
International Standard



928

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

Spices and condiments — Determination of total ash

Épices — Détermination des cendres totales

First edition — 1980-02-15

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 928:1980

<https://standards.iteh.ai/catalog/standards/sist/1ed3be3b-2e47-4d16-b2c9-29f2adf27914/iso-928-1980>

UDC 633.82/.84 : 543.82

Ref. No. ISO 928-1980 (E)

Descriptors : agricultural products, spices, chemical analysis, determination of content, ashes.

Price based on 2 pages

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

It 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 ISO Recommendation R 928-1969 which had been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Romania
Brazil	Greece	South Africa, Rep. of
Bulgaria	Hungary	Thailand
Canada	India	Turkey
Chile	Iran	United Kingdom
Colombia	Israel	USSR
Czechoslovakia	Korea, Rep. of	Yugoslavia
Egypt, Arab Rep. of	Poland	
France	Portugal	

No member body had expressed disapproval of the document.

Spices and condiments — Determination of total ash

0 Introduction

This International Standard is applicable to most spices and condiments. In view of the number and variety of such products, however, it may be necessary in particular cases to modify the method or even to choose a more suitable method.

Such modifications and other methods will be indicated in the International Standards giving specifications for the spices and condiments in question.¹⁾

1 Scope and field of application

This International Standard specifies a method for the determination of total ash from spices and condiments.

2 References

ISO 948, *Spices and condiments — Sampling*

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

3 Definition

total ash : The residue obtained after incineration at 550 °C under the conditions specified in this International Standard.

4 Principle

Destruction of organic matter by heating the test portion in contact with air to constant mass at a temperature of 550 °C.

5 Reagent

5.1 Ethanol, 95 % (V/V) solution.

6 Apparatus

Usual laboratory apparatus not otherwise specified, and :

6.1 Dish, flat-bottomed, having a surface area of at least 15 cm², made of platinum or of other material unaffected by the conditions of the test.

6.2 Muffle furnace, capable of being controlled at 550 ± 25 °C.

6.3 Hotplate.

6.4 Steam-bath.

6.5 Desiccator, provided with an efficient desiccant.

6.6 Analytical balance.

7 Sampling

Sample the product by the method specified in ISO 948.

8 Procedure

8.1 Preparation of test sample

Prepare the test sample by the method specified in ISO 2825.

8.2 Test portion

Weigh, to the nearest 0,001 g, about 2 g of the test sample (8.1) into the dish (6.1), previously heated for at least 30 min in the muffle furnace (6.2), controlled at 550 °C, cooled in the desiccator (6.5) and weighed to the nearest 0,001 g.

8.3 Determination

8.3.1 Pour about 2 ml of the ethanol (5.1) onto the test portion (8.2) in the dish (6.1) and ignite it. When the ethanol is burnt off, carefully heat the dish over a small flame to char the material. Then heat in the muffle furnace (6.2), controlled at 550 °C for 2 h. Cool and wet the ash with several drops of water, evaporate carefully to dryness and heat in the muffle furnace, controlled at 550 °C for another 1 h. If the wetting shows the ash to be carbon free, transfer the dish to the desiccator (6.5), allow to cool to room temperature, and weigh without delay. If the wetting shows the presence of carbon, repeat the wetting and heating until no specks of carbon are visible and heat in the muffle furnace for 1 h after the disappearance of carbon.

1) Modifications are required when using this method for nutmeg, mace, ginger, and cloves.

8.3.2 Cool in the desiccator and weigh to the nearest 0,001 g. The total ash may be retained for the determinations of water-insoluble ash and acid-insoluble ash.

9 Expression of results

9.1 The total ash, expressed as a percentage by mass, on the dry basis, is equal to :

$$(m_2 - m_0) \times \frac{100}{m_1 - m_0} \times \frac{100}{100 - H}$$

where

m_0 is the mass, in grams, of the empty dish;

m_1 is the mass, in grams, of the dish and test portion;

m_2 is the mass, in grams, of the dish and total ash;

H is the moisture content, expressed as a percentage by mass, of the sample as received.

9.2 Calculate the mean of two determinations and express the result to one decimal place.

10 Test report

The test report shall show the method used and the result obtained. It shall also mention all operating conditions not specified in this International Standard, or regarded as optional, and any circumstances that may have influenced the result.

The report shall include all details required for complete identification of the sample.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 928:1980

<https://standards.iteh.ai/catalog/standards/sist/1ed3be3b-2e47-4d16-b2c9-29f2adf27914/iso-928-1980>