

Soil quality - Determination of potential nitrification and inhibition of nitrification - Rapid test by ammonium oxidation (ISO 15685:2012)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 15685:2020 sisaldab Euroopa standardi EN ISO 15685:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15685:2020 consists of the English text of the European standard EN ISO 15685:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Soil quality - Determination of potential nitrification and
inhibition of nitrification - Rapid test by ammonium
oxidation (ISO 15685:2012)

Qualité du sol - Détermination de la nitrification
potentielle et inhibition de la nitrification - Essai rapide
par oxydation de l'ammonium (ISO 15685:2012)

Bodenbeschaffenheit - Bestimmung der potentiellen
Nitrifizierung und Hemmung der Nitrifizierung -
Schnellverfahren mittels Ammoniumoxidation (ISO
15685:2012)

This European Standard was approved by CEN on 13 April 2020.

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European foreword

The text of ISO 15685:2012 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 15685:2020 by Technical Committee CEN/TC 444 "Environmental characterization of solid matrices" the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

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Endorsement notice

The text of ISO 15685:2012 has been approved by CEN as EN ISO 15685:2020 without any modification.

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1 Scope

This International Standard specifies a rapid method for the determination of the potential rate of ammonium oxidation and inhibition of nitrification in soils. This method is suitable for all soils containing a population of nitrifying microorganisms. It can be used as a rapid screening test for monitoring soil quality and quality of wastes, and is suitable for testing the effects of cultivation methods, chemical substances [except volatiles, i.e. $H > 1$ (Henry's constant)], extracts of biosolids and pollution in soils.

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 under aerobic conditions for the assessment of microbiological processes, biomass and diversity 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 11260, *Soil quality — Determination of effective cation exchange capacity and base saturation level using barium chloride solution*

ISO 11261, *Soil quality — Determination of total nitrogen — Modified Kjeldahl method*

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 a 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*

ISO 14256-2, *Soil quality — Determination of nitrate, nitrite and ammonium in field-moist soils by extraction with potassium chloride solution — Part 2: Automated method with segmented flow analysis*

EN 14735, *Characterization of waste — Preparation of waste samples for ecotoxicity tests*

3 Terms and definitions

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

3.1 inhibitory dose ID

amount of a chemical added to soil that effectively inhibits biological activity by a stated percentage after a given time, in comparison with an untreated control

NOTE It is expressed as a percentage. For example, ID25 and ID50 indicate a 25 % and 50 % inhibition of biological activity, respectively.