

STN P	Rastlinné biostimulátory Stanovenie fosforitanov	STN P CEN/TS 17705 46 5606
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Plant biostimulants - Determination of phosphonates

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/22

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do marca 2024 Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

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English Version

Plant biostimulants - Determination of phosphonates

Biostimulants des végétaux - Dosage des phosphonates

Biostimulanzien für die pflanzliche Anwendung -
Bestimmung von Phosphonaten

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 COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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CEN/TS 17705:2022 (E)

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European foreword

This document (CEN/TS 17705:2022) has been prepared by the 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.

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.

CEN/TS 17705:2022 (E)**Introduction**

This document was prepared by the experts of CEN/TC 455 “Plant Biostimulants”. 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 laying down rules on the making available on the market of EU fertilizing products (“FPR” or “Fertilising Products Regulation”).

This standardization request, presented as M/564, also contributes to the Communication on “Innovating for Sustainable Growth: A Bio economy for Europe”. The Working Group 4 “Other safety parameters”, was created to develop a work program as part of this request. The technical committee CEN/TC 455 “Plant Biostimulants” was established to carry out the work program that will prepare a series of standards. The interest in 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.

The preparation of this document is based on the Fertilising Products Standardization Request (M/564) to CEN by the European Commission and the European Free Trade Association concerning a development of the methods for analysis of fertilizers in the framework of Regulation (EC) No 2019/1009.

This document describes the extraction and measurement for the determination of phosphonate (phosphite) in plant biostimulants. It is based on a water extraction of the phosphonate (phosphite) followed by ion chromatography with conductivity detection (IC-CD).

The ion chromatography with a conductivity detector (IC-CD) method can be used in well-equipped analytical laboratories for the determination of different ions. In the field of fertilizing products, the method is used and standardized for the determination of perchlorates in mineral fertilizers. The IC-CD method can determine more ions simultaneously.

The legislative limit for phosphonate content is 0,5 % (mass fraction) and the method described in this document was adapted to achieve this requirement and simultaneously to reduce interferences from other co-extracted anions as much as possible.

The definition of phosphonates is not clearly stated in the Regulation 2019/1009 and to avoid any misunderstanding the results are expressed as a content of phosphorus (P) bound in the form of free water-soluble phosphonates (P-P03).

1 Scope

This document specifies a method for the extraction and determination of phosphonates (P-PO₃) in plant biostimulants using ion chromatography and conductivity detection (IC-CD).

This document is also applicable to the blends of fertilizing products where plant biostimulants are the main part of the blend. Otherwise, the Technical Specification for the main part of the blend applies.

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 17704, *Plant biostimulants — Determination of dry matter*

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