TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

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English Version

Fertilizers - Spectrophotometric determination of biuret in urea

Engrais - Détermination photométrique du biuret dans l'urée

Düngemittel - Spektrometrische Bestimmung von Biuret in Harnstoff

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Contents

Page

Foreword

This document (CEN/TS 15479:2006) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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1 Scope

This Technical Specification specifies a method for the determination of biuret in urea. The method is applicable to urea and urea-based fertilizers.

2 Normative references

The following referenced documents are indispensable for the application 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.

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

EN 12944-1:1999, *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-2:1999, *Fertilizers and liming materials — Vocabulary — Part 2: Terms relating to fertilizers (including corrigendum AC:2000)*

EN ISO 3696:1995, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1:1999 and EN 12944-2:1999 apply.

4 Principle

In an alkaline medium in the presence of potassium sodium tartrate, biuret and bivalent copper form a violet cupric compound. The absorbance of the solution is measured at a wavelength of about 546 nm.

5 Reagents

5.1 General

Use only reagents of recognized analytical grade and distilled or demineralized water, free from carbon dioxide and ammonia (grade 3 according to EN ISO 3696:1995). The quality of the water is particularly important in this determination.

5.2 Methanol

5.3 Sulfuric acid solution

c = approximately 0,05 mol/l

5.4 Sodium hydroxide solution

c = approximately 0,1 mol/l