CEN/TC 223/WG 4 "Analytical methods"
WG Secretariat: **ASI**
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WI 00223115_draft organic nitrogen_2022-02-09

Document type	Related content	Document date	Expected action
Project / Draft		2022-02-14	**INFO**

Description

Please find enclosed the current draft on WI 00223115 including the changes agreed during the last meeting of CEN/TC223/WG 4 on 2022-02-09.

CEN/TC 223

Date: 2022-02

prEN 00223115:2021

Secretariat: NEN

Organic soil improvers— Determination of organic nitrogen

Einführendes Element — Haupt-Element — Ergänzendes Element

Élément introductif — Élément central — Élément complémentaire

ICS:

CCMC will prepare and attach the official title page.

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European foreword

This document (prEN 00223115:2022) has been prepared by Technical Committee CEN/TC 223 “Soil improvers and growing media”, the secretariat of which is held by NEN, in accordance with CEN/TC 260 “Fertilizers and liming materials”.

This document is a working document.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association.

1 Scope

This European Standard specifies a method for the determination of selected organic nitrogen content in organic soil improvers.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 13040-1:—[1], *Soil improvers and growing media – Sample preparation – Part 1: Sample preparation for chemical and physical tests, determination of dry matter content, moisture content and laboratory bulk density*

EN 13654-1:—[2], *Soil improvers and growing media — Determination of nitrogen — Part 1: Modified Kjeldahl method*

EN 13654-2:—[3], *Soil improvers and growing media — Determination of nitrogen — Part 2: Dumas method*

EN 13651:—[4], *Soil improvers and growing media — Extraction of calcium chloride/DTPA (CAT) soluble nutrients and elements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CEN/TS 00223137:—[5] apply.

4 Principle

The content of organic nitrogen is calculated as the difference of the total nitrogen content and the content of CAT extractable nitrogen calculated as the sum of ammonium nitrogen and nitrate nitrogen.

5 Calculation and expression of the results

Calculate the content of organic nitrogen (w_{oN}) in g/kg dry matter according to equation (1).

$$w_{oN} = w_N - \frac{w_{N-CAT} \times 100}{L_D \times D_M} \quad (1)$$

where

w_N is the total nitrogen content as determined according to EN 13654-1 or EN 13654-2 in mg/g dry matter

w_{N-CAT} the extractable nitrogen calculated as the sum of ammonium nitrogen and nitrate nitrogen in mg/l according to EN 13651:—

L_D is the laboratory bulk density determined according to EN 13040-1:—

[1] Under preparation. Stage at the time of publication: prEN 13040-1:20**.
[2] Under preparation. Stage at the time of publication: prEN 13654-1:20**.
[3] Under preparation. Stage at the time of publication: prEN 13654-2:20**.
[4] Under preparation. Stage at the time of publication: prEN 13651:20**.
[5] Under preparation. Stage at the time of publication: prCEN/TS 00223137:20**.

D_M is the dry matter content as percentage by mass determined according to EN 13040-1:—

6 Test report

The test report shall contain the following information:

a) a reference to this European Standard;

b) all information necessary for complete identification of the sample;

c) the results of the calculation, expressed as g/kg sample;

d) date of sampling and sampling procedure (if known);

e) date when the analysis was finished;

f) all operating details not specified in this document, or regarding as optional, together with details of any incidents that occurred when performing the method which might have influenced the test result(s).

Bibliography

[1] CEN/TS 00223137, *Soil improvers and growing media — Terminology*