

ICS 65.080

English Version

## Organic and organo-mineral fertilizers - Determination of the total organic carbon (TOC) content by dry combustion

Engrais organiques et organo-minéraux -  
Détermination de la teneur en carbone organique

Organische und organisch-mineralische Düngemittel -  
Bestimmung des Gehalts an organischem Kohlenstoff  
(TOC) durch trockene Verbrennung

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

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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## European foreword

This document (CEN/TS 17776:2022) 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 standardisation 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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This document is applicable to fertilizing products, which are classified as PFC 1(A) and PFC 1(B) or the PFC 1(A) and PFC 1(B) component in PFC 7 of Regulation (EU) 2019/1009 [5]. However, the present method was not validated for blends.

This document specifies a method for the determination of total organic carbon (TOC) by elemental analysis using dry combustion. The method is applicable to organic and organo-mineral fertilizers containing more than 1 g carbon per kg of dry matter (0,1 %), with the exclusion of organo-mineral fertilizers containing urea-formaldehyde polymers as long as there is no method available to assess carbon in urea-formaldehyde polymers.

## 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.

CEN/TS 17771, *Organic and organo-mineral fertilizers — Determination of the nitrogen content*

CEN/TS 17773, *Organic and organo-mineral fertilizers — Determination of the dry matter content*

EN 15705, *Fertilizers — Determination of urea condensates using high-performance liquid chromatography (HPLC) — Isobutylidenediurea and crotonylidenediurea (method A) and methylen-urea oligomers (method B)*

EN ISO 3696:1995, *Water for analytical laboratory use — Specification and test methods (ISO 3696: 1987)*

## 3 Terms and definitions

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

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **total organic carbon**

#### **TOC**

quantity of carbon that is converted into carbon dioxide by combustion and which is not liberated as carbon dioxide by acid treatment

Note 1 to entry: In agreement with Regulation (EU) 2019/1009 [5], carbon derived from urea and polymers containing urea are not considered as organic in this document.