SLOVENSKI STANDARD
SIST EN 12579:2001

01-september-2001

Izboljševalci tal in rastni substrati - Vzorčenje

Soil improvers and growing media - Sampling

Bodenverbesserungsmittel und Kultursubstrate - Probenahme

Amendements organiques et supports de culture - Echantillonnage

Ta slovenski standard je istoveten z: **EN 12579:1999**

ICS:

65.080 Gnojila Fertilizers

SIST EN 12579:2001 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12579

November 1999

ICS 65.080

English version

Soil improvers and growing media - Sampling

Amendements organiques et supports de culture - Echantillonnage

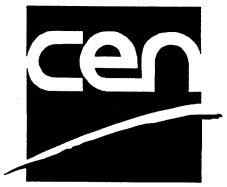
Bodenverbesserungsmittel und Kultursubstrate - Probenahme

This European Standard was approved by CEN on 17 September 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 12579:1999 E

Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 223 "Soil improvers and growing media", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The task of obtaining a reasonably sized sample that is representative of the sampled portion presents a number of problems and emphasizes the need for using a standard sampling method.

Growing media and soil improvers are very difficult to sample because of the variety of materials used and the inhomogeneous materials involved.

The task is further complicated by the variety of sampling equipment that can be used, the quantity to be represented by the sample and the degree of precision required bearing in mind the cost of testing.

1 Scope

This European Standard specifies methods for sampling growing media and soil improvers (excluding liming materials) for subsequent determination of quality and quantity. It outlines the principles to be taken into consideration when taking the sample and ensuring an adequate quantity is available for testing.

This standard applies only to material that is in solid form.

NOTE 1 This standard is intended to be used by manufacturers, buyers and enforcement agencies in verifying claims made for these products. It is not intended that it should necessarily be used for the purpose of manufacturing control.

NOTE 2 The requirements of the standard may differ from the national legal requirements for the declaration of the products concerned.

2 Normative References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 13040	Soil improvers and growing media - Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory compacted bulk density

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply :

3.1
batch; lot
quantity of goods manufactured by the same process under the same conditions and labelled in the same manner and assumed to have the same characteristics.

3.2
consignment
quantity of goods dispatched or received at one time and covered by a particular contract or shipping document.

NOTE A consignment may be composed of a part of a batch (lot) or one or more batches (lots) of the same material or different materials (products).

3.3
sampled portion
maximum quantity of the same material (product) from the same batch from which one representative combined sample is to be taken.

3.4
sampling point
point from which the incremental sample is taken.

3.5
incremental sample
quantity of material taken from one sampling point.

3.6
combined sample
combination of all incremental samples taken from one sampled portion.

3.7
final sample
representative part of the combined sample taken from the sampled portion obtained, where necessary, by a process of reduction.

3.8
laboratory sample
representative part of the final sample prepared for testing.

3.9
bulk material
material that is not packaged.

3.10 package
container in which the goods are delivered and which remains with them after delivery.

4 Requirements

4.1 General

Any sample collected from the growing medium or soil improver shall represent the whole of the material.

Special care shall be taken to ensure that all sampling apparatus is clean, dry, and made from material which will not contaminate the growing medium or soil improver. Sampling shall be carried out as soon as possible and in such a manner so as to preserve the quality aspect for which the sample will be tested.

4.2 Microbiological testing

For microbiological testing all sampling apparatus, including sample containers, shall be sterilised before use. To avoid cross contamination a fresh set of sampling apparatus should be used for each sample.

4.3 Moisture content

The moisture content shall subsequently be determined using the method specified in EN 13040.

5 Apparatus

5.1 Shovel, scoop or other sampling device so long as it preserves the characteristics of the product, and is sterilisable for microbiological samples.

5.2 Apparatus for sample division, comprising any suitable equipment for combining and reducing the samples which preserves the characteristics of the product.

6 Procedure

6.1 General

All sampling operations shall be carried out over a sufficiently short period of time and in such a way as to avoid any alteration in the characteristics of the product delivered or the samples. During sampling all incremental samples shall be stored in a manner that maintains their characteristics.

6.2 Location and time of sampling

From the sampled portion to be sampled, calculate the number of incremental samples to be taken (see 6.4.1). The sampling points shall be designated at random.

NOTE 1 Sampling of a sampled portion may be undertaken during loading and discharge.

NOTE 2 Whenever possible, sampling from the bulk product should be carried out from a moving stream of product, the whole width of the stream being sampled.

6.3 Sampling constraints

6.3.1 Limitations of the size of a sample portion

If the consignment does not appear to be from the same batch (lot) or consists of different materials (products), then the material(s) shall be sampled separately.

A sampled portion shall be not more than 5 000 m^3 (bulk) or 10 000 packages (packaged material) of the same material from the same consignment. If at all possible packages which are damaged shall not be selected.

When sampling packages for quantity determination, the final sample shall be:

— either the individual package if it exceeds 30 l

— or sufficient packages to give a content of at least 30 l.

6.3.2 Number of final samples

Unless otherwise agreed with the parties concerned at least three representative final samples shall be taken and distributed as follows:

a) one portion each for the supplier and buyer (receiver); or enforcement officer:

b) one portion for an independent tester if a dispute on analysis arises.

6.4 Sampling

6.4.1 Number of sampling points

Take an incremental sample from each sampling point. The number of sampling points (n_{sp}) is calculated using the following equation:

$$n_{sp} = 0{,}5(V^{1/2}) \text{ rounded up to the nearest whole number} \quad ...(1)$$

where :

V is the nominal quantity of the sampled portion in cubic metres
with a minimum $n_{sp} = 12$
and a maximum $n_{sp} = 30$.

6.4.2 Distribution of sampling points

The sampling points shall be distributed throughout the sampled portion as follows :

a) Bulk material

Visually divide the sampled portion into the same number of equal portions as the number of sampling points;

b) Packaged material

Each sampling point shall be in a different randomly selected package.

More sampling points shall be used if the package content is so small that the required incremental sample size cannot be obtained.

6.4.3 Volume of samples

From each sampling point incremental samples of sufficient volume (at least 0,5 l) shall be taken to ensure the final sample size (see annex A).

6.4.4 Taking the samples

These incremental samples shall be taken carefully so as to preserve the characteristics of the material for which it is to be tested and as follows :

a) Bulk material

Incremental samples shall be taken from throughout the depth of the material, ignoring material nearer than 50 mm to any surface;