INTERNATIONAL STANDARD

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Dehydrated tarragon (*Artemisia dracunculus* Linnaeus) — Specification

*Estragon déshydraté (*Artemisia dracunculus *Linnaeus) — Spécifications*

Reference number
ISO 7926:1991(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 7926 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 7, *Spices and condiments*.

Annex A forms an integral part of this International Standard. Annexes B and C are for information only.

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Dehydrated tarragon (*Artemisia dracunculus* Linnaeus) — Specification

1 Scope

This International Standard specifies the requirements of dehydrated tarragon (*Artemisia dracunculus* Linnaeus) (methylchavicol type[1]) in the form of whole or cut leaves and powder.

It does not apply to the elemicin-sabinene-type tarragon.

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 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 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 1208:1982, *Spices and condiments — Determination of filth.*

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

3 Description (see figure 1)

Tarragon is the perennial plant *Artemisia dracunculus* Linnaeus, belonging to the family *Asteraceae*.

It is available commercially in the form of leaves and flowering tops.

The colour of the dried leaves ranges from pale green to grey-green.

1) Also called "estragole-type tarragon".

Figure 1 — Tarragon — Stem with leaves

4 Requirements

4.1 Odour and flavour

Tarragon has a typical, pleasing and aromatic odour. Its flavour is pungent, aromatic and rather like that of aniseed. It shall be free from all foreign flavour or odour, particularly that of mould.

4.2 Freedom from insects, moulds, etc.

Dehydrated tarragon 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.

In cases of dispute, the contamination of tarragon in powder form shall be determined by using the method specified in ISO 1208.

4.3 Extraneous matter

For the purposes of this International Standard, all vegetable matter that does not belong to the tarragon plant and all other matter of animal (excluding that arising from insects and rodents), vegetable or mineral origin are considered to be extraneous matter.

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

The proportion of broken stems in tarragon in the form of whole or cut leaves shall not exceed 3 % (*m*/*m*).

The proportion of yellow or brown leaves in tarragon in the form of whole or cut leaves shall not exceed 15 % (*m*/*m*).

4.4 Classification

Tarragon may be classified according to the producing country (e.g. France, Yugoslavia, etc.) and/or its form of presentation (e.g. according to different cuts).

4.5 Chemical requirements

Dehydrated tarragon in the form of whole or cut leaves and powder shall comply with the requirements specified in table 1.

Table 1 — Chemical requirements

Characteristic	Requirement		Test method
	Tarragon as leaves	Tarragon as powder	
Moisture content, % (*m*/*m*), max.			ISO 939
sundried	10	10	
dried by artificial means	7	7	
Total ash, % (*m*/*m*), on dry basis, max.	12	12	ISO 928
Acid-insoluble ash, % (*m*/*m*), on dry basis, max.	1,5	1,5	ISO 930
Volatile oil, % (ml/100 g), on dry basis, min.	0,6	0,5	ISO 6571

4.6 Chromatographic requirements

The volatile oil obtained by dry distillation of the dried leaves of tarragon, and analysed by using gas chromatography (for example, under the operating conditions indicated on the chromatogram given in annex C) shall comprise the following main constituents: *cis*-β-ocimene, *trans*-β-ocimene, *trans*-anethole, methylchavicol (estragole), and methyleugenol.

The volatile oil shall not contain significant amounts of either sabinene or elemicin.

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 evaluation as specified in table 1.

5 Sampling

Sampling should have been carried out in accordance with ISO 948[2].

6 Test methods

Samples of tarragon in the form of whole or cut leaves and powder shall be tested for conformity with the requirements of this International Standard using the test methods specified in 4.3 and table 1.

The analysis shall be carried out on the product as supplied.

Samples of tarragon in powder form shall be subject to microscopic analysis (see annex A).

7 Packing and marking

7.1 Packing

Dehydrated tarragon shall be packed in clean, sound and dry 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.

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;

and, if required,

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

g) reference to this International Standard.

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

Annex A
(normative)

Microscopic examination of the fragments of the dried leaves of tarragon

Take a few fragments of the dried leaves (a few square millimetres) and re-hydrate them by placing them in boiling water. Mount them in a microscope slide and observe them through the microscope.

If there are no hairs or only hairs of the bifidated type (see figure A.1), the tarragon is of the methylchavicol type (called "French tarragon"). If star-type trichomes are observed (see figure A.2) the tarragon is of the elemicin-sabinene type (called "Russian tarragon").

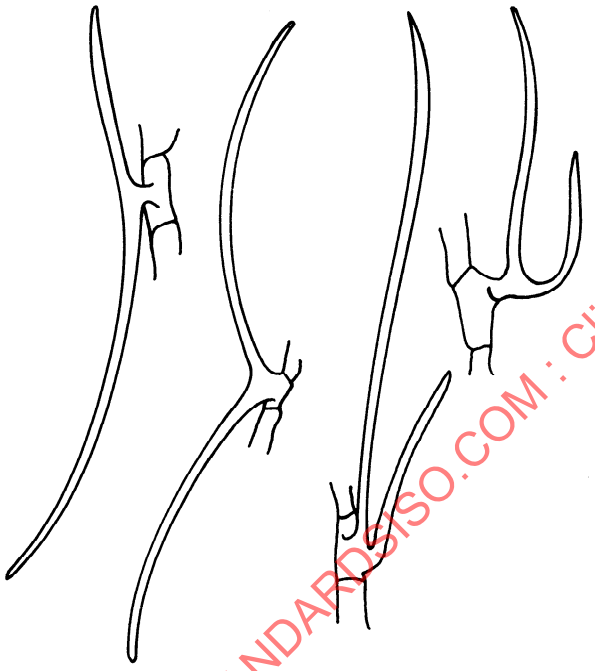

Figure A.1 — Methylchavicol-type tarragon

Figure A.2 — Elemicin-sabinene-type tarragon

Annex B
(informative)

