



**SLOVENSKI STANDARD**  
**oSIST prEN 17700-1:2023**  
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**Rastlinski biostimulanti - Navedbe - 1. del: Splošna načela**

Plant biostimulants - Claims - Part 1: General principles

Pflanzen-Biostimulanzien - Auslobungen - Teil 1: Allgemeine Grundsätze

Biostimulants des végétaux - Allégations - Partie 1 : Principes généraux

**Ta slovenski standard je istoveten z: prEN 17700-1**

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**ICS:**

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EUROPEAN STANDARD  
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EUROPÄISCHE NORM

**DRAFT**  
**prEN 17700-1**

March 2023

ICS 65.080

Will supersede CEN/TS 17700-1:2022

English Version

## Plant biostimulants - Claims - Part 1: General principles

Biostimulants des végétaux - Allégations - Partie 1 :  
Principes généraux

Pflanzen-Biostimulanzien - Auslobungen - Teil 1:  
Allgemeine Grundsätze

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## iTeh STANDARD PREVIEW (standards.iteh.ai)

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**prEN 17700-1:2023 (E)****European foreword**

This document (prEN 17700-1:2023) 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 17700-1:2022.

prEN 17700-1:2023 includes the following significant technical changes with respect to CEN/TS 17700-1:2022:

- Addition of some definitions;
- Addition of a model of check form in Annex B.

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

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.

The definition of plant biostimulants to be used in Regulation (EU) 2019/1009 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 does not guarantee effectiveness under all conditions, as many factors can 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.

**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.

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**prEN 17700-1:2023 (E)****1 Scope**

This document specifies the general principles for justifying the product claims for plant biostimulants. It is applicable to all application types of plant biostimulants.

General principles consist of and define all general parameters, requirements and quality criteria, and are intended to be applied in order to assess the efficacy of trials used for claim(s) validation as a result of the use of a plant biostimulant.

This document is aimed primarily at manufacturers, laboratories, researchers, technical centres, companies that 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.

EN 17700-5:—<sup>1</sup>, *Plant biostimulants — Claims — Part 5: Determination of availability of confined nutrients in the soil or rhizosphere*

EN 17724:—<sup>2</sup>, *Plant biostimulants — Terminology*

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 17724:—<sup>2</sup> 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****plant biostimulant**

product stimulating plant nutrition processes independently of the product's nutrient content with the sole aim of improving one or more of the following characteristics of the plant or the plant rhizosphere:

- nutrient use efficiency,
- tolerance to abiotic stress,
- quality traits,
- availability of confined nutrient in soil or rhizosphere

**3.2****claim**

effect(s) of the product that can be asserted on the product label of a plant biostimulant after the conformity assessment procedure

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<sup>1</sup> Under preparation

<sup>2</sup> Under preparation



**3.3****general principle**

rule defining the crops and quality criteria applicable to all plant biostimulants for carrying out the tests necessary to justify the claim

**3.4****crop**

cultivated plant including all components of the plant (above ground parts and below ground parts), mushrooms, microalgae and macroalgae

**3.5****plant nutrient**

chemical element used by the plant for growth and development, classified as a Primary Macronutrient, Secondary Macronutrient or Micronutrient per the quantity required by the plant

Note 1 to entry: Primary Macronutrients – Nitrogen (N), Phosphorus (P), Potassium (K),

Secondary Macronutrients – Calcium (Ca), Magnesium (Mg), Sodium (Na), Sulphur (S),

Micronutrients – Boron (B), Cobalt (Co), Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Zinc (Zn).

**3.6****protected crop**

crop cultivation in greenhouses or plastic tunnels with or without specific control of climate conditions according to the farming practice

EXAMPLE cucumber or tomato cultivation

**3.7****controlled conditions trial**

trial carried out in a specific place like glasshouse, climatic chamber, etc., where part of the environmental parameters can be controlled or can be measured (like soil, temperature, light, humidity, etc.,)

**3.8****trial series**

grouping of a number of independent field trials (e.g strip, randomized complete block designs), including protected crops carried out with plants, which have the same objectives, experimental design, protocol, parameters to prove the consistency of a result

Note 1 to entry: It can be conducted in different locations and /or over a number of consecutive years, as long as it satisfies quality criteria described in this document (same protocol, same crop, control, timing)".

**3.9****strip trial**

trial carried out using two strips, next to each other, in the same field, to compare control with plant biostimulant treatment without repetition

**3.10****replicates**

repetition of each treatment in the same trial and under the same agronomic management practices (application of fertilizers, plant protection products) as all other treatments

## 4 Type information that can be used to demonstrate efficacy of a claim

### 4.1 General

For the demonstration of the effectiveness of the plant biostimulant product on the requested claim, field trials are to be preferred according to the quality criteria established in this document.

