



SLOVENSKI STANDARD
SIST EN 12580:2001
01-september-2001

Izboljševalci tal in rastni substrati - Določevanje količine

Soil improvers and growing media - Determination of a quantity

Bodenverbesserungsmittel und Kultursubstrate - Bestimmung der Menge

Amendements organiques et supports de culture - Détermination de la quantité

Ta slovenski standard je istoveten z: EN 12580:1999

[SIST EN 12580:2001](https://standards.iteh.ai/catalog/standards/sist/747208c5-c716-4cd0-a16b-6495e197c34d/sist-en-12580-2001)

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ICS:

65.080

Gnojila

Fertilizers

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EUROPEAN STANDARD
NORME EUROPÉENNE
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English version

Soil improvers and growing media - Determination of a quantity

Amendements organiques et supports de culture -
Détermination de la quantité

Bodenverbesserungsmittel und Kultursubstrate -
Bestimmung der Menge

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

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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.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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of an identical text or by endorsement, at the latest by May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.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

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Introduction

Growing media and soil improvers are generally traded by volume as the moisture content can greatly affect the weight of material. It is important for the consumer to know the quantity of growing media or soil improver being traded. Furthermore, for the plant growing in the growing medium, it is generally the volume of material that is important.

1 Scope

This European Standard specifies a method for the determination of a quantity of growing media and soil improvers in bulk and in packages.

This standard is applicable to material that is in solid form reconstituted if necessary, but not to blocks sold as such by dimension. This method is not applicable for material with more than 10 % (V/V) of particles greater than 60 mm in size.

NOTE 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 12579	Soil improvers and growing media - Sampling
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
EN 45501	Metrological aspects of non-automatic weighing instruments
ISO 5725	Accuracy (trueness and precision) of measurement methods and results

3 Terms and definitions

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

3.1

bulk density

density of material as received or reconstituted for use in accordance with the manufacturer's instructions, determined by the method specified in this standard.

3.2

volume

out-turn volume determined by the method specified in this standard.

4 Principle

The material is weighed, its bulk density is determined and the volume is then calculated from these values.

NOTE The structure of the material may change with time and handling and this may affect the volume of the material.

5 Apparatus

5.1 Measuring Cylinder, rigid, $20 \text{ l} \pm 0,4 \text{ l}$ with a height to diameter ratio between 0,9:1 and 1:1. The volume, V_1 , shall be known to the nearest 10 ml at $20 \text{ }^\circ\text{C}$.

NOTE 1 A standard 300 mm internal diameter pipe of height 283 mm with an end cap may be suitable.

NOTE 2 The apparent weight of 1 l of water at $20 \text{ }^\circ\text{C}$ is 997,15 g. Therefore no air buoyancy correction need be made.

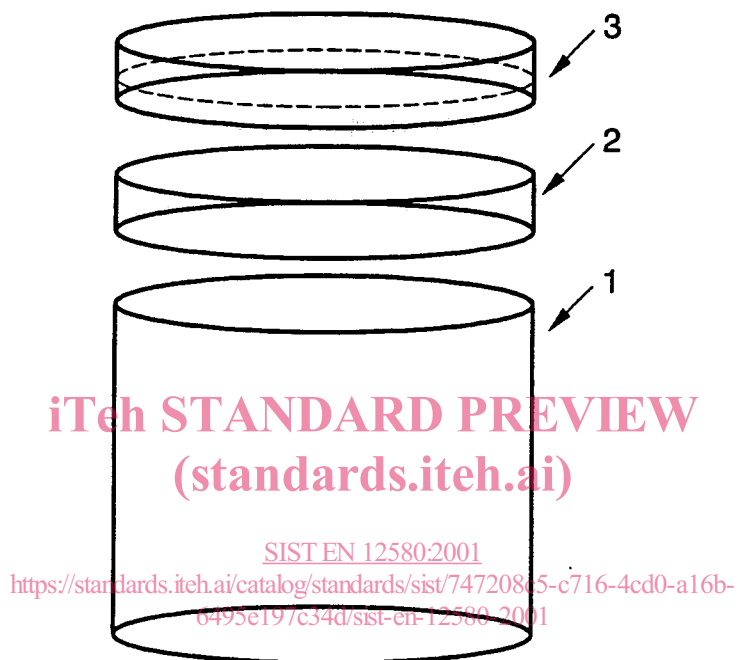
5.2 Collar, rigid, of the same diameter as the measuring cylinder (5.1) and with a height of $75 \text{ mm} \pm 2 \text{ mm}$.

5.3 Fall Controller, of either $20 \text{ mm} \pm 0,6 \text{ mm}$ or $40 \text{ mm} \pm 1,3 \text{ mm}$ or $60 \text{ mm} \pm 2 \text{ mm}$ mesh size as required (see clause 7), held not more than 50 mm above the collar.

NOTE For example, test sieves according to ISO 3310-1 may be used.

Figure 1 shows the apparatus as described in 5.1 to 5.3.

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**Key**

- 1 measuring cylinder (5.1)
- 2 collar (5.2)
- 3 fall controller (5.3)

NOTE For convenience and ease of use, it is advisable to have handles on the cylinder and the collar.

Figure 1 - Measuring cylinder, collar and fall controller

5.4 Weighing Machine : For packaged material, the scale shall conform to table 1 with class III tolerances as specified in EN 45501.

For bulk material, the weighing machine shall conform to class III of EN 45501.

Table 1 - Maximum scale intervals for weighing machines

Mass	Maximum scale interval for analogue scales	Maximum scale interval for digital scales
Kg	g	g
>1 to 2,5	10	5
>2,5 to 5	20	10
>5 to 10	50	20
>10 to 40	100	50
>40	200	100

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5.5 Straight-edge, rigid, of rectangular cross section, or a knife, and at least 200 mm longer than the diameter of the collar.

6 Sampling

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Sampling shall be carried out in accordance with the method specified in EN 12579 For bulk material, the final sample, of at least 30 litres, shall be used for a bulk density determination.

For packaged material the content of a package as defined in EN 12579 under 6.4.2 shall be used, and if this is less than 30 l the content of the number of packages needed to give 30 l of material shall be used.

7 Procedure

7.1 Using the appropriate weighing machine (5.4), determine the gross weight of the material and note the mass m_1 . Determine the tare weight (e.g. of the bags, containers, truck or train) and note the mass m_2 . For packaged material where the quantity in each package of the final sample is being measured, weigh each package separately for both gross and tare weight. The net weight of the material is calculated as $(m_1 - m_2)$. Alternatively the net weight of the product can be determined directly.

7.2 Weigh the measuring cylinder (5.1), note the mass m_3 , and assemble the collar (5.2) on the cylinder. Place the equipment on a stable horizontal surface so that it does not rock.

7.3 Any material in the final sample which has been compressed or dried shall be loosened or moistened for usage according to the manufacturer's instructions.