

**Steel and iron - Determination of
nitrogen content - Thermal
conductimetric method after fusion in a
current of inert gas**

Steel and iron - Determination of nitrogen content -
Thermal conductimetric method after fusion in a
current of inert gas

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10720:2007 sisaldab Euroopa standardi EN ISO 10720:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 31.05.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 10720:2007 consists of the English text of the European standard EN ISO 10720:2007. This document is endorsed on 31.05.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This International Standard specifies a thermal conductimetric method after fusion under inert gas for the determination of nitrogen in steel and iron. The method is applicable to nitrogen contents between 0,000 8 % (m/m) and 0,5% (m/m).	Scope: This International Standard specifies a thermal conductimetric method after fusion under inert gas for the determination of nitrogen in steel and iron. The method is applicable to nitrogen contents between 0,000 8 % (m/m) and 0,5% (m/m).
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ICS 77.080.01

Võtmesõnad:

ICS 77.080.01

English Version

Steel and iron - Determination of nitrogen content - Thermal
conductimetric method after fusion in a current of inert gas (ISO
10720:1997)

Aciers et fontes - Dosage de l'azote - Méthode par
conductibilité thermique après fusion dans un courant de
gaz inerte (ISO 10720:1997)

Eisen und Stahl Bestimmung des Stickstoffgehaltes -
Messung der Wärmeleitfähigkeit nach Aufschmelzen in
strömendem Inertgas (ISO 10720:1997)

This European Standard was approved by CEN on 24 February 2007.

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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 Management Centre has the same status as the official versions.

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

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Foreword

The text of ISO 10720:1997 has been prepared by Technical Committee ISO/TC 17 “Steel” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10720:2007 by Technical Committee ECISS/TC 20 “Methods of chemical analysis of ferrous products” 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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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

Endorsement notice

The text of the International Standard ISO 10720:1997 has been approved by CEN as EN ISO 10720:2007 without any modification.

INTERNATIONAL STANDARD

ISO
10720

First edition
1997-08-15

Steel and iron — Determination of nitrogen content — Thermal conductimetric method after fusion in a current of inert gas

*Aciers et fontes — Dosage de l'azote — Méthode par conductibilité
thermique après fusion sous un courant de gaz inerte*



Reference number
ISO 10720:1997(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10720 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 1, *Methods of determination of chemical composition*.

Annexes A to C of this International Standard are for information only.

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Steel and iron — Determination of nitrogen content — Thermal conductimetric method after fusion in a current of inert gas

1 Scope

This International Standard specifies a thermal conductimetric method after fusion under inert gas for the determination of nitrogen in steel and iron.

The method is applicable to nitrogen contents between 0,000 8 % (m/m) and 0,5% (m/m).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 385-1:1984, *Laboratory glassware — Burettes — Part 1: General requirements.*

ISO 648:1977, *Laboratory glassware — One-mark pipettes.*

ISO 1042:—¹⁾, *Laboratory glassware — One-mark volumetric flasks.*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods.*

ISO 5725-1:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions.*

ISO 5725-2:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method.*

ISO 5725-3:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 3: Intermediate measures of the precision of a standard measurement method.*

ISO 14284 :1996, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition.*

3 Principle

Fusion of a test portion in a single-use graphite crucible under helium gas at a high temperature (e. g. 2 200 °C)
Extraction of the nitrogen in the form of molecular nitrogen in the stream of helium.

Separation from the other gaseous extracts and measurement by thermal conductimetric method.

4 Reagents and materials

During the analysis, unless otherwise stated, use only reagents of recognized analytical grade and only grade 2 water as specified in ISO 3696.

1) To be published. (Revision of ISO 1042:1983)