Recommendations relating to storage and transport conditions

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

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

B.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 C
(informative)

Typical chromatogram

Sample: oil of tarragon (*Artemisia dracunculus* Linnaeus), methylchavicol type

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 10 min

— programme of temperature rise: 2,4 °C/min

— final temperature: 135 °C

Injection temperature: 220 °C

Detection temperature: 250 °C

Carrier gas: hydrogen

Volume injected: 0,1 µl

Constituents

1 *α*-Pinene
2 Limonene
3 *cis*-*β*-Ocimene
4 *trans*-*β*-Ocimene
5 Methylchavicol (estragole)
6 Methyleugenol

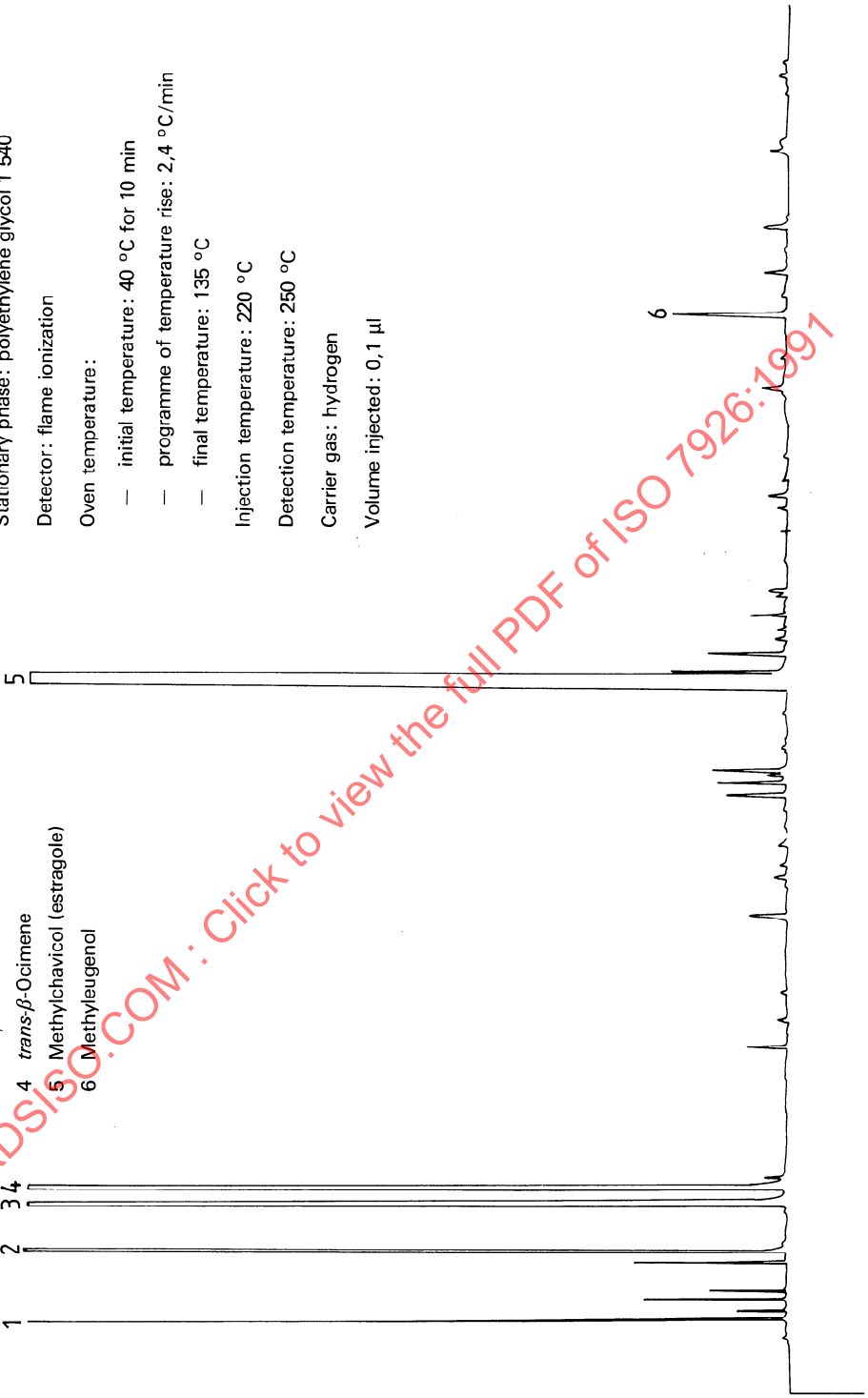

Figure C.1