TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17700-5

March 2022

ICS 65.080

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 - Angaben - Teil 5: Verfügbarkeit von im Boden und in der Rhizosphäre enthaltenen Nährstoffen

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Ref. No. CEN/TS 17700-5:2022 E

Contents

Page

European foreword

This document (CEN/TS 17700-5:2022) has been prepared by Technical Committee CEN/TC 455 “Plant biostimulants”, the secretariat of which is held by AFNOR.

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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.

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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.

1 Scope

The claim described in this document concerns the improvement of availability of confined nutrients in the soil or rhizosphere by 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.

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 17700-1:2022, CEN/TS 17724:2022 and the following apply.

3.1
available nutrient
element either present in the soil solution or exchangeable on soil colloids

3.2
confined nutrient
element present in the solid and gaseous phase of the soil, except on soil colloids

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

3.4
rhizosphere
volume of soil around living roots that is influenced by root activities

3.5
soil
layer of unconsolidated material consisting of weathered material particles, dead and living organic matter, air space, and soil solution

3.6
soil solution
liquid phase of the soil and its solutes

3.7
soil colloid
finer size fraction of the soil (clay and organic matter), being also considered as the most chemically active portion of the soil because of its large surface area and the chemical structure of the materials involved