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INTERNATIONAL STANDARD



771

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Oilseed residues — Determination of moisture and volatile matter content

Tourteaux de graines oléagineuses — Détermination de la teneur en eau et matières volatiles

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Descriptors : oilseeds, oilseed residues, chemical analysis, determination of content, water, volatile matter.

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 771 was developed by Technical Committee ISO/TC 34, *Agricultural food products*.

It was submitted directly to the ISO Council, in accordance with clause 6.12.1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 771-1968, which had been approved by the member bodies of the following countries :

Australia	Germany	Poland
Brazil	Hungary	Romania
Bulgaria	India	South Africa, Rep. of
Chile	Iran	Thailand
Colombia	Israel	Turkey
Czechoslovakia	Italy	United Kingdom
Egypt, Arab Rep. of	Korea, Rep. of	U.S.S.R.
France	Netherlands	Yugoslavia

No member body had expressed disapproval of the document.

Oilseed residues – Determination of moisture and volatile matter content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the moisture and volatile matter content of residues (excluding compounded products) obtained by the extraction of oil from oilseeds by pressure or solvent.

2 REFERENCE

ISO 5500, *Oilseed residues – Sampling*.¹⁾

3 DEFINITION

moisture and volatile matter content : The loss in mass measured under the operating conditions specified below.

The moisture and volatile matter content is expressed as a percentage by mass.

4 PRINCIPLE

Drying of a test portion at 103 ± 2 °C in an oven at atmospheric pressure, until practically constant mass is reached.

5 APPARATUS

5.1 Analytical balance.

5.2 Mechanical mill, easy to clean and allowing the residues to be ground, without heating and without appreciable change in the moisture, volatile matter and oil content, to particles passing completely through the sieve (5.3).

5.3 Sieve, with apertures of diameter 1 mm.

5.4 Flat-bottomed vessel, of metal resistant to attack under the test conditions, provided with a well fitting lid and allowing the test portion to be spread to about 0,2 g/cm² (for example diameter of vessel 50 to 70 mm, height about 30 mm). Glass vessels with ground closures may also be used.

5.5 Electric oven, with thermostatic control and good natural ventilation, capable of being regulated so that the temperature of the air and of the shelves in the neighbourhood of the test portions lies between 101 and 105 °C in normal operation.

5.6 Desiccator, containing an efficient desiccant and provided with a metal plate which allows vessels (5.4) to cool rapidly.

6 PROCEDURE

Make all weighings to the nearest 0,001 g.

6.1 Preparation of the test sample

6.1.1 Take the contract sample obtained in accordance with ISO 5500.

6.1.2 Grind the contract sample, if necessary, in the previously well cleaned mechanical mill (5.2). First, use about one-twentieth of the sample to complete the cleaning of the mill, and reject these grindings; then grind the rest, collect the grindings, mix carefully and carry out the analysis without delay.

6.2 Test portion

6.2.1 Weigh the vessel (5.4) with its lid, after leaving it open for at least 30 min in the desiccator (5.6) at laboratory temperature.

6.2.2 Weigh into the vessel about 5 g of the test sample (6.1.2), spread this uniformly over the whole base of the vessel, close the vessel with its lid and re-weigh.

Carry out these operations as quickly as possible, in order to avoid any appreciable change in moisture content.

1) In preparation.