



BSI Standards Publication

Plant biostimulants — Determination of chromium(VI)

National foreword

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Biostimulants des végétaux - Dosage du chrome(VI)

Pflanzen-Biostimulanzien - Bestimmung von
Chrom(VI)

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European foreword

This document (EN 17703:2024) 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.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 17703:2022.

In comparison with the previous edition no significant technical changes were applied in this document.

The following main editorial changes have been made:

- In the Introduction, standards used as basis for the document and the description of Annexes A, B and C were added;
- In the Scope (Clause 1), the applicability of the document to blends was added;
- The Normative references (Clause 2) and the Bibliography were reordered. Clause 2 only contains the references that some or all of their content constitute requirements of this document, while the other references were included in the Bibliography;
- The principle (Clause 4) was better clarified;
- In Clause 8, the calculation and the expression of the results were aligned to EN 17704:2024 for the dry matter expression;
- In the test report (Clause 9) further information was added;
- Annex A on the results of the inter-laboratory study was added and consequently Annex A (Chromatographic conditions for direct detection method) and Annex B (Chromatographic conditions for method with post-column reaction) became Annex B and C respectively;
- In Annex B and Annex C, two examples of chromatograms were added;
- Annex ZA for the relationship with EU Legislation was added;
- In the text, if references were superseded, the latest edition has been mentioned.

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 relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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

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 provides the method for the chromium VI extraction and determination as mentioned in Annex I, Part II, PFC 6, item 2(b) of Regulation (EU) 2019/1009 [1].

Standards for determination of chromium VI in soil and waste [2] and for leather [3] were studied and considered as a basis of this document.

This document contains two annexes (B and C) which describe two possible ways for determining chromium VI by ion chromatography. Annex B describes an example of chromatographic conditions for the direct detection method, while Annex C explains the chromatographic conditions for method with post-column reaction. Both methods can be applied to determine Chromium VI. The choice depends on the equipment available in laboratories.

The inter-laboratory study reflects the final statistical characteristics of the method for the determination of chromium VI content in plant biostimulants. The results are given in Annex A (informative).

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

IMPORTANT — It is absolutely essential that tests conducted according to this document are carried out by suitably trained staff.