PD CEN/TS 17060:2017

BSI Standards Publication

Fertilizers — Determination of molybdenum in concentrations > 10 % using a gravimetric method with 8- hydroxyquinoline

National foreword

This Published Document is the UK implementation of CEN/TS 17060:2017.

The UK participation in its preparation was entrusted to Technical Committee CII/37, Fertilisers and related chemicals.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Fertilizers - Determination of molybdenum in concentrations > 10 % using a gravimetric method with 8-hydroxyquinoline

Engrais - Dosage du molybdène dans des concentrations > 10 % en utilisant une méthode gravimétrique à la 8-hydroxyquinoléine

Düngemittel - Bestimmung von Molybdän in Konzentrationen > 10 % durch Gravimetrie mit 8-Hydroxychinolin

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European foreword

This document (CEN/TS 17060:2017) 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

The preparation of this document by CEN is based on a mandate by the European Commission and the European Free Trade Association (Mandate M/335), concerning the modernization of methods of analysis on fertilizers in the framework of Regulation (EC) No 2003/2003 [1].

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.

Determination of molybdenum in fertilizers can be executed by inductively coupled plasma-atomic emission spectrometry (ICP-AES) according to prEN 16963:2016. The gravimetric determination as molybdenyl oxinate is more labour intensive and skill demanding but it is an option when ICP-AES is not available.

WARNING — Persons using this European Technical Specification should be familiar with normal laboratory practice. This European Technical Specification does not purport to address all of the safety issues, if any, associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted according to this European Technical Specification are carried out by suitably trained staff.

1 Scope

This Technical Specification specifies a method for the determination of total and water extractable molybdenum in mineral fertilizers containing more than 10 % molybdenum.

This method is applicable to water and aqua regia fertilizer extracts obtained according to prEN 16962:2016 and/or prEN 16964:2016.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1482-2, *Fertilizers and liming materials - Sampling and sample preparation - Part 2: Sample preparation*

EN 12944-1, *Fertilizers and liming materials and soil improvers - Vocabulary - Part 1: General terms*

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

prEN 16962:2016, *Fertilizers — Extraction of water soluble micro-nutrients in fertilizers and removal of organic compounds from fertilizer extracts*

prEN 16964:2016, *Fertilizers — Extraction of total micro-nutrients in fertilizers and removal of organic compounds from fertilizer extracts*

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

ISO 4793, *Laboratory sintered (fritted) filters — Porosity grading, classification and designation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1 and EN 12944-2 apply.

4 Principle

The molybdenum content is determined by precipitation as molybdenyl oxinate under specific conditions.

5 Sampling and sample preparation

Sampling is not part of the method specified in this document. A recommended sampling method is given in EN 1482-1.

Sample preparation shall be carried out in accordance with EN 1482-2. The sample extracts shall be prepared in accordance with prEN 16962:2016 and/or prEN 16964:2016.