Irish Standard Recommendation
S.R. CEN/TS 17767:2022

Organo-mineral fertilizers - Extraction of phosphorus by formic acid

S.R. CEN/TS 17767:2022

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

S.R. CEN/TS 17767:2022 is the adopted Irish version of the European Document CEN/TS 17767:2022, Organo-mineral fertilizers - Extraction of phosphorus by formic acid

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TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 17767

April 2022

ICS 65.080

English Version

Organo-mineral fertilizers - Extraction of phosphorus by formic acid

Engrais organo-minéraux - Extraction du phosphore par l'acide formique

Organisch-mineralische Düngemittel - Extraktion von Phosphor durch Ameisensäure

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 17767:2022) 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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1 Scope

This document specifies the procedure for the extraction of phosphorus in 2 % formic acid (20 g/l), representing the amount of soft natural phosphates.

The method is applicable to 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.

CEN/TS 17774, *Organic and organo-mineral fertilizers — Determination of the content of specific elements by ICP-AES after extraction by water*

3 Terms and definitions

No terms and definitions are listed in this document.

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

To differentiate between hard natural phosphates and soft natural phosphates, phosphorus soluble in formic acid is extracted from the test portion with a 2 % formic acid solution under specified conditions.

5 Sampling

Sampling should be performed carefully, following the principles described in EN 1482 (all parts) with appropriate adaptations, required to account for specificities of organic and organo-mineral fertilizers.

6 Reagents

6.1 Water, distilled or demineralized.

6.2 Formic acid 2 %, (concentration of 20 g/l).

Make 82 ml of formic acid (concentration 98 % to 100 %; density at 20 °C ρ_{20} = 1,22 g/ml) up to 5 l with distilled water.

7 Apparatus

7.1 Common laboratory equipment and glassware.

7.2 500 ml graduated flask, with a wide neck (e.g. Stohmann).

7.3 Rotary shaker, 35 turns to 40 turns per min.