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BSI Standards Publication

Organic and organo-mineral fertilizers — Determination of the nitrogen content

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National foreword

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European foreword

This document (CEN/TS 17771:2022) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

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Introduction

Regulation (EU) 2019/1009 [5] lays down the rules on the making available on the market of EU fertilizing products and the specific safety and quality requirements for the defined product function categories (PFCs). Organic and organo-mineral fertilizers have been classified as PFC 1(A) and PFC 1(B).

This document defines test methods for the determination of the nitrogen content to be used for organic and organo-mineral fertilizers in order to measure the compliance with the related requirement in Regulation (EU) 2019/1009 [5].

1 Scope

This document is applicable to fertilizing products, which are classified as PFC 1(A) or PFC 1(B) of Regulation (EU) 2019/1009 [5]. However, the present method was not validated for blends.

This document specifies a method for the determination of the total nitrogen content and the content of ammoniacal, nitric, ureic and organic nitrogen in organic and organo-mineral fertilizers. This method is based on EN 15604:2009 and adapted to be applicable to organic and organo-mineral fertilizers.

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 12944-1:1999,[1] *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-2:1999,[2] *Fertilizers and liming materials — Vocabulary — Part 2: Terms relating to fertilizers*

EN 15604:2009, *Fertilizers — Determination of different forms of nitrogen in the same sample, containing nitrogen as nitric, ammoniacal, urea and cyanamide nitrogen*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1:1999[1] and EN 12944-2:1999[2] apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

4 Principle

The fertilizer sample shall be analysed according to four different analytical pathways to quantify the different forms of nitrogen in the sample. The nitrogen content determined by the four analytical pathways is representative for:

1) total nitrogen content;

2) total nitrogen content with exception of nitric nitrogen;

3) ammoniacal nitrogen content;

4) ammoniacal nitrogen and ureic nitrogen content.

The analysis results that are obtained by the determination of nitrogen according to these four pathways shall be used to calculate the content of ammoniacal, nitric, ureic, and organic nitrogen in the sample (see 9.1).

[1] As impacted by EN 12944-1:1999/AC:2000.
[2] As impacted by EN 12944-2:1999/AC:2000.