INTERNATIONAL STANDARD

ISO 11287

First edition
2011-05-01

Green tea — Definition and basic requirements

Thé vert — Définition et caractéristiques de base

Reference number
ISO 11287:2011(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 11287 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 8, *Tea*.

Introduction

Tea is grown and manufactured in numerous countries of the world and is blended or drunk in many more. Green tea may be produced from tea from more than one garden or region or may be a blend of teas from two or more origins.

The desired characteristics of a green tea and the resulting liquor depend upon many factors including the type of water to be used for brewing, the preparation method and on individual tastes.

The objects of this International Standard are to specify the plant source from which the green tea is to be manufactured and to set requirements for certain chemical characteristics which, if met, are an indication that the tea had been subjected to good production practice.

It is a matter for the parties concerned whether to apply the requirements of this International Standard to a consignment or lot of green tea. The quality of green tea is usually assessed organoleptically by skilled tea tasters, who base their judgements on their previous experience of green tea, their knowledge of the conditions in the producing areas, and the preferences of the consuming country. Account may be taken of characteristics such as the appearance of the tea before preparation of a liquor (such as shape, colour, cleanliness, and evenness), the appearance of the infused leaf and the appearance, odour, and taste of the liquor. In practice, teas are submitted for chemical analysis only if a tea taster suspects that the product has been adulterated, or if it exhibits abnormal characteristics.

Green tea — Definition and basic requirements

1 Scope

This International Standard specifies the parts of a named plant that are suitable for making green tea for consumption as a beverage and the chemical requirements for green tea that are used to indicate that tea from that source has been produced in accordance with good production practice.

This International Standard also specifies the packing and marking requirements for green tea in containers.

This International Standard is not applicable to green tea subject to further processing such as decaffeination or further roasting.

2 References

The following referenced documents are indispensable for the application 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 1572, *Tea — Preparation of ground sample of known dry matter content*

ISO 1573, *Tea — Determination of loss in mass at 103 °C*

ISO 1575, *Tea — Determination of total ash*

ISO 1576, *Tea — Determination of water-soluble ash and water-insoluble ash*

ISO 1577, *Tea — Determination of acid-insoluble ash*

ISO 1578, *Tea — Determination of alkalinity of water-soluble ash*

ISO 1839, *Tea — Sampling*

ISO 5498, *Agricultural food products — Determination of crude fibre content — General method*

ISO 9768, *Tea — Determination of water extract*

ISO 14502-1, *Determination of substances characteristic of green and black tea — Part 1: Content of total polyphenols in tea — Colorimetric method using Folin-Ciocalteu reagent*

ISO 14502-2, *Determination of substances characteristic of green and black tea — Part 2: Content of catechins in green tea — Method using high-performance liquid chromatography*

ISO 15598, *Tea — Determination of crude fibre content*

3 Terms and definitions

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

3.1
green tea
tea derived solely and exclusively, and produced by acceptable processes, notably enzyme inactivation and commonly rolling or comminution, followed by drying, from the tender leaves, buds, and shoots of varieties of the species *Camellia sinensis* (L.) O. Kuntze, known to be suitable for making tea for consumption as a beverage

4 Requirements

4.1 General requirements

4.1.1 The tea shall be clean and reasonably free from extraneous matter when inspected visually.

4.1.2 The tea shall be free from taint, and shall have the characteristics, appearance, colour and taste of green tea, when examined by sensory analysis.

4.1.3 The tea shall be free from any additives such as colouring agents and flavourings.

4.1.4 Liquor for sensory assessment can be prepared by the method specified in ISO 3103[1].

4.2 Chemical requirements

4.2.1 The tea shall comply with the requirements specified in Table 1 using the methods quoted, in which all the figures given are expressed on the basis of material oven dried to constant mass at (103 ± 2) °C by the method specified in ISO 1573.

4.2.2 No limit is specified for the moisture content of the tea as received. If desired, the actual loss in mass at 103 °C of the sample as received may be determined and the result recorded in the test report. In such cases, the determination shall be carried out by the method described in ISO 1573.

5 Sampling

Samples shall be taken in accordance with ISO 1839.

6 Methods of test

The requirements specified in Table 1, except for water extract, shall be determined using a ground sample prepared in accordance with ISO 1572.

7 Packing and marking

7.1 Packing

The tea shall be packed in closed, clean, and dry containers made of material which does not affect the quality of the tea.

7.2 Marking

The packages of tea shall be marked in accordance with any relevant legal requirements and agreements between the interested parties.

Table 1 — Chemical requirements for green tea

Characteristic	Requirement	Test method
Water extract, % mass fraction	32 min.	ISO 9768
Total ash, % mass fraction	8 max. 4 min.	ISO 1575
Water-soluble ash, % mass fraction of total ash	45 min.	ISO 1576
Alkalinity of water-soluble ash (as KOH), % mass fraction	1,0 min.[a] 3,0 max.[a]	ISO 1578
Acid-insoluble ash, % mass fraction	1,0 max.	ISO 1577
Crude fibre, % mass fraction	16,5 max.	ISO 5498 or ISO 15598[b]
Total catechins, % mass fraction	7 min.	ISO 14502-2
Total polyphenols, % mass fraction	11 min.	ISO 14502-1
Ratio total catechins to total polyphenols, mass fraction	0,5 min.	
NOTE Green tea specifically cultivated in a manner that suppresses the catechin and total polyphenol content, including Tencha (Matcha) and Gyokuro, has minimum 8 % mass fraction total polyphenols and minimum 5 % mass fraction total catechins.		

[a] When the alkalinity of water-soluble ash is expressed in terms of millimoles of KOH per 100 g of ground sample, the limits shall be: 17,8 min; 53,6 max.

[b] The specific method for the determination of crude fibre in tea is specified in ISO 15598; however, for the purpose of routine estimation, the general method specified in ISO 5498 is adequate. In cases of dispute, the method of determination should always be that specified in ISO 15598. The requirement remains unchanged, regardless of the method used.

Bibliography

[1] ISO 3103, *Tea — Preparation of liquor for use in sensory tests*