



BSI Standards Publication

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

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## National foreword

This Published Document is the UK implementation of CEN/TS 17771:2022.

The UK participation in its preparation was entrusted to Technical Committee CII/37, Fertilisers and related chemicals.

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

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**CEN/TS 17771**

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English Version

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

Engrais organiques et organo-minéraux -  
Détermination de la teneur en azote

Organische und organisch-minerale Düngemittel -  
Bestimmung des Stickstoffgehaltes

This Technical Specification (CEN/TS) was approved by CEN on 13 March 2022 for provisional application.

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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.

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

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

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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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].

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## 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,<sup>1</sup> *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-2:1999,<sup>2</sup> *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<sup>1</sup> and EN 12944-2:1999<sup>2</sup> 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 of:

- 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).

<sup>1</sup> As impacted by EN 12944-1:1999/AC:2000.

<sup>2</sup> As impacted by EN 12944-2:1999/AC:2000.