INTERNATIONAL STANDARD

ISO 7928-1

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Savory — Specification —

Part 1:
Winter savory (*Satureja montana* Linnaeus)

Sarriette — Spécifications —

*Partie 1: Sarriette des montagnes (*Satureja montana *Linnaeus)*

Reference number
ISO 7928-1:1991(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 7928-1 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 7, *Spices and condiments*.

ISO 7928 consists of the following parts, under the general title *Savory — Specification*:

— *Part 1: Winter savory (Satureja montana Linnaeus)*

— *Part 2: Summer savory (Satureja hortensis Linnaeus)*

Annexes A and B of this part of ISO 7928 are for information only.

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Savory — Specification —

Part 1:
Winter savory (*Satureja montana* Linnaeus)

1 Scope

This part of ISO 7928 specifies the requirements of winter savory (*Satureja montana* Linnaeus) in the form of

— sprigs, and

— whole or broken leaves.

It is not applicable to summer savory (*Satureja hortensis* Linnaeus) which forms the subject of ISO 7928-2.

Recommendations relating to storage and transport conditions are given in annex A, for information.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7928. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7928 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 927:1982, *Spices and condiments — Determination of extraneous matter content.*

ISO 928:1980, *Spices and condiments — Determination of total ash.*

ISO 930:1980, *Spices and condiments — Determination of acid-insoluble ash.*

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

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

ISO 6571:1984, *Spices, condiments and herbs — Determination of volatile oil content.*

3 Description

Winter savory is the perennial plant *Satureja montana* Linnaeus, belonging to the family *Lamiaceae*. Its flowers are white with pink spots, or pink or violet in colour (see figure 1).

It is available commercially in the form of whole sprigs, harvested before blooming, but more frequently in the form of whole or broken leaves.

Sprigs are 15 cm to 30 cm in height. The stem is light green in colour and is hardly lignified. (See figure 2.)

The leaves are tough, lanceolate, very pointed, attenuate in the corner at the base, shiny and smooth on the faces, and ciliated at the edges.

Their length varies between 15 mm and 30 mm and their width from 3 mm to 5 mm. Their colour varies from olive green to matt ash-green.

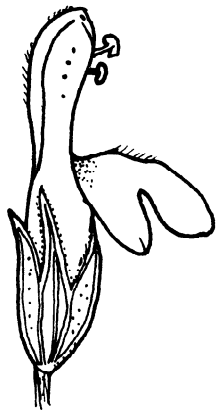


Figure 1 — Flower of winter savory

Figure 2 — Sprig of winter savory

4 Specifications

4.1 Odour and flavour

Winter savory has a typical, strong and pleasant odour. Its flavour is aromatic and hot, similar to that of carvacrol. It shall be free from all foreign flavour or odour.

4.2 Freedom from insects, moulds, etc.

Winter savory shall be free from living insects and moulds, and practically free from dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision) or with such magnification as may be necessary in any particular case. If the magnification exceeds × 10, this fact shall be mentioned in the test report.

4.3 Extraneous matter

For the purposes of this part of ISO 7928, all vegetable matter other than savory (as described in clause 3) and all matter of animal (excluding that arising from insects and rodents) or mineral origin are considered to be extraneous matter.

The total percentage of extraneous matter in winter savory, determined in accordance with ISO 927, shall not exceed 1 % (*m*/*m*).

The proportion of broken stems in winter savory marketed in the form of whole or broken leaves shall not exceed 5 % (*m*/*m*).

4.4 Chemical requirements

Winter savory shall comply with the requirements specified in table 1.

Table 1 — Chemical requirements

Characteristic	Requirement		Test method
	Savory as sprigs	Savory as leaves	
Moisture content, % (*m*/*m*) max.	13	13	ISO 939
Total ash, % (*m*/*m*), on dry basis, max.	13	11	ISO 928
Acid-insoluble ash, % (*m*/*m*), on dry basis, max.	1	1	ISO 930
Volatile oil, % (ml/100 g), on dry basis, min.	0,5	0,7	ISO 6571

4.5 Chromatographic requirements

The volatile oils obtained by dry distillation of the dried leaves of winter savory, and analysed by using gas chromatography (for example, under the operating conditions indicated on the chromatograms given in annex B) shall comprise the following main constituents: γ-terpinene, *p*-cymene, linalool, 1-terpinen-4-ol and carvacrol.

NOTE 1 Gas chromatography should not be carried out on the volatile oil obtained by the entrainment method (ISO 6571), which is used for the quantitative estimation as specified in table 1.

5 Sampling

Sampling should have been carried out in accordance with ISO 948[1].

6 Test methods

Samples of winter savory shall be tested for conformity with the requirements of this part of ISO 7928 using the test methods specified in 4.3 and table 1.

The ground sample for analysis shall be prepared in accordance with ISO 2825 and shall pass completely through a sieve having apertures of size 300 µm.

