

<b>STN</b>	<b>Anorganické hnojivá</b> <b>Stanovenie dusíka vo výživových polyméroch</b> <b>v prítomnosti iných foriem obsahujúcich dusík</b>	<b>STN</b> <b>EN 18103</b>  65 5023
------------	---	--

Inorganic fertilizers - Determination of nutrient polymers nitrogen in the presence of other nitrogenous forms

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/25

Obsahuje: EN 18103:2025

**141529**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2026  
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii  
v znení neskorších predpisov.



EUROPEAN STANDARD

**EN 18103**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2025

ICS 65.080

English Version

## Inorganic fertilizers - Determination of nutrient polymers nitrogen in the presence of other nitrogenous forms

Engrais inorganiques - Détermination de l'azote des  
polymères nutritifs en présence d'autres formes  
azotées

Anorganische Düngemittel - Bestimmung von  
Nährstoff-Polymer-Stickstoff in Anwesenheit anderer  
stickstoffhaltiger Formen

This European Standard was approved by CEN on 27 July 2025.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## EN 18103:2025 (E)

<b>Contents</b>		<b>Page</b>
<b>European foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>4</b>
<b>4</b>	<b>Principle</b> .....	<b>4</b>
<b>4.1</b>	<b>General</b> .....	<b>4</b>
<b>4.2</b>	<b>Total nitrogen</b> .....	<b>5</b>
<b>4.2.1</b>	<b>Total nitrogen in the presence of nitrate nitrogen</b> .....	<b>5</b>
<b>4.2.2</b>	<b>Total nitrogen in the absence of nitrate nitrogen</b> .....	<b>5</b>
<b>4.3</b>	<b>Nitrate nitrogen</b> .....	<b>5</b>
<b>4.4</b>	<b>Ammonia nitrogen</b> .....	<b>5</b>
<b>4.5</b>	<b>Urea nitrogen</b> .....	<b>5</b>
<b>4.6</b>	<b>Cyanamide nitrogen</b> .....	<b>5</b>
<b>4.7</b>	<b>Isobutylidenediurea nitrogen (IBDU)</b> .....	<b>5</b>
<b>4.8</b>	<b>Crotonylidenediurea nitrogen (CDU)</b> .....	<b>5</b>
<b>4.9</b>	<b>Methylen-urea nitrogen</b> .....	<b>5</b>
<b>5</b>	<b>Sampling and sample preparation</b> .....	<b>5</b>
<b>5.1</b>	<b>Sampling</b> .....	<b>5</b>
<b>5.2</b>	<b>Sample preparation</b> .....	<b>6</b>
<b>6</b>	<b>Procedure</b> .....	<b>6</b>
<b>6.1</b>	<b>Part A: Determination of total, nitric, ammoniacal and cyanamide nitrogen</b> .....	<b>6</b>
<b>6.1.1</b>	<b>Reagents</b> .....	<b>6</b>
<b>6.1.2</b>	<b>Apparatus and equipment</b> .....	<b>7</b>
<b>6.1.3</b>	<b>Total nitrogen</b> .....	<b>7</b>
<b>6.1.4</b>	<b>Nitrate nitrogen</b> .....	<b>7</b>
<b>6.1.5</b>	<b>Ammoniacal nitrogen</b> .....	<b>8</b>
<b>6.1.6</b>	<b>Cyanamide nitrogen</b> .....	<b>8</b>
<b>6.1.7</b>	<b>Digestion of the test solution</b> .....	<b>8</b>
<b>6.1.8</b>	<b>Distillation of the test solution</b> .....	<b>8</b>
<b>6.1.9</b>	<b>Titration</b> .....	<b>9</b>
<b>6.1.10</b>	<b>Blank test</b> .....	<b>9</b>
<b>6.1.11</b>	<b>Expression of the result</b> .....	<b>9</b>
<b>6.2</b>	<b>Part B: Determination of urea, IBDU and CDU nitrogen</b> .....	<b>10</b>
<b>6.2.1</b>	<b>Determination of urea</b> .....	<b>10</b>
<b>6.2.2</b>	<b>Determination of IBDU</b> .....	<b>10</b>
<b>6.2.3</b>	<b>Determination of CDU</b> .....	<b>11</b>
<b>6.3</b>	<b>Part C: Determination of methylen-urea nitrogen</b> .....	<b>11</b>
<b>7</b>	<b>Test report</b> .....	<b>11</b>
<b>Annex A (informative) Stannous chloride solution</b> .....		<b>12</b>
<b>Annex B (informative) Overview of subclauses to determine the various nitrogen forms</b> .....		<b>13</b>
<b>Bibliography</b> .....		<b>14</b>

## **European foreword**

This document (EN 18103:2025) 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 March 2026, and conflicting national standards shall be withdrawn at the latest by March 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

**EN 18103:2025 (E)****1 Scope**

This document specifies a method for the determination of nutrient polymers nitrogen in presence of the other forms of nitrogen in inorganic fertilizers.

The method is applicable to all fertilizers which do not contain interfering organic compounds.

NOTE Nutrient polymers are methylen-urea (MU), in liquid and in solid form.

**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.

EN 1482-1, *Fertilizers, liming materials and inhibitors — Sampling and sample preparation — Part 1: General sampling provisions*

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

EN 1482-3, *Fertilizers, liming materials and inhibitors — Sampling and sample preparation — Part 3: Sampling of static heaps*

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 15562, *Inorganic fertilizers — Determination of cyanamide nitrogen*

EN 17864, *Inorganic fertilizers — Determination of nitrogen content in IBDU (isobutylidenediurea) and CDU (crotonylidenediurea)*

ISO 19746:2017, *Determination of urea content in urea-based fertilizers by high performance liquid chromatography (HPLC)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**