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Dried barberry — Specification and test methods

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Foreword

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 3, *Fruits and vegetables and their derived products*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Barberries are found in temperate and subtropical regions around the world. Native species can be found in Europe and North America whereas a greater diversity of species can be found in Africa, Asia and South America. The flowers are either orange or yellow, about 3 mm to 6mm long with both sepals and petals, six each in alternating whirls of three. The fruit is a small berry about 5 mm to 15 mm long, coloured deep red or dark blue. They have waxy surface in either pink or violet and sometimes appear long but are mostly spherical in shape.

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Dried barberry — Specification and test methods

1 Scope

This document specifies requirements and test methods for the dried barberry fruit of the *Berberis vulgaris* L. tree.

It is applicable to dried red barberries only.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 763, *Fruit and vegetable products — Determination of ash insoluble in hydrochloric acid*

ISO 1026, *Fruit and vegetable products — Determination of dry matter content by drying under reduced pressure and of water content by azeotropic distillation*

ISO 5520, *Fruits, vegetables and derived products — Determination of alkalinity of total ash and of water-soluble ash*

OECD Scheme for the Application of International Standards for Fruit and Vegetables, 2012

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

extraneous matter

matter visible to the naked eye that is species waste belonging to the plant to which the product belongs

EXAMPLE Floral waste; crushed stalks and buds.

3.2

foreign matter

matter visible to the naked eye that is not part of the plant to which the product belongs

Note 1 to entry: The origin of macro foreign matter can be non-animal (e.g. stems, stones, straw, visible moulds) or animal (e.g. excreta, insects, insect-defiled product) foreign matter.

3.3

pest infestation

fruit damaged by insect and/or mite infestation

3.4

tailed barberry/cap-stem

piece of wood stuck to end of dried barberry fruit

3.5

immaturity

amount of fruit that has not reached physiological maturity

3.6

moisture content

quantity of water that has been distilled and collected

Note 1 to entry: It is expressed as a percentage by mass.

4 Description

Dried barberries that are sour in taste are prepared from fresh barberries by a drying process. Barberry fruits can be dried by applying different methods such as shade-drying, sun-drying and industrial-drying.

The colour of the fruit is generally red but black fruits have also been found. Dried barberry is native to temperate and semi-tropical regions of Africa, Asia, Europe, North America, South America and Iran.

5 Classification and requirements

5.1 Classification

5.1.1 Groups

Dried barberries are divided into two groups according to their colour:

- red;
- black.

5.1.2 Classes

Dried barberries are divided into three classes according to their quality requirements and diameter:

- Extra class;
- Class I;
- Class II.

The class requirements of dried barberries according to their size limits are given in [Table 1](#).

The size of the dried barberries shall be determined by measuring their shortest diameter (hereafter referred to as "diameter").

Table 1 — Size limits of dried barberries

Diameter (mm)	Extra class	Class I	Class II
	≥ 7	> 5 < 7	> 3 ≤ 5

5.2 Requirements

5.2.1 General requirements

The general quality requirements of dried barberry are given in [Table 2](#).

The dried barberries shall be whole, sound and of a natural colour. The odour and taste of the dried barberries shall be characteristic of the variety. The fruits shall be free from foreign odour and taste.

Table 2 — General requirements

Characteristic	Requirement
Living insects or mites	Free
Extraneous matter	Free
Foreign matter	Mass fraction of 10 g/kg (max.)
Pest infestation	Mass fraction of 10 g/kg(max.)
Tailed barberry/cap-stem	Mass fraction of 30 g/kg (max.)
Immaturity	Mass fraction of 10 g/kg (max.)
Total ash	Mass fraction of 35 g/kg (max.)
Acid insoluble ash	Mass fraction of 8 g/kg (max.)
Moisture content	Mass fraction of 130 g/kg (max.)

5.3 Tolerances

5.3.1 Group tolerances

Extra class can include at most 5 % black barberries in total mass. Class I can include 8 % black barberries in total mass. Class II can include 10 % black barberries in total mass.

5.3.2 Size tolerances

The mass of barberries in the package that does not conform to the limits specified in [Table 1](#) shall be at most 10 %.

6 Sampling

Samples are taken from the lot. Dried barberries with the same type, class, length, packaging and inspection time are considered as a lot. It is important that the laboratory receives a sample that is truly representative and has not been damaged during storage and transportation.

Sampling shall be in accordance with the OECD Scheme for the Application of International Standards for Fruit and Vegetables, 2012.

7 Test methods

7.1 General

The organoleptical and visual inspections, sniffing, tasting, weighing and measuring of the dried barberries should be done upon the request of the customer

If necessary, the analyses given in [7.2](#) to [7.5](#) can also be performed.

7.2 Visual examination

A visual examination involves the inspection of a test portion of dried barberries and the physical separation of the different coloured fruits.

Visually examine samples of dried barberry for conformity with the proportions of physical defects as follows:

- living insects or mites;
- extraneous matter;