



SLOVENSKI STANDARD
SIST-TS CEN/TS 17700-4:2023

01-januar-2023

Rastlinski biostimulanti - Navedbe - 4. del: Določanje kakovostnih lastnosti rastlin zaradi uporabe biostimulanta

Plant biostimulants - Claims - Part 4: Determination of quality traits resulting from the use of a plant biostimulant

Pflanzen-Biostimulanzien - Auslobungen - Teil 4: Bestimmung der Qualitätsmerkmale, die sich aus der Verwendung eines Pflanzen-Biostimulans ergeben

Biostimulants des végétaux - Allégations - Partie 4 : Détermination des caractéristiques qualitatives résultant de l'utilisation d'un biostimulant des végétaux

Ta slovenski standard je istoveten z: CEN/TS 17700-4:2022

ICS:

65.080 Gnojila Fertilizers

SIST-TS CEN/TS 17700-4:2023 en,fr,de

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17700-4

March 2022

ICS 65.080

English Version

**Plant biostimulants - Claims - Part 4: Determination of
quality traits resulting from the use of a plant biostimulant**

Biostimulants des végétaux - Allégations - Partie 4 :
Détermination des caractéristiques qualitatives
résultant de l'utilisation d'un biostimulant des
végétaux

Biostimulanzien für die pflanzliche Anwendung -
Angaben - Teil 4: Bestimmung der Qualitätsmerkmale,
die sich aus der Verwendung eines Biostimulans für die
pflanzliche Anwendung ergeben

This Technical Specification (CEN/TS) was approved by CEN on 3 January 2022 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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European foreword

This document (CEN/TS 17700-4:2022) has been prepared by Technical Committee CEN/TC 455 “Plant biostimulants”, the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

The CEN/TS 17700 series, *Plant biostimulants — Claims*, consists of the following parts:

- *Part 1: General Principles;*
- *Part 2: Nutrient use efficiency resulting from the use of a plant biostimulant;*
- *Part 3: Tolerance to abiotic stress resulting from the use of a plant biostimulant;*
- *Part 4: Determination of quality traits resulting from the use of a plant biostimulant;*
- *Part 5: Determination of availability of confined nutrient in the soil or rhizosphere.*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document has been developed to provide guidance for a consistent approach to justify the claims associated with the use of plant biostimulants in agriculture.

The definition of plant biostimulants to be used in the regulation on fertilizing materials is claims-based.

For this reason, demonstrating that a product is indeed a bona fide plant biostimulant depends on a demonstration of its effect.

The placing of a plant biostimulant on the market should never be considered to guarantee effectiveness under all conditions, as many factors may influence the performance of a plant biostimulant in the field.

Plant biostimulants used in agriculture can be applied in multiple ways: on soil, on plant, as seed treatment, etc. This document is applicable to all application types of plant biostimulants in agriculture.

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1 Scope

This document provides guidance for justifying quality traits claims of plant biostimulants used in agriculture.

This document is aimed primarily at manufacturers, laboratories, companies which will put the products on the market, notifying authorities, notified bodies, and market surveillance authorities.

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.

CEN/TS 17700-1:2022, *Plant biostimulants — Claims — Part 1: General Principles*

CEN/TS 17724:2022, *Plant biostimulants — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CEN/TS 17700-1, CEN/TS 17724 and the following apply.

3.1

quality trait

desired attribute of a crop regarding agronomical and marketable traits

3.2

agronomical trait

property related to plant phenotype as state, relative development, or amount of a plant organ (or part), a plant cycle stage or a plant component that has proven contribution in one or more key performance characteristics in plant production such as yield, plant value, end use or quality parameter

EXAMPLE photosynthetic activity, flower number, root length, root density, foliar biomass

3.3

marketable trait

property which can improve the marketable value and/or marketable part of the crop such as a nutritional, organoleptic or techno-functional property, physical characteristic of the harvest

3.4

nutritional property

content of substances normally consumed as a constituent of food or feed

(a) which provides energy; or

(b) which is needed for growth, development and maintenance of healthy life; or

(c) a deficit of which will cause characteristic bio-chemical or physiological changes to occur

EXAMPLE protein, fat, carbohydrates, vitamins, minerals

CEN/TS 17700-4:2022 (E)**3.5****organoleptic property**

property related to an attribute perceptible by the senses

EXAMPLE appearance, basic taste, acidity, odour, flavour, colour

3.6**techno-functional property**

physico-chemical attribute which impacts a transformation process or any downstream use

EXAMPLE food, feed, energy, cosmetology, pharmacology, building materials

4 Terminology of the claim

On the label, reference shall only address the demonstrated claim(s) according to CEN/TS 17700-1. This/these claims(s) need to be covered by the definition of 3.1 "Quality trait".

The claim should specify:

- The effect of the product on the quality traits (e.g. size of the fruit, content of a specific substance in the plant tissues, number of flowers),
- The terminology of the crops (refer to CEN/TS 17700-1).

Some examples of the claims are given in Annex A (Informative).

5 Markers to validate the claims

Methods usable to measure markers shall be based on consensus and/or supported by technical/scientific evidence about fitness for purpose and shall be available.

Some examples of the source of the methods are given in Annex B (Informative).

Some examples of the methods to measure a marker to validate a claim are given in Annex C (Informative).

6 Specifications for the performance of the trials

As long as the measure has to be done in the soil/involving the soil (e.g. root length, root number, germinability, plant emergence, root architecture ...), then trials under controlled conditions may be used.

The measure of the marketable part of the plant cannot be included in this exemption (e.g. size of sugar beet, carrots).

Annex A (informative)

Some examples of claims

- Improve the colour of tomato fruits,
- Increase the number of flowers of woody perennials,
- Increase the size of the roots of all crops.

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Annex B (informative)

Some examples of the source of the methods

Some source documents relevant to find methods in order to measure markers for claims validation:

- International/national legislations (e.g.: Agricultural Product Quality Schemes Regulation (EU)),
- International/national standards (e.g.: CEN, ISO),
- Non-mandatory standards proposed by official entities (ex: United Nations Economic Commission for Europe (UNECE), Codex Alimentarius or OECD, AOAC),
- Inter-professional criteria relative to a given crop,
- International commercial specifications for a crop,
- Requirements established by the industrial sector involved in the first processing step of a given crop,
- Any internationalized recognized harmonized criteria around quality traits,
- Methods described and recognized by the scientific community in peer-review literature publications.

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