



SLOVENSKI STANDARD
SIST EN ISO 6974-2:2002

01-september-2002

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Natural gas - Determination of composition with defined uncertainty by gas chromatography - Part 2: Measuring-system characteristics and statistics for processing of data (ISO 6974-2:2001)

Erdgas - Bestimmung der Zusammensetzung mit definierter Unsicherheit durch Gaschromatographie - Teil 2: Messsystem charakteristiken und Statistiken für die Datenverarbeitung (ISO 6974-2:2001)

Gaz naturel - Détermination de la composition avec une incertitude définie par chromatographie en phase gazeuse - Partie 2: Caractéristiques du système de mesure et statistiques pour le traitement des données (ISO 6974-2:2001)

Ta slovenski standard je istoveten z: EN ISO 6974-2:2002

ICS:

75.060 Zemeljski plin Natural gas

SIST EN ISO 6974-2:2002 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 6974-2

March 2002

ICS 75.060

English version

Natural gas - Determination of composition with defined uncertainty by gas chromatography - Part 2: Measuring-system characteristics and statistics for processing of data (ISO 6974-2:2001)

Gaz naturel - Détermination de la composition avec une incertitude définie par chromatographie en phase gazeuse - Partie 2: Caractéristiques du système de mesure et statistiques pour le traitement des données (ISO 6974-2:2001)

Erdgas - Bestimmung der Zusammensetzung mit definierter Unsicherheit durch Gaschromatographie - Teil 2: Messsystem charakteristiken und Statistiken für die Datenverarbeitung (ISO 6974-2:2001)

This European Standard was approved by CEN on 5 January 2002.

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 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 Management Centre has the same status as the official versions.

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CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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

EN ISO 6974-2:2002 (E)

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Foreword

The text of the International Standard from Technical Committee ISO/TC 193 "Natural gas" of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Board of CEN.

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 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

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 the International Standard ISO 6974-2:2001 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 6974-1	2000	Natural gas - Determination of composition with defined uncertainty by gas chromatography - Part 1: Guidelines for tailored analysis	EN ISO 6974-1	2001

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INTERNATIONAL STANDARD

ISO
6974-2

First edition
2001-02-01

Natural gas — Determination of composition with defined uncertainty by gas chromatography —

Part 2:

Measuring-system characteristics and statistics for processing of data

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*Gaz naturel — Détermination de la composition avec une incertitude
définie par chromatographie en phase gazeuse —*

*Partie 2: Caractéristiques du système de mesure et statistiques pour le
traitement des données*

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Reference number
ISO 6974-2:2001(E)

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ISO 6974-2:2001(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 6974 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 6974-2 was prepared by Technical Committee ISO/TC 193, *Natural gas*, Subcommittee SC 1, *Analysis of natural gas*.

This part as well as the other five parts of ISO 6974 cancel and replace ISO 6974:1984 which specified only one method.

ISO 6974 consists of the following parts, under the general title *Natural gas — Determination of composition with defined uncertainty by gas chromatography*:

- (standards.iteh.ai)
- [SIST EN ISO 6974-2:2002](https://standards.iteh.ai/catalog/standards/sist/08d1cce9-e8ce-4102-8f15-2787cc2f4ec8/sist-en-iso-6974-2-2002)
- *Part 1: Guidelines for tailored analysis*
 - *Part 2: Measuring-system characteristics and statistics for processing of data*
 - *Part 3: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and hydrocarbons up to C₈ using two packed columns*
 - *Part 4: Determination of nitrogen, carbon dioxide and C₁ to C₅ and C₆₊ hydrocarbons for a laboratory and on-line measuring system using two columns*
 - *Part 5: Determination of nitrogen, carbon dioxide and C₁ to C₅ and C₆₊ hydrocarbons for a laboratory and on-line process application using three columns*
 - *Part 6: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and hydrocarbons up to C₈ using three capillary columns*

Annexes A, B and C of this part of ISO 6974 are for information only.

Introduction

This part of ISO 6974 describes the data processing for the “tailored” analysis of natural gas.

This part is to be used in conjunction with part 1 of ISO 6974 which gives the guidelines for “tailored” analysis.

Any method of analysis, either one of those in part 3 of ISO 6974 and subsequent parts or another method of choice can only be applied in conjunction with parts 1 and 2 of ISO 6974.

The calculation of the composition of the gas using response curves, a working-reference gas mixture and relative response factors are described in part 1 of ISO 6974, while the elaboration of these formulae is described in this part of ISO 6974.

The working-reference gas mixture and the gas sample are analysed with the same analytical system under the same set of conditions. Components not measured by this method will influence the accuracy of the method and should therefore be known.

If no working-reference gas mixture is used for the regular calibration of the analytical system, a number of equations given in this part of ISO 6974 will change. Such changes are indicated for each of these equations.

Once the working ranges of the components have been defined, an evaluation is carried out to determine whether components are to be considered as:

- main components or groups of components to be analysed using direct measurement (directly measured components);
- components or groups of components to be analysed using indirect measurement, as a function of a different, reference component in the calibration gas (indirectly measured components);
- components that are not measured and whose mole fraction can be assumed to be constant (components not measured).

The sum of the mole fractions of the main components, the indirect components and the fixed components is equal to 1.

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