

<b>STN</b>	<b>Ocele a liatiny</b> <b>Stanovenie obsahu niklu</b> <b>Metóda plameňovej atómovej absorpčnej</b> <b>spektrometrie (FAAS)</b>	<b>STN</b> <b>EN 10136</b>  42 0506
------------	---	--

Steels and cast irons - Determination of nickel content - Flame atomic absorption spectrometric method (FAAS)

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. 12/19

Obsahuje: EN 10136:2019

Oznámením tejto normy sa ruší  
STN EN 10136 (42 0506) z mája 1998

**129920**

EUROPEAN STANDARD

**EN 10136**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2019

ICS 77.040.30

Supersedes EN 10136:1989

English Version

**Steels and cast irons - Determination of nickel content -  
Flame atomic absorption spectrometric method (FAAS)**

Aciers et fontes - Détermination de la teneur en nickel -  
Méthode par spectrométrie d'absorption atomique  
dans la flamme (SAAF)

Stahl und Gusseisen - Bestimmung des Nickelanteils -  
Flammenatomabsorptionsspektrometrisches  
Verfahren (FAAS)

This European Standard was approved by CEN on 22 April 2019.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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 10136:2019 (E)**

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms and definitions</b> .....	<b>4</b>
<b>4 Principle</b> .....	<b>4</b>
<b>5 Reagents</b> .....	<b>4</b>
<b>6 Apparatus</b> .....	<b>6</b>
<b>6.1 Ordinary laboratory apparatus</b> .....	<b>6</b>
<b>6.2 Atomic absorption spectrometer</b> .....	<b>6</b>
<b>6.2.1 General</b> .....	<b>6</b>
<b>6.2.2 Minimum precision</b> .....	<b>6</b>
<b>6.2.3 Additional performance requirements</b> .....	<b>6</b>
<b>7 Sampling</b> .....	<b>6</b>
<b>8 Procedure</b> .....	<b>7</b>
<b>8.1 Test portion</b> .....	<b>7</b>
<b>8.2 Blank test</b> .....	<b>7</b>
<b>8.3 Determination</b> .....	<b>7</b>
<b>8.3.1 Preparation of the test solution</b> .....	<b>7</b>
<b>8.3.2 Treatment of the test solution</b> .....	<b>7</b>
<b>8.3.3 Preparation of the calibration solutions</b> .....	<b>8</b>
<b>8.3.4 Adjustment of the atomic absorption spectrometer</b> .....	<b>9</b>
<b>8.3.5 Spectrometric measurements</b> .....	<b>9</b>
<b>9 Expression of results</b> .....	<b>10</b>
<b>9.1 Use of the calibration curve</b> .....	<b>10</b>
<b>9.2 Use of bracketing method</b> .....	<b>10</b>
<b>10 Test report</b> .....	<b>11</b>
<b>Annex A (informative) Precision</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>13</b>

## European foreword

This document (EN 10136:2019) has been prepared by Technical Committee CEN/TC 459 “ECISS - European Committee for Iron and Steel Standardization”<sup>1</sup>, the secretariat of which is held by AFNOR.

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 December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

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.

This document supersedes EN 10136:1989.

In comparison with EN 10136:1989, the following significant technical changes were made:

- Clause 1: lower limit of the scope changed;
- Normative references: revised;
- Clause 4: possibility for using other suitable radiation sources added;
- Clause 5: preparation of iron base solutions added;
- 8.3: details regarding the preparation of the test solution added;
- 8.3.3: calibration solutions expanded;
- 8.3.4: background correction specified;
- 8.3.5 and Clause 9: bracketing method for the spectrometric measurements added;
- Clause 10: editorially updated;
- Bibliography: added.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

---

<sup>1</sup> Through its subcommittee SC 2 “Methods of chemical analysis for iron and steel” (secretariat: SIS)

**EN 10136:2019 (E)****1 Scope**

This document specifies a flame atomic absorption spectrometric method (FAAS) for the determination of nickel content in steels and cast irons.

The method is applicable to nickel contents between 0,004 % (weight percent) and 2,0 % (weight percent).

The method can be adapted to lower or higher nickel contents by changing the test portion or the dilution process, provided the criteria in 6.2.2 and 6.2.3 are still met.

**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 ISO 648, *Laboratory glassware — Single-volume pipettes (ISO 648)*

EN ISO 1042, *Laboratory glassware — One-mark volumetric flasks (ISO 1042)*

EN ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition (ISO 14284)*

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