SLOVENSKI STANDARD
oSIST prEN 17700-4:2023

01-maj-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: **prEN 17700-4**

ICS:

65.080 Gnojila Fertilizers

oSIST prEN 17700-4:2023 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 17700-4

March 2023

ICS 65.080

Will supersede CEN/TS 17700-4:2022

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

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

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 455.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 17700-4:2023) has been prepared by Technical Committee CEN/TC 455 “Plant biostimulants”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede CEN/TS 17700-4:2022.

prEN 17700-4:2023 does not include significant technical changes with respect to CEN/TS 17700-4:2022.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

The EN 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 nutrients in the soil or rhizosphere*.

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.

WARNING — Persons using this document should be familiar with normal laboratory practice. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted in accordance with this document be carried out by suitably trained staff.

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.

To be in compliance with this standard, it is important also to follow the Recommendations and Quality Criteria described in the Standard of General Principles EN 17700-1:—[1].

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.

EN 17700-1:—[1], *Plant biostimulants — Claims — Part 1: General principles*

EN 17724:—[2], *Plant biostimulants — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17700-1:—[1], EN 17724:—[2], and the following 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
quality trait
desired attribute of a crop regarding agronomical and/or 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 germination rate, flower fertility, root growth, root development, seedling emergence, dry matter content, tillering, vigour, plant biomass, uniformity of flowering, anticipation of flowering, uniformity in fruit set, fruit number, pod size, pod length, spikelet size, spike length, reduction of internode length, increase of seed protein content and increase in antioxidants

[1] Under preparation
[2] Under preparation

3.3
marketable trait
property which can improve the marketable value and/or marketable part of the crop such as nutritional, organoleptic, techno-functional properties, physical characteristic of the harvest

EXAMPLE Colour, size, sugar content, oil content, skin quality

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

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 property of plants or plant parts which influences a transformation process or any downstream use in such sectors as food, feed, energy, cosmetics, pharmaceuticals, building materials

EXAMPLE Starch content, fibre strength, allantoin content, flavonoid content, salicylic acid content

4 Terminology of the claim

On the label, reference shall only address the demonstrated claim(s) according to EN 17700-1:—[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 EN 17700-1:—[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 agronomical trait to prove a plant biostimulant effect on quality traits is measured in the soil/involving the soil (e.g. root length, root number, germinability, plant emergence, root architecture…), then the trial(s) to prove this effect may be done under controlled conditions.

If the quality trait that is being measured to prove a plant biostimulant effect is a marketable trait, even if it is measured in the soil/involving the soil (e.g. size of sugar beet, carrots), this exemption does not apply.

Annex A
(informative)

Some examples of claims

— Improve the colour of tomato fruits,

— Increase the number of flowers of woody perennials,

— Increase the length of the roots of all crops.