

ISO/TC 34/SC 3

Secretariat: TSE

Voting begins on:  
**2020-05-30**

Voting terminates on:  
**2020-07-25**

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## Artichokes — Specification and test methods

*Artichauts — Spécifications et méthodes d'essai*

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ISO/FDIS 20980:2020(E)

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Published in Switzerland

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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](http://www.iso.org/directives)).

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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](http://www.iso.org/members.html).

## Introduction

Artichoke plants are herbaceous perennial plants, members of the *Asteraceae* family of plants, a group that includes thistles, dandelions and sunflowers. They are short-lived perennials in warmer climates but are normally grown as annuals in cooler regions. Artichokes are usually grown for the edible flower buds, which are harvested before the flowers open. The unopened bud has overlapping rows of spine-tipped green bracts enclosing the actual flower parts. At the base of the bud is the tender, flavourful artichoke “heart,” which is the part that is cooked and eaten.

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# Artichokes — Specification and test methods

## 1 Scope

This document specifies requirements and test methods for fresh artichokes, including their hearts and bottoms, of the following groups:

- *cynara cardunculus* Scolymus Group;
- *cynara cardunculus* Cardoon Group, syn. *C. cardunculus* var. *altilis* DC.

It does not apply to processed artichokes.

## 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 750, *Fruit and vegetable products — Determination of titratable acidity*

ISO 751, *Fruit and vegetable products — Determination of water-insoluble solids*

ISO 762, *Fruit and vegetable products — Determination of mineral impurities content*

ISO 874, *Fresh fruits and vegetables — Sampling*

ISO 1842, *Fruit and vegetable products — Determination of pH*

ISO 2173, *Fruit and vegetable products — Determination of soluble solids — Refractometric method*

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

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

#### artichoke

edible portion of the vegetables included in the *Cynara cardunculus* Scolymus Group and *Cynara cardunculus* Cardoon Group, syn. *C. cardunculus* var. *altilis* DC

### 3.2

#### bract

modified or specialized leaf, especially associated with a reproductive structure such as a flower, inflorescence axis or cone scale

### 3.3

#### **heart**

central part of the head of the *artichoke* (3.1) without thorns and devoid of peduncles and outer *bracts* (3.2), leaving only the receptacle and tender inner sepals

### 3.4

#### **bottom**

receptacle of the head of spiny *artichokes* (3.1), completely devoid of *bracts* (3.2) and flowers in formation, remaining only the receptacle

## 4 Classification and requirements

### 4.1 General

Artichokes shall be divided into different types according to their botanical structure (see 4.2.1), divided into classes according to their quality characteristics (see 4.2.2) and divided into classes according to their size and characteristics (see 4.3.2).

### 4.2 Classification

#### 4.2.1 Types

Artichokes are divided based on their botanical structure into:

- globe artichokes, which are rounder in shape;
- elongated artichokes, which are longer.

#### 4.2.2 Classes

Based on the quality characteristics of the two types of artichokes, these are divided into four classes as follows:

- Extra class;
- Class I;
- Class II;
- No class.

### 4.3 Requirements and recommendations

#### 4.3.1 General

The head of the artichoke should not:

- have defects that affect its appearance or texture;
- show loss of humidity in this tissue;
- have a surface that appears dry or discoloured;
- show signs of pest damage or disease.

The development and condition of the artichoke shall allow the following characteristics:

- it shall be durable for handpicking, packaging and transportation;



— it shall be in a favourable condition to meet the market demands when it reaches its destination.

#### 4.3.2 By class

##### 4.3.2.1 Extra class

Artichokes in this class shall be whole and compact. They shall not be dehydrated or show any signs of pest damage or disease. The length of the heart diameter should be between 3,5 cm and 5 cm. The length of the bottom diameter should be between 7 cm to 9 cm.

Artichokes in this class shall be of high quality. The variety and/or commercial type shall have its own unique characteristics. Medium bracts shall be tightly closed and free of defects. Symptoms of becoming fibrous at the receptacle portion shall not have started. The colour should be completely green without being pale.

##### 4.3.2.2 Class I

Class I artichokes have the same characteristics as Extra class artichokes but are larger in size. The length of the heart diameter should be between 5,1 cm and 8 cm. The length of the bottom diameter should be between 9,1 cm and 11 cm.

Artichokes in this class shall be of high quality. They shall have characteristics of the variety and/or commercial type. The middle part of the bract shall be tightly closed. The receptacle portion shall not have become fibrous.

There shall not be any defects except for very slight outer surface defects that do not affect the overall appearance of the product and the presentation of the packaging.

Mild frost damage (cracks), very slight bruising and very mild defects of the product's overall appearance may be present without affecting the quality and presentation in the package.

##### 4.3.2.3 Class II

Class II artichokes may show slight dehydration, with slight pest or disease damage that could compromise the interior head.

Artichokes not included in other classes but fitting the general characteristics are included in this class. Mild deformities, frost defects, mild bruises, slight browning on the surface, becoming fibrous at the receptacle portion and a slight opening at the middle of the bracts are allowed.

##### 4.3.2.4 No class

No class artichokes are those that do not demonstrate any of the features for Extra class, Class I or Class II.

## 5 Tolerances

### 5.1 General

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