

Produkty na hnojenie Stanovenie stability produktov na hnojenie obsahujúcich mikroživiny vo forme komplexu

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Fertilizing products - Determination of the stability of fertilizing products containing micronutrient complexes

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

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English Version

Fertilizing products - Determination of the stability of fertilizing products containing micronutrient complexes

Fertilisants - Détermination de la stabilité des fertilisants contenant des oligo-éléments complexés Düngeprodukte - Bestimmung der Stabilität von Spurennährstoffkomplexen in Düngeprodukten

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 EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (CEN/TS 17783:2022) 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

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 micronutrient metals are Iron (Fe), Manganese (Mn), Cobalt (Co), Copper (Cu) and Zinc (Zn).

An EU fertilizing product shall consist solely of component materials complying with the requirements for one or more of the component material categories (CMCs). CMC 1 corresponds with the virgin material substances and mixtures.

If a micronutrient fertilizing product 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. According to Regulation (EU) 2019/1009 [2], EU fertilizing products containing complexed micronutrients shall remain stable in water solution at pH 6 and pH 7 for at least one day.

This document defines a test method to check the micronutrient complex stability in solution at pH 6 and pH 7.

1 Scope

This document specifies a method for the determination of the soluble metal that remains in solution after the application of a solution of the fertilizer substance containing micronutrient complexes in water and adjusting the pH to 6 and pH 7 for at least one day.

The method applies to fertilizing products containing micronutrient complexes.

2 Normative references

The following documents are referred 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

EN 15962, Fertilizers — Determination of the complexed micro-nutrient content and of the complexed fraction of micro-nutrients

EN 16962, Fertilizers — Extraction of water soluble micro-nutrients in fertilizers and removal of organic compounds from fertilizer extracts

EN 16963, Fertilizers — Determination of boron, cobalt, copper, iron, manganese, molybdenum and zinc using ICP-AES

EN 16965, Fertilizers — Determination of cobalt, copper, iron, manganese and zinc using flame atomic absorption spectrometry (FAAS)

CEN/TS 17786-1, Inorganic micronutrient fertilizers — Determination of the chelated micronutrient content and the chelated fraction of micronutrients — Part 1: Treatment with a cation exchange resin

CEN/TS 17786-2, Inorganic micronutrient fertilizers — Determination of the chelated micronutrient content and the chelated fraction of micronutrients — Part 2: Determination of EDTA, DTPA, HEEDTA, IDHA or EDDS

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

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