



SLOVENSKI STANDARD
oSIST prEN 13040-2:2026

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Izboljševalci tal in rastni substrati - Priprava vzorcev - 2. del: Priprava vzorcev za mikrobiološke preskuse

Soil improvers and growing media - Sample preparation - Part 2: Sample preparation for microbiological examination

Bodenverbesserungsmittel und Kultursubstrate - Probenvorbereitung - Teil 2: Probenvorbereitung für mikrobiologische Untersuchungen

Amendements du sol et supports de culture - Préparation des échantillons - Partie 2 : Préparation des échantillons pour l'examen microbiologique

Ta slovenski standard je istoveten z: prEN 13040-2

ICS:

65.080 Gnojila Fertilizers

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Sample Document

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 13040-2

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English Version

Soil improvers and growing media - Sample preparation - Part 2: Sample preparation for microbiological examination

Amendements du sol et supports de culture -
Préparation des échantillons - Partie 2 : Préparation
des échantillons pour l'examen microbiologique

Bodenverbesserungsmittel und Kultursubstrate -
Probenvorbereitung - Teil 2: Probenvorbereitung für
mikrobiologische Untersuchungen

This draft European Standard is submitted to CEN members for second enquiry. It has been drawn up by the Technical Committee CEN/TC 223.

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European foreword

This document (prEN 13040-2:2025) has been prepared by Technical Committee CEN/TC 223 “Soil improvers and growing media”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN 2nd Enquiry.

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.

A list of all parts in this series can be found on the CEN website: www.cencenelec.eu.

EN 13040, *Soil improvers and growing media — Sample preparation*, is currently composed with the following parts:

- *Part 1: Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory bulk density;*
- *Part 2: Sample preparation for microbiological examination.*

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prEN 13040-2:2025 (E)

1 Scope

This document specifies the general requirements for the preparation of samples, initial suspensions and further dilutions prior to microbiological examinations of soil improvers and growing media. This method is intended especially for sample preparation prior to microbiological examinations of e.g. *Escherichia coli* (*E. coli*), *Salmonella* spp. and enterococci.

If a laboratory receives a material/product that is not listed in Annex B but has external characteristics (i.e. hardness, fibrous nature, particle size) like one of the materials/products listed in Annex B, then the procedural steps for sample preparation (pre-treatment, treatment and dilution) are carried out in the same way as listed for the material/product which has comparable external characteristics.

Any special diluents or practices required for particular materials or microorganisms in specific standard methods take priority over the general requirements listed in this document.

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 12579, *Soil improvers and growing media - Sampling*

EN ISO 7218, *Microbiology of the food chain - General requirements and guidance for microbiological examinations (ISO 7218)*

prEN 17732,¹ *Soil improvers and growing media - Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12579, prEN 17732 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 laboratory sample

in relation to chemical and physical testing, a final sample intended for laboratory testing and in relation to microbiological testing, each separate segment sample intended for laboratory testing

3.2 test sample

sample prepared from the laboratory sample (3.1) and from which test portions (3.3) are taken

Note 1 to entry: A test sample is only necessary when the laboratory sample is used for multiple analysis (e.g. microbiological and chemical analysis). When multiple analyses are performed (e.g. microbiological and chemical analysis), appropriately sized test sample needs to be taken first for microbiological analysis in order to avoid contamination. The remaining test sample material shall be stored in a cool place for possible subsequent analyses. The remaining laboratory sample is thereafter passed on for chemical analyses, if necessary.

¹ Under preparation. Stage at time of publication: prEN 17732:2025.

3.3

test portion

quantity of material drawn from the test sample or directly from the laboratory sample and on which the tests and observations are actually carried out

3.4

initial suspension

primary dilution obtained after the test portion (3.2) has been treated with, normally, a nine-fold quantity of diluent

Note 1 to entry: A closer ratio between the diluent and the quantity of material is often not recommended because of possible inhibiting influences of the matrix.

3.5

further dilution

suspension or solution obtained by mixing a measured volume of the initial suspension (3.4) with an x-fold volume of diluent and by repeating this operation with further dilutions until a dilution series is obtained that is suitable for the inoculation of culture media

Note 1 to entry: Normally ten-fold dilutions are used to yield a decimal dilution series, but other ratios may be required for specific purposes.

4 Principle

Sample preparation prior to microbiological examination consists of two consecutive steps, for which the second step depends on the intent of the subsequent microbiological examination, meaning enumeration or detection.

- 1) Removal of a representative test portion (3.3) out of the test sample (3.2) or laboratory sample (3.1) after thorough homogenisation
- 2) Addition of the homogenic test portion to the dilution or enrichment medium and homogenisation
 - 2a) **For detection:** Preparation of a suspension for the first enrichment in a way to obtain an as uniform as possible distribution of microorganisms contained in the test portion
 - 2b) **For enumeration:** Preparation of an initial suspension in a way to obtain an as uniform as possible distribution of microorganisms contained in the test portion. Preparation, if necessary, of further dilutions in order to reduce the number of microorganisms per unit volume to allow counting of colonies on enumeration plates after incubation

5 Reagents

Follow current laboratory practices in accordance with standards comparable to EN ISO 7218. The composition of culture media and reagents and their preparation are specified in Annex A. For performance testing of culture media, it is advised to follow the procedures of EN ISO 11133.

6 Apparatus and equipment

Disposable equipment is an acceptable alternative to reusable glassware if it has suitable specifications. The usual microbiological laboratory equipment (see EN ISO 7218) and, in particular, the following shall be used.

6.1 Apparatus for dry sterilization (oven) or wet sterilization (autoclave).