

Soil improvers and growing media — Determination of plant response

Part 2: Petri dish test using cress

National foreword

This British Standard is the UK implementation of EN 16086-2:2011.

BSI, as a member of CEN, is obliged to publish EN 16086-2:2011 as a British Standard. However, attention is drawn to the fact that the UK committee voted against its approval as a European Standard.

The UK committee voted against the publication of this standard because, although the method is interesting for screening materials, the plant species specified for the test are not sensitive to some of the pesticides of greatest concern currently in composted materials, and because it considered that the reproducibility obtained in inter-laboratory evaluation was not an adequate basis on which to establish a reference method. This could cause problems in the event of dispute or litigation.

The standard deviations of reproducibility in the inter-laboratory validation trials of this method were poor and there is a low probability of getting the same result from two laboratories analysing the same sample. In the worst cases the standard deviation of reproducibility exceeded the mean analysis (after rejection of outliers), for example mean germination rate for compost 1 was 22.38 %, S_R 34.66; root length compost 1 0.98, S_R 1.51 cm.

The UK committee advises that this standard will not detect inhibition by residues of some of the herbicides of greatest concern, and that in addition the results are imprecise.

The UK participation in its preparation was entrusted to Technical Committee AW/20, Top soil and other growing media.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Soil improvers and growing media - Determination of plant response - Part 2: Petri dish test using cress

Amendements du sol et supports de culture -
Détermination de la réponse des plantes - Partie 2: Essai
en boîte de Pétri avec du cresson

Bodenverbesserungsmittel und Kultursubstrate -
Bestimmung der Pflanzenverträglichkeit - Teil 2:
Petrischalentest mit Kresse

This European Standard was approved by CEN on 17 September 2011.

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Foreword

This document has been prepared by Technical Committee CEN/TC “Soil improvers and growing media”, the secretariat of which is held by ASI.

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 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This European Standard describes a method for the routine determination of the effect of soil improvers and growing media or constituents thereof on the germination and early root development of cress.

2 Normative references

The following referenced documents are indispensable for the application 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 13037, *Soil improvers and growing media – Determination of pH*

EN 13038, *Soil improvers and growing media – Determination of electrical conductivity*

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 ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

3 Terms and definitions

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

3.1
plant response
variation in cress seed germination and/or growth when sown and grown in a growing medium, soil improver or constituent thereof

NOTE Factors causing negative plant growth cannot be identified nor sufficiently quantified by applying this method.

3.2
germination
for this method, the seed is said to have germinated as soon as the radicle has emerged from the seed

3.3
root length index
percentage difference of the root length of germinated cress seeds on the material under investigation compared to the root length of the control

3.4
Munoo-Liisa Vitality index
index calculated from the germination rate and the root length