

INTERNATIONAL STANDARD

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Durum wheat flour and semolina — Determination of yellow pigment content

*Farines et semoules de blé dur — Détermination de la teneur en pigments
jaunes*



Reference number
ISO 11052:1994(E)



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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.

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.

International Standard ISO 11052 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 4, *Cereals and pulses*.

Annexes A and B of this International Standard are for information only.

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Durum wheat flour and semolina — Determination of yellow pigment content

1 Scope

This International Standard specifies a method for determination of the yellow pigment content in durum wheat flour and semolina (*Triticum durum* L.).

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 712:1985, *Cereals and cereal products — Determination of moisture content (Routine reference method)*.

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 yellow pigment content: An essential quality factor of raw materials for the production of pasta, defined as the content of extractable carotenoids of the endosperm.

It is expressed as milligrams of β -carotene in 100 g of dry matter.

4 Principle

Extraction of the carotenoids at room temperature with water-saturated *n*-butanol. Then photometric

evaluation of the optical density of the clear filtrate against β -carotene standard solutions.

5 Reagents

Use only reagents of recognized analytical grade and distilled or demineralized water or water of at least equivalent purity.

5.1 Water-saturated *n*-butanol

Prepare a solution of *n*-butanol and water in proportions 6:2 (V/V) and shake vigorously. Use the clear upper layer after separation of the phases.

5.2 Diethyl ether

5.3 Synthetic β -carotene, crystalline, finely crushed.

6 Apparatus

Usual laboratory apparatus and, in particular, the following.

6.1 Grinder, having the following properties:

- constructed of a material that does not absorb water;
- easy to clean;
- of minimal dead space;
- capable of grinding rapidly and uniformly without heating, and avoiding as far as possible contact of the sample with the outside air.

6.2 Spectrometer, capable of operating at a wavelength of 440 nm.