanical means*
- *Part 3: Determination of dry gluten from wet gluten by an oven drying method*
- *Part 4: Determination of dry gluten from wet gluten by a rapid drying method*

Introduction

The alternative techniques specified in this part of ISO 21415 and in ISO 21415-2 for the isolation of wet gluten (i.e. washing out by hand and mechanical washing out) do not usually give equivalent results. The reason is that, for complete development of the gluten structure, it is necessary to rest the dough. Therefore, the result obtained by hand washing is usually higher than that obtained by mechanical washing, mainly in the case of wheat which has high gluten content. Consequently, the test report should always indicate the technique used.

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Wheat and wheat flour — Gluten content —

Part 1:

Determination of wet gluten by a manual method

1 Scope

This part of ISO 21415 specifies a manual washing out method for the determination of the wet gluten content of wheat flour (*Triticum aestivum* L. and *Triticum durum* Desf.). This method is directly applicable to flour. It is also applicable to semolina and wheat after grinding, if their particle size distribution meets the specification given in Table B.1.

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 — Routine reference method*

3 Terms and definitions

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

3.1

wet gluten

visco-elastic substance, composed principally of two protein fractions (gliadin and glutenin) in a hydrated form, obtained as specified in this part of ISO 21415 or ISO 21415-2

3.2

ground wheat

product of small-scale milling of whole wheat which meets the particle size distribution shown in Table B.1

3.3

semolina

coarsely milled wheat endosperm

3.4

flour

finely milled wheat endosperm with a particle size of less than 250 µm

4 Principle

Dough is prepared from a sample of flour or reground semolina or ground wheat and a solution of sodium chloride. The dough is left to rest for the gluten structure to develop. The wet gluten is separated by hand