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NSAI Standards

Irish Standard
I.S. EN ISO 17155:2020

Soil quality - Determination of abundance and activity of soil microflora using respiration curves (ISO 17155:2012)

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This document is based on:	*Published:*
EN ISO 17155:2020	2020-05-06

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2020-06-04	NOTE: If blank see CEN/CENELEC cover page

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NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 17155

May 2020

ICS 13.080.30

English Version

Soil quality - Determination of abundance and activity of soil microflora using respiration curves (ISO 17155:2012)

Qualité du sol - Détermination de l'abondance et de l'activité de la microflore du sol à l'aide de courbes de respiration (ISO 17155:2012)

Bodenbeschaffenheit - Bestimmung der Abundanz und Aktivität der Bodenmikroflora mit Hilfe von Atmungskurven (ISO 17155:2012)

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European foreword

The text of ISO 17155:2012 has been prepared by Technical Committee ISO/TC 190 "Soil quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17155:2020 by Technical Committee CEN/TC 444 "Environmental characterization of solid matrices" the secretariat of which is held by NEN.

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ISO/TC **190**/SC **4** Secretariat: **AFNOR**

Voting begins on **2011-03-10** Voting terminates on **2011-08-10**

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Soil quality —Determination of abundance and activity of soil microflora using respiration curves

Qualité du sol — étermination de l'abondance et de l'activité de la microflore du sol à l'aide de courbes de respiration

[Revision of first edition (ISO 17155:2002)]

ICS 13.080.30

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Foreword

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ISO 17155 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

This second edition cancels and replaces the first edition, [clause(s) / subclause(s) / table(s) / figure(s) / annex(es)] of which [has / have] been technically revised.

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Soil quality —Determination of abundance and activity of soil microflora using respiration curves

1 Scope

This International Standard describes a test method for determining the activity of active aerobic, heterotrophic microbial biomass in soils. This method is applicable to the monitoring of soil quality and to the evaluation of the ecotoxic potential of soils and soil materials. It is also applicable to soils that are contaminated experimentally in the field or in the laboratory (chemical testing) and for soils sampled along contamination gradients in the field.

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.

ISO 10381-6, *Soil quality — Sampling — Part 6: Guidance on the collection, handling and storage of soil for the assessment of aerobic microbial processes in the laboratory*

ISO 10390, *Soil quality — Determination of pH*

ISO 10694*, Soil quality — Determination of organic and total carbon after dry combustion (elementary analysis)*

ISO 11277, *Soil quality — Determination of particle size distribution in mineral soil material — Method by sieving and sedimentation*

ISO 11465, *Soil quality — Determination of dry matter and water content on mass basis — Gravimetric method*

ISO 14238, *Soil quality — Biological methods — Determination of nitrogen mineralization and nitrification in soils and the influence of chemicals on these processes*

3 Terms and definitions

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

3.1
basal respiration rate
$\boldsymbol{R_B}$
constant mass of CO_2 released or mass of O_2 consumed per unit mass of soil per unit time without substrate addition

NOTE See Figure 1.

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