

TAIMEDE BIOSTIMULAATORID. NÕUETEKOHASUS. OSA  
5: TOITAINETE KÄTTESAADAVUSE MÄÄRAMINE  
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Plant biostimulants - Claims - Part 5: Determination of  
availability of confined nutrients in the soil or  
rhizosphere

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 17700-5:2024 sisaldab Euroopa standardi EN 17700-5:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.11.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 17700-5:2024 consists of the English text of the European standard EN 17700-5:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 27.11.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 65.080

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EUROPEAN STANDARD

EN 17700-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2024

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Supersedes CEN/TS 17700-5:2022

English Version

## Plant biostimulants - Claims - Part 5: Determination of availability of confined nutrients in the soil or rhizosphere

Biostimulants des végétaux - Allégations - Partie 5 :  
Détermination de la disponibilité des éléments nutritifs  
confinés dans le sol ou la rhizosphère

Pflanzen-Biostimulanzien - Auslobungen - Teil 5:  
Bestimmung der Verfügbarkeit von gebundenen  
Nährstoffen im Boden oder in der Rhizosphäre

This European Standard was approved by CEN on 26 August 2024.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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.

CEN members are the national standards bodies of 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, Türkiye and United Kingdom.



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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## European foreword

This document (EN 17700-5:2024) has been prepared by Technical Committee CEN/TC 455 “Plant biostimulants”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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 supersedes CEN/TS 17700-5:2022.

EN 17700-5:2024 includes the following significant technical changes with respect to CEN/TS 17700-5:2022:

- 5.2.1: the text “Soil or rhizosphere samples should be processed according to EN 16179” has been changed to “It is recommended to process soil or rhizosphere samples according to EN 16179 [21]”;
- 5.2.1: the text “Prior to analysis, the soil or rhizosphere samples can be air-dried, dried in an oven at temperatures not exceeding 0 °C for at least 72h” has been changed to “Prior to analysis, the soil or rhizosphere samples can be air-dried, dried in an oven at temperatures not exceeding 40 °C for at least 72 h”;
- 5.3.1: the text “Plant samples shall be washed prior to drying if the plant biostimulant was applied by foliar application” has been added;
- 5.3.1: the text “After sampling, the plant samples should be dried in an air-forced oven at temperatures not exceeding 40 °C to reduce the risk of volatilization (as described in EN ISO 16198:2015, see Annex B)” has been replaced by “After sampling, it is recommended to dry the plant sample in an air-forced oven at temperatures not exceeding 40 °C to reduce the risk of volatilization, as described in EN ISO 16198:2015 [11], see Annex B”;
- 5.3.2: the text “Plant samples should be washed if the plant biostimulant is applied by foliar application” has been deleted;
- 6.2.1: Table 1 has been removed and the text “The minimum number of trials is defined in Table 4 of the standard EN 17700-1:2024 on general principles” has been added;
- an informative Annex ZA on the relationship of this European standard and the essential requirements of Regulation (EU) 2019/1009 has been added.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, 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.*

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 implement this European Standard: 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, Türkiye and the United Kingdom.

## Introduction

The European Committee for Standardization (CEN) was requested by the European Commission (EC) to draft European Standards or European Standardization deliverables to support the implementation of Regulation (EU) 2019/1009 of 5 June 2019 [1] laying down rules on the making available on the market of EU fertilising products (“FPR” or “Fertilising Products Regulation”).

This standardization request, presented as SR M/564 and relevant amendments, also contributes to the Communication on “Innovating for Sustainable Growth: A Bio economy for Europe”. The interest in plant biostimulants has increased significantly in Europe as a valuable tool to use in agriculture. Standardization was identified as having an important role in order to promote the use of biostimulants. The work of CEN/TC 455 seeks to improve the reliability of the supply chain, thereby improving the confidence of farmers, industry, and consumers in biostimulants, and will promote and support commercialisation of the European biostimulant industry.

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 in Regulation (EU) 2019/1009 [1] is claims-based. For this reason, demonstrating that a product is indeed a bona fide plant biostimulant depends on a demonstration of its function.

The placement 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 can be applied in multiple ways: to the soil, on plants, as seed treatment, etc.

This document is applicable to all application types of plant biostimulants.

**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 rules.

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

## 1 Scope

This document gives guidance on a consistent approach to justify the claims associated with the use of plant biostimulants.

This document is aimed primarily at manufacturers, laboratories, researchers, technical centres, and companies that intend to place plant biostimulants on the market, as well as notifying authorities, notified bodies, and market surveillance authorities.

To be in compliance with this standard, it is important to also follow the recommendations and quality criteria described in the standard EN 17700-1:2024 on general principles to demonstrate plant biostimulant claims.

## 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 17700-1:2024, *Plant biostimulants — Claims — Part 1: General principles*

EN 17724:2024, *Plant biostimulants — Terminology*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17700-1:2024, EN 17724:2024, 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

#### **available nutrient**

element either present in the soil solution or exchangeable on soil colloids

[SOURCE: EN 17724:2024, 3.1.2.4]

### 3.2

#### **confined nutrient**

element present in the solid and gaseous phases of the soil, elsewhere than on soil colloids

[SOURCE: EN 17724:2024, 3.1.5.2]

### 3.3

#### **improvement of availability of confined nutrients in the soil or rhizosphere**

moving soil nutrients from the pool of confined nutrients to the pool of available nutrients

[SOURCE: EN 17724:2024, 3.1.5.3]