
Dried barberry — Specification and test methods

Épine-vinette séchée — Spécification et méthodes d'essai

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 24090:2021](https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021)

<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021>



iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 24090:2021

<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Description.....	2
5 Classification and requirements.....	2
5.1 Classification.....	2
5.1.1 Groups.....	2
5.1.2 Classes.....	2
5.2 Requirements.....	2
5.2.1 General requirements.....	2
5.3 Tolerances.....	3
5.3.1 Group tolerances.....	3
5.3.2 Size tolerances.....	3
6 Sampling.....	3
7 Test methods.....	3
7.1 General.....	3
7.2 Visual examination.....	3
7.3 Determination of total ash.....	4
7.4 Determination of ash insoluble in hydrochloric acid.....	4
7.5 Determination of moisture content.....	4
8 Packaging and labelling.....	4
8.1 Packaging.....	4
8.2 Labelling.....	4
9 Storage and transport.....	4

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 3, *Fruits and vegetables and their derived products*. [ISO 24090:2021](https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d510b-1d05/di-24090-2021)

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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 24090:2021

<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 24090:2021

<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021>

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 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 24090:2021
<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0-8d590b1e7d05/iso-24090-2021>

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 160 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

ISO 24090:2021

<https://standards.iteh.ai/catalog/standards/sist/a966ac4f-0043-47ff-91e0->

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;

ISO 24090:2021(E)

- foreign matter;
- pest infestation;
- tailed barberry/cap-stem;
- immaturity.

For these purposes, weigh, to the nearest 0,1 g, a test portion of about 200 g and spread it out on a clean white surface.

7.3 Determination of total ash

The total ash value of the samples shall be determined in accordance with ISO 5520.

7.4 Determination of ash insoluble in hydrochloric acid

The ash insoluble in hydrochloric acid value of the samples shall be determined in accordance with ISO 763.

7.5 Determination of moisture content

The moisture content value of the samples shall be determined in accordance with ISO 1026.

8 Packaging and labelling

STANDARD PREVIEW
(standards.iteh.ai)

8.1 Packaging

The product shall be packaged in clean food-grade packaging materials to protect it from contamination. The packaging materials and process shall not contaminate the product or otherwise affect its technological, nutritional or sensory quality. The net weight of each package should not be less than 50 g and not be more than 10 kg.

8.2 Labelling

The following elements shall be marked or labelled on each container and case:

- a) the name of the material, and the trademark or brand name, if any;
- b) the name and address of the manufacturer or packer;
- c) the batch or code number;
- d) the net mass or gross mass (according to the request of the importing country);
- e) the producing country;
- f) any other marking required by the purchaser, such as year of harvest and date of packing (if known);
- g) the expiry date.

9 Storage and transport

Processing, packaging, storage areas and transport vehicles shall be free from bad odour that could affect the produce.

To prevent spoilage, the product should be kept in stores at 2 °C to 7 °C and 50 % to 60 % RH (relative humidity) for six months, or at -10 °C to 4 °C and 50 % to 60 % RH for one year.