7 Packing and marking

7.1 Packing

Winter savory shall be packed in clean and sound containers made of a material which does not affect the product but which protects it from the ingress or loss of moisture and volatile matter. Examples of containers which meet these requirements are tin plate containers, wooden cases with internal waterproof liners and new jute bags with waterproof internal liners.

7.2 Marking

The following particulars shall be marked directly on each package or shall be marked on a label attached to the package:

a) name of the product and trade-name;

b) name and address of the producer or packer, or trade-mark;

c) code or batch number;

d) net mass;

e) producing country;

f) destination, i.e. name of the port or of the city;

and, if required,

g) any other information requested by the purchaser, such as the year of harvest and the date of packing (if known);

h) reference to this part of ISO 7928.

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

Annex A
(informative)

Recommendations relating to storage and transport conditions

A.1 Packages of winter savory shall be stored in covered premises, well protected from the sun, rain and excessive heat.

A.2 The storeroom shall be dry, free from unpleasant odours and protected against entry of insects and other vermin. Ventilation shall be adjusted in such a way as to give good ventilation during dry weather and to be fully closed under damp conditions. Suitable provisions shall be made for fumigation of storerooms.

A.3 Packages shall be handled and transported in such a way that they are protected from the rain, sun or other sources of excessive heat, unpleasant odours and any other contamination (especially in the holds of ships).

Annex B
(informative)

Typical chromatograms

Sample: oil of winter savory (*Satureja montana* Linnaeus)

Column: glass capillary, length 60 m, internal diameter 0,39 mm

Stationary phase: polyethylene glycol 1 540

Detector: flame ionization

Oven temperature:

