



SLOVENSKI STANDARD
SIST ISO 6141:2000

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BUXca Yý U
SIST ISO 6141:1995

Analiza plinov - Zahteve, ki temeljijo na certifikatih za pline in plinske zmesi

Gas analysis -- Requirements for certificates for calibration gases and gas mixtures

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Analyse des gaz -- Prescriptions relatives aux certificats de gaz et mélanges de gaz pour étalonnage
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SIST ISO 6141:2000 **en**

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INTERNATIONAL STANDARD

ISO 6141

Third edition
2000-05-01

Gas analysis — Requirements for certificates for calibration gases and gas mixtures

*Analyse des gaz — Prescriptions relatives aux certificats de gaz et
mélanges de gaz pour étalonnage*

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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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 6141 was prepared by Technical Committee ISO/TC 158, *Analysis of gases*.

This third edition cancels and replaces the second edition (ISO 6141:1984), which has been technically revised.

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Gas analysis — Requirements for certificates for calibration gases and gas mixtures

1 Scope

This International Standard specifies requirements for certificates for pure gases and for certificates for homogeneous gas mixtures to be used as calibration gases.

This International Standard specifies the minimum information (mandatory data) required and additional information (optional data) recommended for characterizing a pure gas, or a homogeneous gas mixture, supplied under pressure in a cylinder or other container. This International Standard does not cover the field of safety-relevant data and related labelling.

Two different formats are considered for the information specified by this International Standard:

- a certificate, i.e., a document uniquely related to the container; and
- a certificate extract, i.e., a document affixed to the container.

2 Terms and definitions

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For the purposes of this International Standard, the following terms and definitions apply.

2.1

supplier

organization that has supplied the gas or gas mixture

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2.2

customer

organization that has ordered the gas or gas mixture

2.3

container

vessel in which the gas or gas mixture is supplied

2.4

composition

property of a gas or a gas mixture given by the identity and the content of each specified component

2.5

component

chemical substance contained in the gas or gas mixture

2.6

specified component

component whose content is specified quantitatively in the certificate

NOTE In general, the content of the complementary gas is not specified explicitly.

2.7

impurity

component present, but not wanted

ISO 6141:2000(E)**2.8****critical impurity**

impurity affecting the intended use

2.9**complementary gas**

component which completes the gas mixture

NOTE The complementary gas can be a pure gas or a gas mixture.

2.10**standard uncertainty**

uncertainty of the content of a specified component, expressed as a standard deviation

NOTE 1 This definition is an adaptation of the definition given in GUM (see reference [1] in the Bibliography).

NOTE 2 The standard uncertainty can be expressed as an absolute value or as a relative value.

2.11**expanded uncertainty**

uncertainty of the content of a specified component, expressed as a product of the standard uncertainty and a coverage factor

NOTE 1 This definition is an adaptation of the definition given in GUM [1].

NOTE 2 The expanded uncertainty aims at characterizing a confidence interval at a confidence level of approximately 95 %.

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3 Requirements for certificates and certificate extracts

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3.1 General

The information specified by this International Standard shall be provided by the supplier of the gas or the gas mixture, in two different formats:

- a certificate, i.e., a document uniquely related to the container; and
- a certificate extract, i.e., a document affixed to the container.

The certificate shall contain as a minimum the data specified as “mandatory” in Table 1. It is recommended that the data specified as “optional” also be included in the certificate.

The certificate extract shall contain as a minimum the data specified as “mandatory” in Table 2. The certificate extract shall be affixed to the container in a secure way, such as in the form of a sticker or tag.

NOTE Consideration should be given to protect the sticker or tag from adverse conditions of exposure.

Requirements for and explanations of the individual data are given in the following clauses. Those data in capital letters, and the associated requirements, are mandatory. When optional data are adopted, then the associated requirements become mandatory.

3.2 Stated information**3.2.1 UNIQUE CERTIFICATE IDENTIFICATION**

Each certificate shall be assigned a unique identification.

Table 1 — Specification of certificate data

Mandatory data	Reference	Optional data	Reference
Unique certificate identification	3.2.1	Customer	3.2.4
Container identification	3.2.2	Nominal composition	3.2.5
Supplier	3.2.3	Standard uncertainty	3.3.4/3.4.4
Authorization date	3.2.6	References/ traceability	3.3.6/3.4.6
Responsible person	3.2.7	Method of preparation	3.3.7/3.4.7
Number of pages	3.2.8	Method of analysis	3.3.8/3.4.8
Specified components	3.3.2/3.4.2	Date of preparation	3.3.9/3.4.9
Composition	3.3.3/3.4.3	Date of analysis	3.3.10/3.4.10
Expanded uncertainty	3.3.5/3.4.5	Commercial name	3.3.11/3.4.11
Filling pressure	3.5.2	Container volume	3.5.1
Valve outlet connection	3.5.4	Filling amount	3.5.3
Minimum utilization pressure	3.5.5		
Storage/utilization temperature	3.5.6		
Expiry date	3.5.7		

Table 2 — Specification of certificate extract data

Mandatory data	Reference
Unique certificate identification	3.2.1
Container identification	3.2.2
Specified components	3.3.2/3.4.2
Composition	3.3.3/3.4.3
Expanded uncertainty	3.3.5/3.4.5
Filling pressure	3.5.2
Valve outlet connection	3.5.4
Minimum utilization pressure	3.5.5
Storage/utilization temperature	3.5.6
Expiry date	3.5.7

3.2.2 CONTAINER IDENTIFICATION

Containers for pressurized gases shall be identified by the number that is stamped into the wall, or by batch or lot numbers.

3.2.3 SUPPLIER

The name and address of the supplier shall be stated.

3.2.4 Customer

The name and address of the customer and any other information required by the customer shall be stated.