

<b>STN</b>	<b>Ocele</b> <b>Stanovenie nióbu v oceliach</b> <b>Spektrofotometrická metóda</b>	<b>STN</b> <b>EN 10178</b>  42 0531
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Steels - Determination of niobium - Spectrophotometric method

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. 08/24

Obsahuje: EN 10178:2024

Oznámením tejto normy sa ruší  
STN EN 10178 (42 0531) z apríla 1993

**139059**

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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2024  
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 10178**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2024

ICS 77.040.30

Supersedes EN 10178:1989

English Version

**Steels - Determination of niobium - Spectrophotometric method**

Aciers - Détermination du niobium - Méthode spectrophotométrique

Stähle - Bestimmung von Niob - Photometrisches Verfahren

This European Standard was approved by CEN on 29 April 2024.

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**EN 10178:2024 (E)**

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## European foreword

This document (EN 10178:2024) has been prepared by Technical Committee CEN/TC 459/SC 2 “Methods of chemical analysis for iron and steel”, the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by December 2024, and conflicting national standards shall be withdrawn at the latest by December 2024.

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 10178:1989.

In comparison with the previous edition, the following technical modifications have been made:

- normative references: updated;
- Clause 3 Terms and definitions: added;
- reference 5.13: added;
- reference 5.18: title simplified;
- Clause 6: developed and subclauses 6.1 and 6.2, added;
- Clause 7: updated;
- former subclause 7.3.3: included in 8.3.2;
- Clause 10: updated;
- Bibliography: added.

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 10178:2024 (E)****1 Scope**

This document specifies a spectrophotometric method for the determination of niobium in steels. The method is applicable to all grades of steels with niobium contents up to 1,3 % (by mass), with a lower limit of detection of 0,002 % (by mass).

The precision data of the present method are given in Annex A.

**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)*

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

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