

Väetised. N-(2-nitrofenüül) fosfor triamiidi (2-NPT) määramine ureas ja ureat sisaldavad väetised. Kõrgefektiivse vedelikkromatograafia meetod (HPLC)

Fertilizers - Determination of N-(2-nitrophenyl)phosphoric triamide (2-NPT) in urea and fertilizers containing urea - Method using high-performance liquid chromatography (HPLC)

EESTI STANDARDI EESSÕNA

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English Version

Fertilizers - Determination of N-(2-nitrophenyl)phosphoric triamide (2-NPT) in urea and fertilizers containing urea - Method using high-performance liquid chromatography (HPLC)

Engrais - Dosage du N-(2-nitrophényl) triamide phosphorique (2-NPT) dans l'urée et les engrais contenant de l'urée - Méthode par chromatographie liquide à haute performance (HPLC)

Düngemittel - Bestimmung von N-(2-Nitrophenyl)Phosphorsäure-Triamid (2-NPT) in Harnstoff und harnstoffhaltigen Düngemitteln - Verfahren mit Hochleistungs-Flüssigchromatographie (HPLC)

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Foreword

This document (EN 16075:2011) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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1 Scope

This European Standard specifies a method for the determination of N-(2-nitrophenyl)phosphoric triamide (2-NPT) in urea or in fertilizers containing urea using high-performance liquid chromatography (HPLC).

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.

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

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

EN 12944-2:1999, *Fertilizers and liming materials and soil improvers — Vocabulary — Part 2: Terms relating to fertilizers*

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

The sample of fertilizer is dissolved in water or extracted with water. 2-NPT is determined using reversed phase high-performance liquid chromatography with an UV detector.

5 Reagents

Use only reagents of recognized analytical grade and distilled or demineralised water (conductivity less than 0,5 mS/m, according to EN ISO 3696:1995, grade 3).

5.1 2 N-(2-nitrophenyl)phosphoric triamide, of known purity.

5.2 Standard solution of 2-NPT, $\rho = 1$ g/l.

Weigh 1 /R g of 2-NPT, where R is the purity of 2-NPT, to the nearest 0,1 mg into a 1 000 ml measuring flask. Dissolve with water, make up to the mark with water and mix well. This solution is stable for about 4 weeks.

5.3 Methanol.

5.4 n-hexane.

6 Apparatus

6.1 Analytical balance, measuring accuracy 0,1 mg or better.