However, if the performance of trials under controlled conditions has been indicated as possible in the claims standards or if the implementation of field tests is difficult or uncertain (measurement of the roots, cold stress...) then the trials under controlled conditions should be accepted.

### 4.2 Field and/or protected crop experimental data

Field trials are essential to justify plant biostimulant claims. For some claims, however, the appropriate field conditions cannot always be easily reached (for example, salt stress, cold stress, root measurements...) in the field. In those contexts, trials under controlled conditions can be allowed.

### 4.3 Under controlled conditions (e.g. laboratory data, greenhouse, growth chamber)

Plant biostimulant claims can be proven by data generated under controlled conditions (e.g. greenhouses, growth room, growth chamber, laboratory data), depending on the claim defined in the dedicated standard.

### 4.4 Literature review

Scientific literature can be used as given in EN 17700-2:—<sup>3</sup>, EN 17700-3:—<sup>4</sup>, EN 17700-4:—<sup>5</sup> and EN 17700-5:—<sup>1</sup> to describe analytical methods and methods used to measure the effect of a product. Only peer review literature (e.g. referenced by the Scopus/Web of science databases) shall be accepted.

## 5 General guideline for trials/assays of plant biostimulants

### 5.1 General <https://standards.iteh.ai/catalog/standards/sist/8a7c6b8c-e645-4b7b-9d1e-b7634db2e99c/osist-pren-17700-1-2023>

All trials/assays shall be performed according to the Quality Criteria defined in this document.

### 5.2 Crop groupings for the performance of plant biostimulant trials

For the trials carried out with plants, the crop groupings for conduction of plant biostimulant trials are defined in Table 1, except for the availability of confined nutrients in a soil claim. If the crop is not listed in Table 1, refer to the definition below to determine the appropriate crop group.

- Broadacre crops (combinable and processing products): annual and non-annual crops usually characterized by being grown in large extensions, harvested via combiners or industrial harvesters, with the aim of obtaining vegetative organs, Roots, Tubers and/or seeds/grains,
- Woody perennials: non-annual crops with the ability to cover their stems with suberized cork,
- Vegetables, ornamental and AMP (Aromatic and Medicinal Plant) crops: annual and non-annual crops usually correlated with seasonality and not included in the broadacre and woody perennial crops.

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<sup>3</sup> Under preparation

<sup>4</sup> Under preparation

<sup>5</sup> Under preparation

Table 1 — Crop groupings

<b>Broadacre: Combinable and Processing Products</b>	<b>Woody Perennials</b>	<b>Vegetables, ornamental and AMP<sup>a</sup> crops</b>
BARLEY	ALMOND	ANGELICA
BEAN	APPLE	ANISE
BEEF	APRICOT	ASPARAGUS
BORAGE	AVOCADO	AUBERGINE
BUCKWHEAT	BAY	BALM
CHICKPEA	BILBERRY	BANANA
CLOVER	BLACK CURRANT	BASIL
COTTON	BLACKBERRY	BROCCOLI and CALABRESE
DURUM WHEAT	BLUEBERRY	BRUSSELS SPROUT
EVENING PRIMROSE	CAPERS	BULB ONION
GRASSLAND	CHERIMOYA	CABBAGE
HEMP	CHERRY	CARDON
LENTIL	CHESTNUT	CARROT
LINSEED	CITRUS FRUITS	CAULIFLOWER
LUCERNE	COCOA TREE	CELERIC
LUPIN	COFFEE TREE	CELERY
MAIZE	CRANBERRY	CELERY LEAVES (Caraway and Salad Burnet)
MUSTARD (for seed)	CURRY LEAVES	CHERVIL
OAT	DATE	CHICORY (Witloof)
PEA	ELDERBERRY	CHILLI
POPPY	FIG	CHINESE CABBAGE
POTATO	GRAPE	CHIVES
QUINOA	GUAVA	CHOI SUM
RAPE	HAZELNUT	COLLARD
RICE	HOPS	CORIANDER
RYE	JUNIPER	COURGETTE and SUMMER SQUASH
SAFFLOWER	KAFFIR LIME	CRESS
SAINFOIN	KIWI	CUCUMBER
SESAME	LIQUORICE	DILL
SORGHUM	LOGANBERRY	EDIBLE FLOWERS
SOYBEAN	MANGO	EDIBLE LEAF MUSTARD
SPELT	MEDLAR	ENDIVE
SUGAR BEET	MULBERRY	FENNEL