

INTERNATIONAL STANDARD

ISO
7541

First edition
1989-12-01

Ground (powdered) paprika — Determination of total natural colouring matter content

*Paprika en poudre — Détermination de la teneur en matières colorantes
naturelles*



Reference number
ISO 7541:1989(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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7541 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*.

The method specified in this International Standard has been developed on the basis of the American Spices Trade Association (ASTA) 20/1 method.

For better application, further editorial details have been introduced and modifications have been made to the procedure on the following essential points:

- duration of extraction;
- zone of optimal absorbance;
- expression of results.

Ground (powdered) paprika — Determination of total natural colouring matter content

1 Scope

This International Standard specifies a method for the determination of the total natural colouring matter content of ground (powdered) paprika.

2 Normative references

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

ISO 939:1980, *Spices and condiments — Determination of moisture content — Entrainment method*.

ISO 948:1980, *Spices and condiments — Sampling*.

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

3 Principle

Extraction of the natural colouring matter content of ground paprika with acetone. Measurement of the absorbance of the solution obtained using a spectrometer at a wavelength of 460 nm.

4 Reagents

All reagents shall be of recognized analytical grade. The water used shall be distilled water or water of equivalent purity.

4.1 Acetone.

4.2 Sulfuric acid, 5 % (V/V) solution (to check the spectrometer, if necessary).

4.3 Standard colour solution (to check the spectrometer, if necessary), prepared as follows.

Weigh, to the nearest 0,0002 g, 1,3500 g of cobalt chloride hexahydrate ($\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$) and 0,0125 g of potassium dichromate ($\text{K}_2\text{Cr}_2\text{O}_7$) into a conical flask. Add 20 ml of the 5 % (V/V) sulfuric acid solution (4.2). Transfer this solution quantitatively into a 100 ml volumetric flask that has previously been rinsed with the sulfuric acid solution (4.2), further rinsing the conical flask three times with small quantities of the sulfuric acid solution. Then dilute to the mark with the sulfuric acid solution.

5 Apparatus

Usual laboratory apparatus and, in particular, the following.

5.1 Spectrometer, suitable for measurements at wavelengths of 460 nm, 465 nm and 477 nm, fitted with cells of 1 cm thickness.

5.2 Sieve, of nominal aperture size 0,63 mm.

5.3 Analytical balance.

5.4 Shaking machine, set to a speed of 270 to 300 vibrations per minute.

5.5 Volumetric flasks, of 250 ml capacity, made of amber glass.

5.6 Graduated pipette, of 5 ml capacity, fitted with a safety bulb.