
International Standard



751

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Fruit and vegetable products — Determination of water-insoluble solids content

Produits dérivés des fruits et légumes — Détermination de la teneur en résidu sec insoluble dans l'eau

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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 751 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in July 1980.

It has been approved by the member bodies of the following countries :

Australia	Hungary	Poland
Austria	India	Portugal
Brazil	Ireland	Romania
Bulgaria	Israel	South Africa, Rep. of
Canada	Korea, Rep. of	Spain
Chile	Malaysia	Sri Lanka
Czechoslovakia	Netherlands	Thailand
Egypt, Arab Rep. of	New Zealand	Turkey
France	Peru	USSR
Germany, F. R.	Philippines	

No member body expressed disapproval of the document.

This International Standard has also been approved by the International Union of Pure and Applied Chemistry (IUPAC).

This International Standard cancels and replaces ISO Recommendation R 751-1968, of which it constitutes a technical revision.

Fruit and vegetable products – Determination of water-insoluble solids content

1 Scope and field of application

This International Standard specifies a method for the determination of the water-insoluble solids content of the edible parts of fruit and vegetable products.

2 Principle

Dissolution of the water-soluble matter in a test portion, filtration, drying of the residue and weighing.

3 Apparatus

Usual laboratory apparatus, and in particular :

- 3.1 Homogenizer or mortar.
- 3.2 Beakers, of capacity 250 or 400 ml.
- 3.3 Buchner funnel.
- 3.4 Filter paper, medium texture.
- 3.5 Indicator paper.
- 3.6 Weighing vessel.
- 3.7 Desiccator, containing an efficient desiccant.
- 3.8 Oven, capable of being controlled at 103 ± 2 °C.
- 3.9 Centrifuge (see 7.2).
- 3.10 Analytical balance.

4 Procedure

NOTE — The water used shall be distilled water or water of at least equivalent purity.

4.1 Preparation of the test sample

Separate and remove from the laboratory sample stalks, stones, hard seed-cavity walls, and whenever possible, pips (after thawing in the case of frozen or deep-frozen products). Mix the sample thoroughly.

Allow frozen or deep-frozen products to thaw in a closed vessel and add the liquid formed during this process to the product before mixing.

If it is desired to express the result in terms of the sample as received, weigh the latter before removing stalks, stones, etc; weigh these after washing and drying and take them into account in the expression of results (see 5.3).

4.2 Preparation of apparatus

Place a filter paper (3.4) in the weighing vessel (3.6) and dry in the oven (3.8), controlled at 103 ± 2 °C, for 30 min. Cool in the desiccator (3.7) and weigh to the nearest 0,001 g.

4.3 Test portion

Weigh, to the nearest 0,001 g, into a 250 ml beaker (400 ml in the case of sweetened products) 10 to 100 g of the test sample (4.1), according to the consistency of the product and the expected water-insoluble solids content, for example :

— tomato concentrate	10 g
— jam, fruit preserve	25 g
— pulpy products	50 g
— fruit and vegetable juices	100 g

NOTE — For liquid products, it is also possible to take the test portion by volume.

4.4 Determination

Add 100 to 150 ml of water to the beaker containing the test portion and stir with a glass rod until a homogeneous mixture is obtained. Heat to boiling (in the case of sweetened products, see 7.1).

Pour the contents of the beaker quantitatively onto the dried filter paper (see 4.2) placed in the Buchner funnel (3.3) and filter (see 7.2). Wash the filter paper with a little hot water.

Transfer the filter paper and its contents quantitatively to the weighing vessel (see 4.2) and dry in the oven (3.8), controlled at 103 ± 2 °C, to constant mass, i.e. until the difference between two consecutive weighings, after 30 min in the oven followed by cooling in the desiccator for about 20 min, does not exceed 0,001 g. Carry out the weighings to the nearest 0,001 g.