— initial temperature: 40 °C for 16 min

— programme of temperature rise: 2 °C/min up to 110 °C, then 3 °C/min

— final temperature: 135 °C

Injection temperature: 220 °C

Detection temperature: 250 °C

Carrier gas: hydrogen

Volume injected: 0,1 µl

Constituents

1 γ-Terpinene
2 *p*-Cymene
3 Linalool
4 1-Terpinen-4-ol
5 Carvacrol

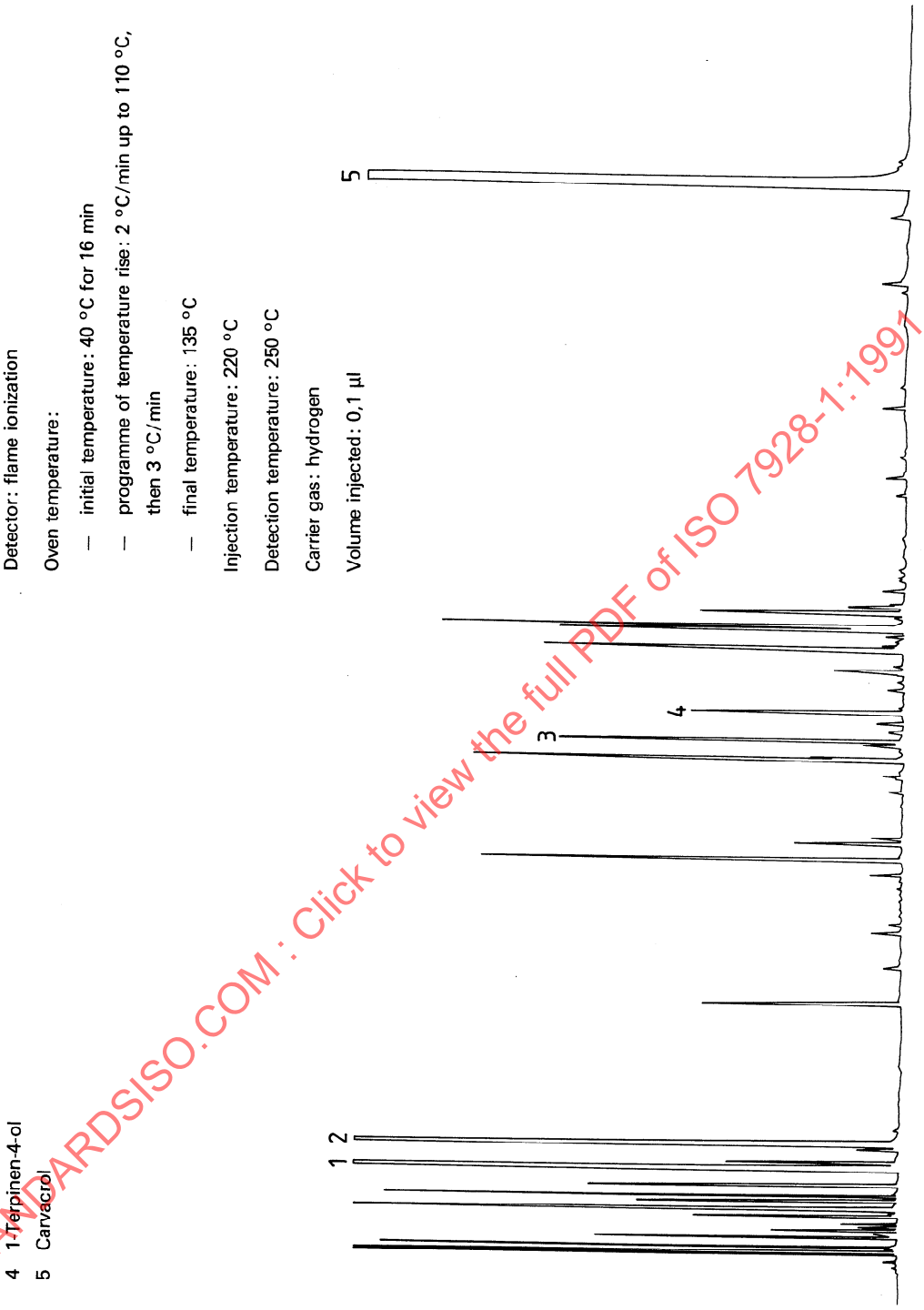
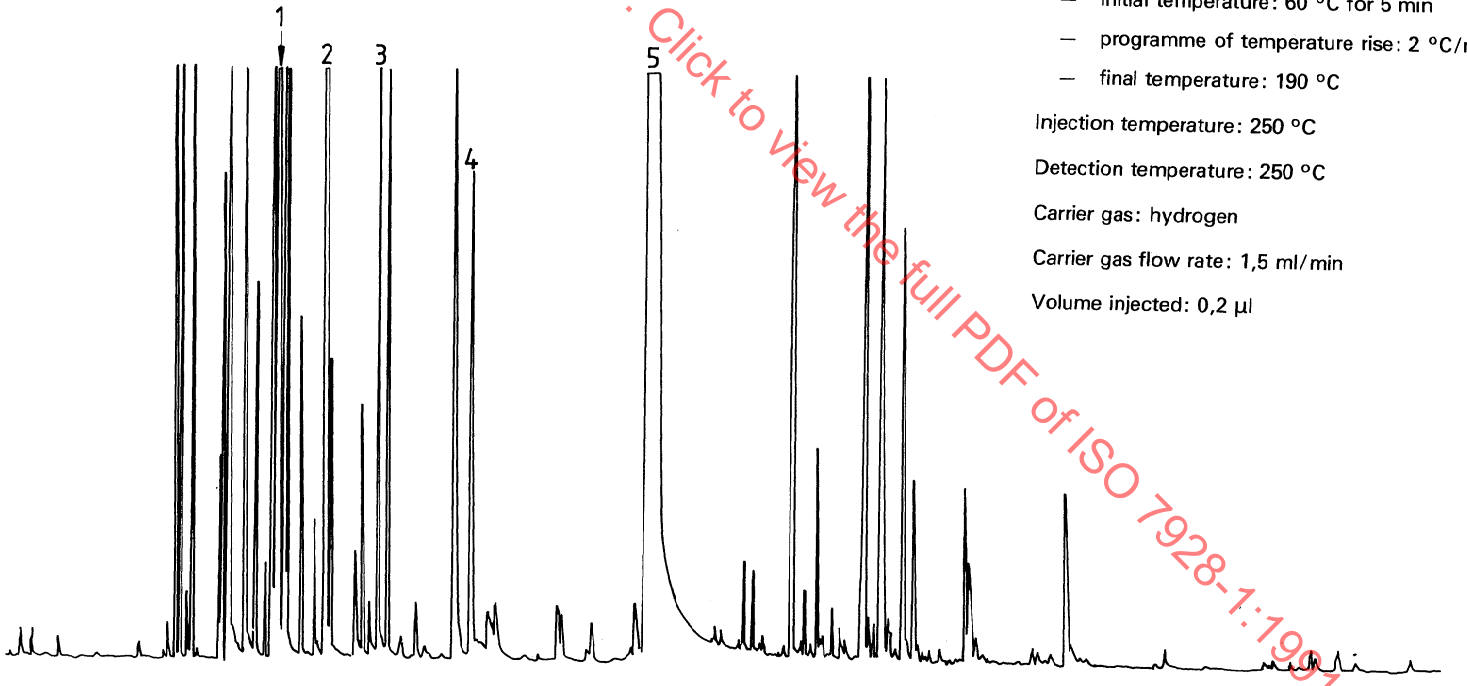


Figure B.1

Constituents

1 *p*-Cymene
2 *γ*-Terpinene
3 Linalool
4 1-Terpinen-4-ol
5 Carvacrol



Sample: oil of winter savory (*Satureja montana* Linnaeus)

Column: fused silica capillary, length 50 m, internal diameter 0,3 mm

Stationary phase: OV-101

Split ratio: 1/100

Detector: flame ionization

Oven temperature:

- initial temperature: 60 °C for 5 min
- programme of temperature rise: 2 °C/min
- final temperature: 190 °C

Injection temperature: 250 °C

Detection temperature: 250 °C

Carrier gas: hydrogen

Carrier gas flow rate: 1,5 ml/min

Volume injected: 0,2 µl

Figure B.2