

INTERNATIONAL STANDARD

ISO
7543-1

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Chillies and chilli oleoresins — Determination of total capsaicinoid content —

Part 1: Spectrometric method

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

Partie 1: Méthode par spectrométrie



Reference number
ISO 7543-1:1994(E)

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.

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 7543-1 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee 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*

Chillies and chilli oleoresins — Determination of total capsaicinoid content —

Part 1: Spectrometric method

1 Scope

This part of ISO 7543 specifies a method for the determination, by a spectrometric method, of the total capsaicinoid content of whole or powdered chillies (usually *Capiscum frutescens* L.) and their oleoresins.

This method of analysis requires discoloration by carbon black. In certain cases, this discoloration cannot be achieved under the experimental conditions described. Then it is necessary to use the method of determination of capsaicinoids by high-performance liquid chromatography as described in ISO 7543-2¹⁾.

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*.

3 Principle

Determination of the absorption of a methanolic solution of the extracts of chillies or chilli oleoresins at wavelengths of 248 nm and 296 nm.

3.1 Chillies in powder form

Extraction with tetrahydrofuran, then determination of the capsaicinoids by spectrometry, in accordance with the method described in this part of ISO 7543.

3.2 Whole chillies

Preparation by grinding the sample, then extraction with tetrahydrofuran, followed by determination of the capsaicinoids by spectrometry, in accordance with the method described in this part of ISO 7543.

3.3 Oleoresins of chillies

Dilution of the oleoresin in methanol, then determination of the capsaicinoids by spectrometry, in accordance with the method described in this part of ISO 7543.

4 Reagents

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

1) ISO 7543-2:1993, *Chillies and chilli oleoresins — Determination of total capsaicinoid content — Part 2: Method using high-performance liquid chromatography*.