PD CEN/TS 17702-1:2022

BSI Standards Publication

Plant biostimulants — Sampling and sample preparation

Part 1: Sampling

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee EH/4/-/7, Plant Biostimulants.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Biostimulanzien für die pflanzliche Anwendung - Probenahme und Probenvorbereitung - Teil 1: Probenahme

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Ref. No. CEN/TS 17702-1:2022 E

Contents

Page

European foreword

This document (CEN/TS 17702-1:2022) 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 17702 series, *Plant biostimulants — Sampling and sample preparation*, consists of the following parts:

— *Part 1: Sampling*;

— *Part 2: Sample preparation*.

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.

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 1 "Sampling", 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.

This document covers the following aspects of sampling, derived from EN 1482-1:2007 *Fertilizers and liming materials — Sampling and sample preparation — Part 1: Sampling* and documents indicated. This document is presented in a form adapted to the specificity of plant biostimulants. The titles of the standards are given in the Bibliography.

From a technical point of view, sampling is generally defined as the withdrawal operation, of the part of a "mass", of such dimensions that the properties found in the sample taken are, within the limits of statistical acceptability, the same as those of the mass of origin (representativeness of the sample). In other words, the ultimate purpose of sampling is to allow the collection of representative portions of plant biostimulants to be subject to analysis. Therefore it fundamentally affects the significance and reliability of the analytical results themselves.

The final results, in fact, must as far as possible refer to the state and conditions in where the material is found at the time of collection, therefore, care must be taken to avoid or minimize possible modifications to the chemical, physical and biological properties of the sample during or after sampling.

In conclusion, for a correct sampling, it is necessary that the sampling and collection of samples take place quickly, if possible, taking necessary precautions to ensure that they are representative of the plant biostimulants to be analysed and that the samples taken are stored in appropriate way. The surfaces, containers and instruments used must be clean and dry.

Furthermore, remember the protection of health and safety in places of work, and that every intervention must be carried out in compliance with the defined prevention and protection measures (including the use of any suitable personal protective equipment (PPE)), in particular a careful reading of the labels on the product and where available on the safety data sheet.

Figure 1 gives a schematic diagram of the sampling and sample preparation process.

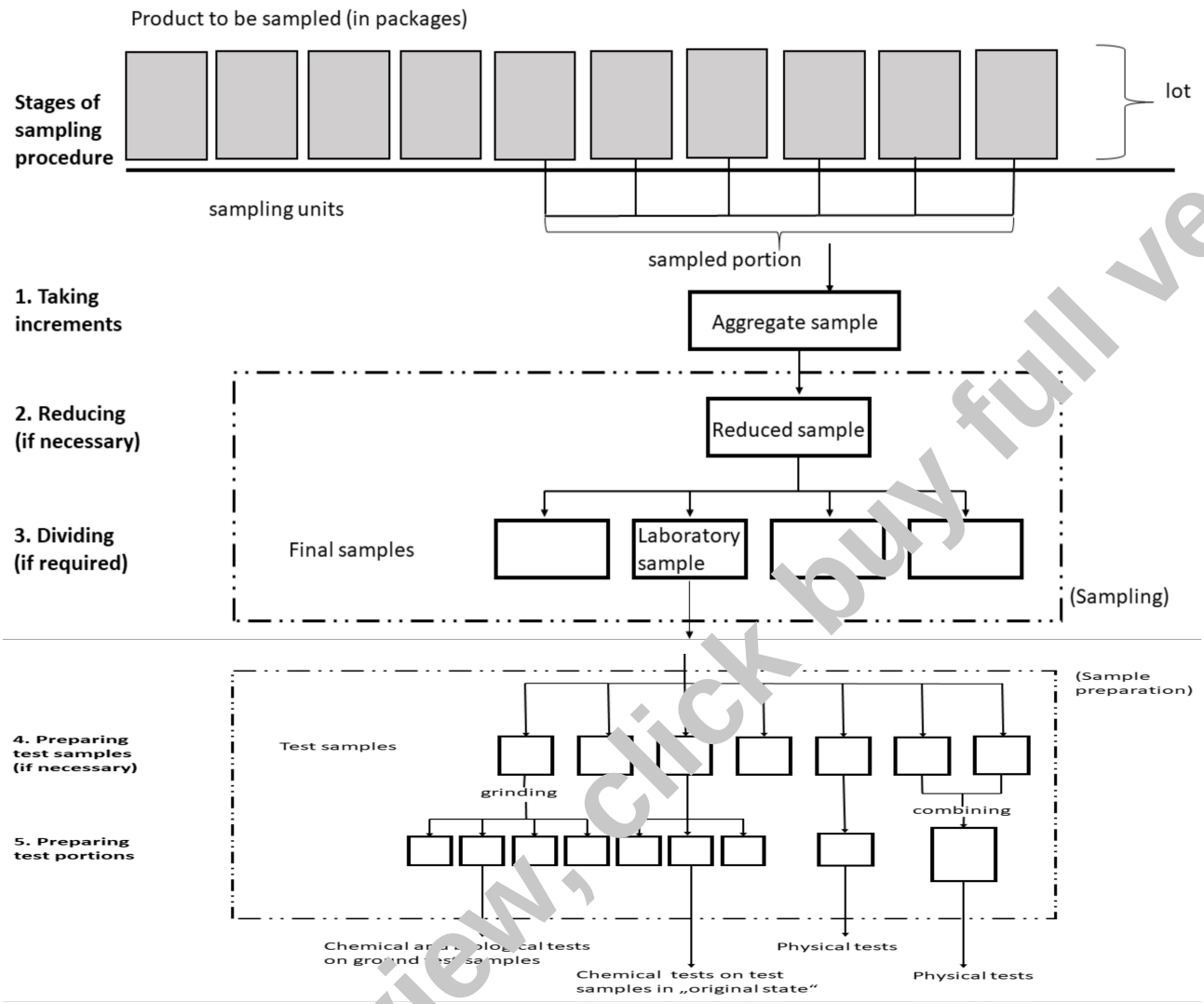

Figure 1 — Schematic diagram of sampling and sample preparation process for solid plant biostimulants

1 Scope

This document specifies sampling plans and methods of representative sampling of plant biostimulants to obtain samples for physical, chemical and biological analysis.

It is applicable to the sampling of lots of plant biostimulants supplied or ready for supply to third parties, as such, or in smaller lots.

It is also applicable to the sampling of blends of fertilizing products where plant biostimulants are main part of the blend. Otherwise, deliverables of sampling relevant for the main part of the blend apply.

This document is intended to be used by manufacturers, buyers and competent authorities to obtain samples prior to transport and supply it to a laboratory for testing.

NOTE This document is applicable to the category of EU fertilizing product (plant biostimulants) in the meaning of the Regulation (EU) 2019/1009.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
aggregate sample
combination of all increments from the lot

3.2
division
process of producing a number of representative smaller portions, approximately equal in mass to each other, from a larger mass

3.3
final sample
representative part of the reduced sample or, where no intermediate reduction is required, of the aggregate sample

Note 1 to entry: Often, more than one sample is prepared, at the same time, from the reduced sample (or from the aggregate sample). One or more of these final samples will be used as a laboratory sample or as laboratory samples, while others may be stored for reference purposes.

3.4
increment
representative quantity of material taken from a sampling unit

Note 1 to entry: This may be constituted from a number of sub samples.

3.5
laboratory sample
final sample intended for laboratory inspection or testing

3.6
lot
total quantity of material, assumed to have the same characteristics, to be sampled using a sampling plan