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Cornelian cherry — Specification and test methods

Cournouiller mâle — Spécifications et méthodes d'essai

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Foreword

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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).

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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*.

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

Cornelian cherry (*Cornus mas* L.) is the most important of the 40 species of the family *Cornaceae*. These species grow in the temperate zone, except one that is native to Peru (*Cornus peruviana* L.).

Cornelian cherry is a deciduous tree or shrub, of a height reaching 3 m to 6 m, with brilliant leaves and greenish or grayish branches.

The fruit is olive-shaped, 1 cm to 2 cm long, and sweet-sour in taste. It originates from the inferior ovary with one seed. The colour of the fruit is generally red, but yellow fruit has also been found. The fruit is edible during August to September.

The most common uses of Cornelian cherry fruit are to eat and to produce different drinks and sweets. The fruit is also used for the preparation of gels and jams and in cookery. Cornelian cherry was an important medicinal plant in the past.

Cornelian cherry — Specification and test methods

1 Scope

This document specifies requirements and test methods for the fresh cornelian fruit of the tree *Cornus mas* L. It does not apply to processed cornelian cherries.

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 874, *Fresh fruits and vegetables — Sampling*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

3 Terms and definitions

No terms and definitions are listed in this document.

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/

4 Description

Cornelian cherry fruit is olive-shaped, 1 cm to 2 cm long, and sweet-sour in taste. Commercial varieties of cornelian cherry fruit are grown on the tree *Cornus mas L.* of the tree *Cornus* family. The colour of the fruit is generally red, but yellow fruit has also been found. The mass of the fruit ranges from 2 g to 6 g.

5 Classification and requirements

5.1 General

Cornelian cherries shall be divided into groups according to their colour (see 5.2.1) and divided into classes according to their quality and diameter (see 5.2.2).

5.2 Classification

5.2.1 Groups

Cornelian cherries are divided into five groups according to their colour:

— yellow;

— red;

— white;

— pink;

— violet.

5.2.2 Classes

Cornelian cherries are divided into three classes according to their quality requirements and diameter:

— Extra class;

— Class I;

— Class II.

5.3 Requirements

5.3.1 General requirements

Cornelian cherries shall be:

— whole and sound;

— clean and free from visible foreign matter;

— fresh looking and fresh smelling;

— free from insects and insect damage;

— free from any wounds;

— free from rots and suitable for handling and transportation.

Cornelian cherries shall be free from:

— abnormal external moisture;

— foreign taste and smell;

— hollows, clefts, peelings and fractures.

When cornelian cherries reach their destination, they shall be in a satisfactory condition.

5.3.2 Class requirements

5.3.2.1 General

The diameters for different classes of cornelian cherries are given in Table 1.

Table 1 — Diameter values according to class

Diameter (mm)	Extra class	Class I	Class II
	1,3 to 1,4	1,1 to 1,2	0,7 to 1,0

5.3.2.2 Extra class

Cornelian cherries of this class shall be of superior quality. This class shall have a unique colour. They shall be intact.

The external appearance of the product shall have no defects. The packaging shall not affect the presentation and quality of ingredients.

5.3.2.3 Class I

Cornelian cherries of this class shall be of good quality. This class shall have a uniform colour.

5.3.2.4 Class II

Cornelian cherries of this class shall meet the minimum specifications. A higher-grade cornelian cherry should not be included in this class.

6 Tolerances

6.1 General

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

6.2 Group tolerances

Extra class should include, at most, 10 % white cornelian cherry in total mass and 15 % violet cornelian cherry in Class II.

6.3 Class tolerances

6.3.1 Extra class

In this class, the total defects from the general feature requirements (see 5.3.1) in the cornelian cherry total mass shall not exceed 5 %.

6.3.2 Class I

In this class, the total defects from the general feature requirements (see 5.3.1) in the cornelian cherry total mass shall not exceed 10 %.

6.3.3 Class II

In this class, the total defects from the general feature requirements (see 5.3.1) in the cornelian cherry total mass shall not exceed 15 %.

6.4 Size tolerances

The mass or number of cornelian cherries in each package that do not meet the limits specified shall be 10 % maximum.

7 Sampling

Samples are taken from the lot. Cornelian cherries with the same group, class, size, 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 done in accordance with ISO 874 and ISO 2859-1.

8 Test methods

8.1 General

The organoleptical and visual inspections, sniffing, tasting, weighing and measuring of the cornelian cherries should be done upon request of the customer.

If necessary, the analyses given in 8.2 to 8.6 should also be done.

8.2 Determination of titratable acidity

The titratable acidity value of the samples should be determined in accordance with ISO 750.

8.3 Determination of water-insoluble solids

The water-insoluble solids of the samples should be determined in accordance with ISO 751.

8.4 Determination of mineral impurities content

The mineral impurities content of the samples should be determined in accordance with ISO 762.

8.5 Determination of pH

The pH value of the samples should be determined in accordance with ISO 1842.

8.6 Determination of soluble solids content

The soluble solids content of the samples should be determined in accordance with ISO 2173.

9 Packaging and marking

9.1 Packaging

Cornelian cherries shall be packed in such a way as to properly protect the produce. The materials used inside the package shall be clean and of such a quality as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed, provided that the printing or labelling is done with non-toxic ink or glue.

Packages shall be free of all kinds of foreign matter.

9.2 Marking

The container and case shall be marked or labelled with the following:

a) the name of the product or variety, and the trademark or brand name, if any;

b) the name and address of the producer or packer;

c) the code or batch number;

d) the net mass or gross mass (according to the request of the importing country);

e) the class of product;

f) the producing country;

g) the expiry date;

h) any other marking required by the purchaser, such as the year of harvest and date of packing (if known);

i) a reference to this document, i.e. ISO 20984 (optional).

10 Storage and transportation

Cornelian cherries in packages shall be kept in the shade. They shall not be left in the rain or cold or be allowed to freeze. They shall not be loaded and unloaded in these conditions.

11 Hygiene contaminants and pesticide residues

Cornelian cherries should be prepared in accordance with the appropriate sections of CAC/RCP 1-1969[6] and CAC/RCP 53-2003[7].

For contaminants and pesticides residues, it is recommended to refer to CODEX STAN 193-1995[8] and the pesticides residues database[9] as applicable to the product.