TECHNICAL REPORT

ISO/TR 21380

First edition
2022-04

Matcha tea — Definition and characteristics

Thé matcha — Définition et caractéristiques

Reference number
ISO/TR 21380:2022(E)

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Published in Switzerland

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Origins of matcha tea **1**
4.1 Historical origins of matcha tea 1
4.2 Descriptive names — Matcha tea and green, black and white teas 2
4.3 Plant source, cultivation and harvest 2
4.3.1 Cultivation and harvest 2
4.3.2 Roof frame shading and harvest 2
4.3.3 Direct shading and harvest 3
4.4 Processing and production stages 3
4.4.1 Harvesting and processing 3
4.4.2 Dry leaf grinding 3
4.5 Sensory analysis 4
4.6 Shelf life 4
5 Characteristics **4**
5.1 General characteristics 4
5.2 Chemical characteristics 5
Annex A (informative) **Appearance of sub-types of matcha tea and tencha tea** **6**
Annex B (informative) **Cultivation and processing** **7**
Bibliography **11**

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Foreword

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

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.

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Introduction

Tea is grown and manufactured in numerous countries in the world and is blended and/or consumed in many more. There is some confusion as to the origins, cultivation, appearance and processing for matcha tea and how this can or does differ from green, black, white and other types of tea.

Matcha tea (see Figure A.1) is traditionally prepared with hot water as a beverage in the Japanese tea ceremony called “Chanoyu”. Matcha tea is now consumed as a tea beverage prepared with hot water worldwide. In modern usage, matcha tea is also an ingredient in food and beverages.

The desired characteristics of matcha tea and the resulting liquor infusion depend upon a number of factors including the tea plant cultivation and the unique processing method and manufacture using fresh tea leaves.

This document:

— specifies the plant source of matcha tea;

— explains the requirements for cultivation, processing (drying) and grinding;

— identifies the physical and chemical characteristics which, if met, identify that the tea has followed good manufacturing practice.

The cultivation and processing methods are presented as the typical examples which have been developed for the harvest of tencha tea leaves (see Figure A.2) and the production of matcha tea in Japan.

Matcha tea is a specific type of green tea prepared with plant cultivation using shading, leaf steaming and leaf grinding processes. An investigation of the levels of L-theanine, chlorophyll and catechins – including epigallocatechin gallate (EGCG) and epigallocatechin (EGC) – in matcha tea indicates that the levels can vary to those in green and black teas and shows they support the discrimination between matcha, green and black teas. It is possible that the differentiation between matcha, green and black teas needs the use of ratios of the various chemical components, among others.

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Matcha tea — Definition and characteristics

1 Scope

This document contains information regarding the tea cultivation, manufacture (including processing and grinding) and sensory analysis of the tea referred to as "matcha tea" in international trade.

It provides an internationally agreed definition of matcha tea based on the plant source, cultivation and production methods used. These are important for the physical, chemical and sensory characteristics of matcha tea.

It does not apply to flavoured matcha tea, blended matcha tea, or decaffeinated or soluble extracts of matcha tea.

NOTE Images of matcha tea and the tencha tea leaf are given in Annex A. Images of the cultivation and processing of the tencha tea leaf are given in Annex B.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
matcha tea
tea derived solely and exclusively from harvested tender leaves, buds and shoots of varieties of the species *Camellia sinensis* (L.) O. Kuntze var. *sinensis* which are grown under shade, known to be suitable for making tea for consumption as a beverage, and produced by acceptable processes notably enzyme inactivation using a steaming process followed by a drying process, without rolling the leaves, and a fine grinding process for the leaf to make tea powder

4 Origins of matcha tea

4.1 Historical origins of matcha tea

Powdered tea was introduced into Japan in the late twelfth century, from its historical roots in China, and is produced using leaves of the *Camellia sinensis* (L.) O. Kuntze.

Tea plants were originally cultivated in open fields. By the sixteenth century, a cultivation method was developed covering the tea bushes with reed mats or rice straw mats which originally prevented the new shoots from having frost damage in late spring. The new shoots of the plants produced under the shade developed a deep green colour with a rich umami taste and unique aromas compared with the shoots produced in open-field environments. This cultivation method using an intensely shaded culture significantly improves the quality of matcha tea. Tea cultivation records show that the use of shading was initiated at the beginning of the sixteenth century in the Uji area of Kyoto. The noble class invited special guests to a tea ceremony called "Chanoyu" where high quality matcha tea was prepared. The

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