

STN P	Organické a organicko-minerálne hnojivá Stanovenie celkového obsahu špecifických prvkov pomocou ICP-AES po mineralizácii lúčavkou kráľovskou	STN P CEN/TS 17770 65 5034
------------------	---	--

Organic and organo-mineral fertilizers - Determination of the total content of specific elements by ICP-AES after digestion by aqua regia

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/22

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do apríla 2024 Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

Obsahuje: CEN/TS 17770:2022

135064

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17770

April 2022

ICS 65.080

English Version

**Organic and organo-mineral fertilizers - Determination of
the total content of specific elements by ICP-AES after
digestion by aqua regia**

Engrais organiques et organo-minéraux -
Détermination de la teneur totale en éléments
spécifiques par ICP-AES après digestion à l'eau régale

Organische und organisch-mineralische Düngemittel -
Bestimmung des Gesamtgehaltes spezifischer
Elemente durch ICP-AES nach Aufschluss durch
Königswasser

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.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

CEN/TS 17770:2022 (E)

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	5
5	Interferences	5
5.1	General	5
5.2	Spectral interferences	5
5.3	Transport interferences	6
5.4	Excitation interferences	6
5.5	Chemical interferences	6
5.6	Memory interferences	6
6	Reagents	6
7	Apparatus	7
8	Procedure	8
8.1	Preparation of test and blank solution	8
8.2	Preparation of the calibration solutions	8
8.3	Measurement	8
9	Calculation and expression of the results	10
10	Test report	11
Bibliography		12

European foreword

This document (CEN/TS 17770:2022) 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.

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.

CEN/TS 17770:2022 (E)**Introduction**

This document is part of a modular approach and concerns the analytical measurement step. “Modular” means that a test standard concerns a specific step in assessing a property and not the whole chain of measurements. Inductively coupled plasma atomic emission spectrometry (ICP-AES) is nowadays widely used and a well-established method in many laboratories.

1 Scope

This document specifies a method for the determination of elements in organic fertilizers and organo-mineral fertilizers digests using inductively coupled plasma-atomic emission spectrometry (ICP-AES).

NOTE Alternatively, inductively coupled plasma mass spectrometry (ICP-MS) can be used for the measurement if the user proves that the method gives the same results.

This method is applicable to aqua regia digests prepared according to CEN/TS 17768 for the determination of P, K, Ca, Mg, Na, S, B, Co, Cu, Fe, Mn, Mo, Zn, As, Cd, Cr, Ni, Pb by ICP-AES. The method can be used for the determination of other elements, provided the user has verified the applicability.

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 ISO 11885:2009, *Water quality — Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885:2007)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN