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**Chillies and chilli oleoresins —  
Determination of total capsaicinoid  
content —**

**Part 2:**  
Method using high-performance liquid  
chromatography

*Piments et leurs oléorésines — Détermination de la teneur en  
capsaïcinoïdes totaux —*

*Partie 2: Méthode par chromatographie en phase liquide à haute  
performance*



## Foreword

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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.

International Standard ISO 7543-2 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 7, *Spices and condiments*.

ISO 7543 consists of the following parts, under the general title *Chillies and chilli oleoresins — Determination of total capsaicinoid content*:

- *Part 1: Spectrometric method*
- *Part 2: Method using high-performance liquid chromatography*

Annex A of this part of ISO 7543 is for information only.

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# Chillies and chilli oleoresins — Determination of total capsaicinoid content —

## Part 2:

## Method using high-performance liquid chromatography

### 1 Scope

This part of ISO 7543 specifies a method for the determination, by high-performance liquid chromatography, of the total capsaicinoid content of whole or powdered chillies (usually *Capsicum frutescens* L.) and their extracts (oleoresins). This content is calculated from the total of capsaicin, nordihydrocapsaicin and dihydrocapsaicin, expressed as nonyl acid vanillylamide, which is the chosen reference substance.

This method enables the separation of capsaicin and nonyl acid vanillylamide.

NOTE 1 A spectrometric method is given in ISO 7543-1.<sup>1)</sup>

### 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 7543. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7543 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2825:1981, *Spices and condiments — Preparation of a ground sample for analysis*.

1) To be published.

### 3 Principle

#### 3.1 Chillies in powder form

Extraction with tetrahydrofuran using a Soxhlet-type continuous extraction apparatus, then determination of the capsaicinoids by high-performance liquid chromatography (HPLC), in accordance with the procedure described in this part of ISO 7543.

#### 3.2 Whole chillies

Preparation by grinding the sample, then extraction of the powder so obtained, followed by determination of the capsaicinoids by HPLC, in accordance with the procedure described in this part of ISO 7543.

#### 3.3 Oleoresins of chillies

Dilution of the oleoresin in a tetrahydrofuran/methanol solution, then determination of the capsaicinoids by HPLC, in accordance with the procedure described in this part of ISO 7543.

### 4 Reagents

Use only reagents of recognized analytical grade, and distilled or demineralized water or water of equivalent purity.