

STN P	Organicko-minerálne hnojivá Identifikácia chelátotvorných činidiel Časť 1: Stanovenie EDTA, HEEDTA a DTPA iónovou chromatografiou	STN P CEN/TS 17789-1 65 5064
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Organo-mineral fertilizers - Identification of chelating agents - Part 1: Determination of EDTA, HEEDTA and DTPA by ion chromatography

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 17789-1:2022

135085

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17789-1

April 2022

ICS 65.080

English Version

Organo-mineral fertilizers - Identification of chelating agents - Part 1: Determination of EDTA, HEEDTA and DTPA by ion chromatography

Engrais organo-minéraux - Identification des agents chélatants - Partie 1 : Détermination de l'EDTA, de l'HEEDTA et du DTPA par chromatographie ionique

Organisch-mineralische Düngemittel - Identifizierung von Chelatbildnern - Teil 1: Bestimmung von EDTA, HEEDTA und DTPA mittels Ionenchromatographie

This Technical Specification (CEN/TS) was approved by CEN on 21 February 2022 for provisional application.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN/TS 17789-1:2022 (E)

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European foreword

This document (CEN/TS 17789-1:2022) 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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This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

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CEN/TS 17789-1:2022 (E)**Introduction**

Micronutrients are considered to be, in plant nutrition, a number of elements known to be needed in small amounts for proper plant growth and development. The most common are Iron (Fe), Manganese (Mn), Molybdenum (Mo), Copper (Cu), Zinc (Zn) and Boron (B).

If an organo-mineral fertilizer contains a substance, or one of the substances in the mixture, which is intended to enhance the long term availability to plants of micronutrients in the EU fertilizing product, that substance is either a chelating agent or a complexing agent.

The chelating agents are divided into two groups¹:

- Group 1: EDTA, DTPA, HEEDTA, IDHA and [S,S]-EDDS;
- Group 2: Chelating agents present in UVCB (unknown or variable composition, complex reaction products or biological materials) chelates including [o,o] EDDHA, [o,p] EDDHA, [o,o] EDDHMA, HBED and EDDHSA.

This document specifies the test method to be used in order to determine the content of certain chelating agents (EDTA, DTPA and HEEDTA) in organo-mineral fertilizers (product function category (PFC) 1(B) according to Regulation (EU) 2019/1009 [4]).

¹ Abbreviated terms are described in Annex A.

1 Scope

This document specifies a method for the determination by ion chromatography of the total amount of each of the individual chelating agents EDTA, HEEDTA, and DTPA in organo-mineral fertilizers, having an organic matrix based on vegetal residues (cocoa shells, grape residue, soybean residue, ...), algae extract, and animal meal (feather, bones, blood, ...) and containing one or more of these substances.

The method allows the identification and the determination of the total water-soluble fraction of each of these chelating agents. It does not allow to distinguish between the free form and the metal bound form of the chelating agents.

This method applies to organo-mineral fertilizers containing chelates of one or more of the following micronutrients: cobalt, copper, iron, manganese, zinc and with a mass fraction of at least 0,1 %.

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, *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

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

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