

---

---

---

**Spices, condiments and herbs —  
Determination of volatile oil content  
(hydrodistillation method)**

*Épices, aromates et herbes — Détermination de la teneur en huiles essentielles (méthode par hydrodistillation)*

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[ISO 6571:2008](#)

<https://standards.iteh.ai/catalog/standards/iso/05418e77-2c59-4c10-8dae-524ce14d935c/iso-6571-2008>



Reference number  
ISO 6571:2008(E)

© ISO 2008

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

**iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview**

[ISO 6571:2008](#)

<https://standards.iteh.ai/catalog/standards/iso/05418e77-2c59-4c10-8dae-524ce14d935c/iso-6571-2008>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6571 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 7, *Spices, culinary herbs and condiments*.

This second edition cancels and replaces the first edition (ISO 6571:1984) of which it constitutes a technical revision.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[ISO 6571:2008](#)

<https://standards.iteh.ai/catalog/standards/iso/05418e77-2c59-4c10-8dae-524ce14d935c/iso-6571-2008>



# Spices, condiments and herbs — Determination of volatile oil content (hydrodistillation method)

## 1 Scope

This International Standard specifies a method for the determination of the volatile oil content of spices, condiments and herbs.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 939, *Spices and condiments — Determination of moisture content — Entrainment method*

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

(<https://standards.iteh.ai>)

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

[ISO 6571:2008](#)

3.1

**volatile oil content**

all the substances entrained by steam under the conditions specified in this International Standard

NOTE The volatile oil content is expressed in millilitres per 100 g of dry product.

## 4 Principle

An aqueous suspension of the product is distilled. The distillate is collected in a graduated tube containing a measured volume of xylene to fix the volatile oil. The organic and aqueous phases are then allowed to separate and the total volume of the organic phase read. The volatile oil content is calculated after deducting the volume of xylene.

## 5 Reagents

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

5.1 **Xylene.**

5.2 **Cleaning solutions.**

5.2.1 **Acetone** (for fatty residues).

**5.2.2 Liquid detergent** (used at the concentration recommended by the manufacturer) or a **solution of sulfuric acid and potassium dichromate** (see the warning) prepared by slowly adding, while stirring continuously, one volume of concentrated sulfuric acid to one volume of saturated potassium dichromate solution and by passing the mixture, after cooling, through a fritted glass filter.

**WARNING — Avoid any contact of this solution with the skin and mucous membranes.**

## 6 Apparatus

Usual laboratory equipment, and in particular the following.

**6.1 Distillation apparatus**, made of strong glass having a low coefficient of thermal expansion<sup>1)</sup>.

The apparatus comprises the following components connected by ground glass joints.

**6.1.1 Round-bottom flask**, with a ground neck, of capacity 500 ml or 1 000 ml, according to the product concerned (see Annex A).

**6.1.2 Condenser system**, comprising the following components joined together (see Figure 1):

- a) a vertical tube (AC), the base of which has a ground joint to fit the flask (6.1.1);
- b) a bent tube (CDE);
- c) a vertical bulb condenser (FG);
- d) an assembly consisting of a tube with a side-arm (K) provided with a ground stopper (K'), a pear-shaped enlargement (J), a tube graduated in divisions of 0,05 ml (JL), a spherical enlargement (L) and a three-way tap (M) connected to the vertical tube (AC) by an inclined tube (O) provided with a safety tube (N), if necessary topped by the steam trap (6.1.3).

[ISO 6571:2008](#)

<https://standards.iteh.ai/catalog/standards/iso/05418e77-2c59-4c10-8dae-524ce14d935c/iso-6571-2008>

---

1) This apparatus corresponds to the type described in the *European Pharmacopoeia* (V 5.89), 2.8.12.