
International Standard



1237

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Mustard seed — Specification

Graines de moutarde — Spécifications

Second edition — 1981-08-01

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1237 was developed by Technical Committee ISO/TC 34, *Agricultural food products*.

This second edition was submitted directly to the ISO Council, in accordance with clause 5.10.1 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 1237-1974), which had been approved by the member bodies of the following countries :

Brazil	Germany, F.R.	Netherlands
Bulgaria	Hungary	Poland
Czechoslovakia	India	Romania
Egypt, Arab Rep. of	Iran	Turkey
France	Israel	United Kingdom

This International Standard had also been approved by the Association of Official Analytical Chemists (AOAC).

The member body of the following country had expressed disapproval of the document on technical grounds :

Austria

Mustard seed — Specification

1 Scope and field of application

This International Standard specifies requirements for mustard seed.

Recommendations relating to storage and transport conditions are given in annex E.

2 References

ISO 927, *Spices and condiments — Determination of extraneous matter content*.

ISO 928, *Spices and condiments — Determination of total ash*.

ISO 930, *Spices and condiments — Determination of acid-insoluble ash*.

ISO 948, *Spices and condiments — Sampling*.

ISO 1108, *Spices and condiments — Determination of non-volatile ether extract*.

ISO 2825, *Spices and condiments — Preparation of a ground sample for analysis*.

3 Requirements

3.1 Description

Mustard seed is the dried clean seed of one or more of the following plants:

- *Sinapis alba* Linnaeus — White mustard, yellow mustard;
- *Brassica nigra* (Linnaeus) W.D.J Koch — Black mustard;
- *Brassica juncea* (Linnaeus) Czernajew and Cosson in Czernajew — Indian mustard.

3.2 Odour and flavour

The odour and flavour of the seeds when ground and moistened shall be fresh and pungent, and free from rancidity and mustiness.

3.3 Freedom from moulds, insects, etc.

The seeds shall be free from living insects, mites and moulds, and shall be practically free from dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision), using such magnification as may be necessary in any particular case. If the magnification exceeds X 10, this fact shall be stated in the test report.

3.4 Extraneous matter, shrivelled and damaged seeds

The seeds shall be whole and mature and shall not contain more than 0,7 % (m/m) of extraneous matter or other vegetable material, determined by the method specified in ISO 927. Extraneous seeds include charlock (*Sinapis arvensis* Linnaeus), rape (*Brassica napus* Linnaeus), and *Melilotus* species. The proportion of damaged or shrivelled mustard seeds shall not exceed 2 % (m/m).

3.5 Chemical requirements¹⁾

The mustard seed shall comply with the requirements given in the table.

Table — Requirements for mustard seed

Characteristics	Requirement	Method of test
Loss in mass at 103 °C, % (m/m) max.	10	Annex A
Total ash, % (m/m) on dry basis, max.	6,5	ISO 928
Acid-insoluble ash, % (m/m) on dry basis, max.	1,0	ISO 930
Non-volatile ether extract, % (m/m) on dry basis, min.	28	ISO 1108
Allyl isothiocyanate, % (m/m) on dry basis a) in <i>B. nigra</i> , min. b) in <i>B. juncea</i> , min.	1,0 0,70	Annex B
<i>p</i> -hydroxybenzyl isothiocyanate, % (m/m) on dry basis in <i>Sinapis alba</i> , min.	2,3	Annex C or Annex D

1) Limits for toxic substances will be included later, in accordance with the recommendations of the FAO/WHO Codex Alimentarius Commission.

4 Sampling

Sample the mustard seed by the method specified in ISO 948.

5 Methods of test

5.1 The samples of mustard seed shall be tested for conformity with the requirements of this International Standard by the methods of test referred to in 3.4 and the table.

5.2 For the determination of total ash, use the method specified in ISO 928, with the following modifications to sub-clause 8.3.2 :

Leach the ash with hot water, filter through a medium-fine, ashless filter paper and wash thoroughly. Transfer the filter paper and contents to the dish (6.1), dry and heat again in the muffle furnace (6.2) for 1 h. Cool and add 5 to 10 drops of analytical quality nitric acid, evaporate to dryness on the steam bath (6.4) and heat in the muffle furnace for 30 min. Repeat the addition of 5 to 10 drops of the nitric acid, again evaporate to dryness and heat in the muffle furnace for 1 h. Cool the dish, add the filtrate, and evaporate to dryness on the steam bath. Heat again in the muffle furnace for 1 h, cool and weigh. Repeat these operations until the difference between two successive weighings is less than 0,002 g. Record the lower mass.

The total ash may be retained for the determinations of water-insoluble ash and acid-insoluble ash.

6 Packing and marking

6.1 Packing

The mustard seed shall be packed in clean, hygienic bags of a material which does not affect the seed and prevents it from absorbing moisture.

6.2 Marking

The following particulars shall be marked or labelled on each package :

- a) name of the material (botanical name), and the trade name or brand name, if any;
- b) name and address of the manufacturer or packer;
- c) batch or code number;
- d) net mass;
- e) grade of the material (if graded), according to the national standard of the producing country;
- f) producing country;
- g) year of harvest, if known;
- h) date of packing;
- j) any other marking required by the purchaser.