

SLOVENSKI STANDARD SIST EN ISO 11541:2003

01-februar-2003



Natural gas - Determination of water content at high pressure (ISO 11541:1997)

Erdgas - Bestimmung des Wassergehaltes unter hohem Druck (ISO 11541:1997)

Gaz naturel - Dosage de l'eau a haute pression (ISO 11541:1997)

Ta slovenski standard je istoveten z: EN ISO 11541:2002

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EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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English version

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This European Standard was approved by CEN on 9 October 2002.

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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 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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

The text of ISO 11541:1997 has been prepared by Technical Committee ISO/TC 193 "Natural gas" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11541:2002 by CMC.

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of an identical text or by endorsement, at the latest by May 2003, and conflicting national standards shall be withdrawn at the latest by May 2003.

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

Endorsement notice

The text of ISO 11541:1997 has been approved by CEN as EN ISO 11541:2002 without any modifications.

NOTE Normative references to International Standards are listed in Annex ZA (normative). (standards.iteh.ai)

SIST EN ISO 115412003 https://standards.iteh.ai/catalog/standards/sist/491209dc-6ec1-4321-9e94e49feecbb083/sist-en-iso-11541-2003



EN ISO 11541:2002 (E)

Annex ZA (normative)

Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	<u>Year</u>	Title	<u>EN</u>	Year
ISO 10715	1997	Natural gas - Sampling guidelines	EN ISO 10715	2000
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INTERNATIONAL STANDARD

ISO 11541 First edition 1997-02-15

Natural gas — Determination of water content at high pressure

Gaz naturel — Dosage de l'eau à haute pression

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Reference number ISO 11541:1997(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 VIEW a vote.

International Standard ISO 11541 was prepared by Technical Committee ISO/TC 193, Natural gas, Subcommittee SC 1, Analysis of natural gas,

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Natural gas — Determination of water content at high pressure

1 Scope

Water vapour may be present in natural gas due to, for example, natural occurrence in the well production stream, the storage of gas in underground reservoirs, transmission or distribution through mains containing moisture or other reasons.

This International Standard specifies a method of determining the water content of natural gas under pressures of more than 1 MPa, the upper pressure limit being determined by the maximum pressure that the apparatus can withstand. It is applicable to sweet natural gas and sour natural gas, containing hydrogen sulfide, with a water concentration of 10 mg/m³ or more.¹⁾ (standards.iteh.ai)

NOTE — Test data may be affected by alcohols, mercaptans, hydrogen sulfide and glycol contained in the sample gas, as these compounds react with the phosphorus peritoxide (P20) used to absorb the water vapour in the gas.

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2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 10715:—²⁾, Natural gas — Sampling guidelines.

3 Principle

A measured volume of gas is passed through an absorption tube filled with phosphorus pentoxide. Water contained in the gas is absorbed by the phosphorus pentoxide and phosphoric acid is formed. The increase in the mass of the tube is deemed to be the mass of water present in the gas. The absorption of water vapour at pipeline pressure is favoured over absorption at ambient pressure for the following reasons:

a) the water vapour partial pressure is high;

b) the necessary amount of gas is transmitted in a shorter time.

¹ In this International Standard, all volumes are expressed at 288,15 K and 101,325 kPa.

²⁾ To be published.