

OHUTUSNÕUDED ELEKTRILISTELE MÕÕTMIS-,
JUHTIMIS- JA LABORATOORIUMISEADMETELE. OSA
2-061: ERINÕUDED LABORATOORSETELE TERMILISEL
ATOMISEERIMISEL JA IONISEERIMISEL PÕHINEVATELE
AATOMSPEKTROMEETRITELE

Safety requirements for electrical equipment for
measurement, control and laboratory use - Part 2-061:
Particular requirements for laboratory atomic
spectrometers with thermal atomization and ionization

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61010-2-061:2021 sisaldab Euroopa standardi EN IEC 61010-2-061:2021 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61010-2-061:2021 consists of the English text of the European standard EN IEC 61010-2-061:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.09.2021.	Date of Availability of the European standard is 10.09.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 19.080, 71.040.20

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English Version

Safety requirements for electrical equipment for measurement,
control and laboratory use - Part 2-061: Particular requirements
for laboratory atomic spectrometers with thermal atomization and
ionization
(IEC 61010-2-061:2018)

Règles de sécurité pour appareils électriques de mesurage,
de régulation et de laboratoire - Partie 2-061: Exigences
particulières pour spectromètres atomiques de laboratoire
avec vaporisation et ionisation thermiques
(IEC 61010-2-061:2018)

Sicherheitsbestimmungen für elektrische Mess-, Steuer-,
Regel- und Laborgeräte - Teil 2-061: Besondere
Anforderungen an Labor-Atomspektrometer mit thermischer
Atomisierung und Ionisation
(IEC 61010-2-061:2018)

This European Standard was approved by CENELEC on 2018-10-26. CENELEC 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.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 66/643/CDV, future edition 4 of IEC 61010-2-061, prepared by IEC/TC 66 "Safety of measuring, control and laboratory equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61010-2-061:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-08-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-08-02

This document supersedes EN 61010-2-061:2015 and all of its amendments and corrigenda (if any).

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This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of EN IEC 61010-2-061:2021/A11:2021.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

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The text of the International Standard IEC 61010-2-061:2018 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62061	NOTE	Harmonized as EN 62061
ISO 13849 (series)	NOTE	Harmonized as EN ISO 13849 (series)

INTERNATIONAL STANDARD

NORME INTERNATIONALE

GROUP SAFETY PUBLICATION
PUBLICATION GROUPEE DE SÉCURITÉ

Safety requirements for electrical equipment for measurement, control, and laboratory use –

Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire –

Partie 2-061: Exigences particulières pour spectromètres atomiques de laboratoire avec vaporisation et ionisation thermiques



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NORME INTERNATIONALE

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**Safety requirements for electrical equipment for measurement, control, and laboratory use –
Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization**

**Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire –
Partie 2-061: Exigences particulières pour spectromètres atomiques de laboratoire avec vaporisation et ionisation thermiques**

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CONTENTS

FOREWORD.....	3
1 Scope and object.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Tests.....	6
5 Marking and documentation	6
6 Protection against electric shock.....	9
7 Protection against mechanical HAZARDS.....	9
8 Resistance to mechanical stresses.....	9
9 Protection against the spread of fire.....	10
10 Equipment temperature limits and resistance to heat.....	10
11 Protection against HAZARDS from fluids and solid foreign objects.....	10
12 Protection against radiation, including laser sources, and against sonic and ultrasonic pressure	11
13 Protection against liberated gases and substances, explosion and implosion	12
14 Components and subassemblies.....	13
15 Protection by interlocks.....	14
16 HAZARDS resulting from application.....	14
17 RISK assessment	14
Annexes	15
Annex A (normative) Routine tests	16
Annex L (informative) Index of defined terms.....	17
Bibliography	18
Figure 101 – Example of a GAS LOCK	12
Table 101 – Time-temperature conditions.....	9

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR
MEASUREMENT, CONTROL, AND LABORATORY USE –****Part 2-061: Particular requirements for laboratory atomic
spectrometers with thermal atomization and ionization**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61010-2-061 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment.

It has the status of a group safety publication in accordance with IEC Guide 104.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) adaptation of changes introduced by Amendment 1 of IEC 61010-1;
- b) added tolerance for stability of AC voltage test equipment to Clause 6;

- c) added requirement for interlock systems containing electric/electronic or programmable components to Clause 15.

The text of this International Standard is based on the following documents:

CDV	Report on voting
66/643/CDV	66/668/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61010 series, under the general title, *Safety requirements for electrical equipment for measurement, control, and laboratory use*, may be found on the IEC website.

This Part 2-061 is intended to be used in conjunction with IEC 61010-1. It was established on the basis of the third edition (2010) and its Amendment 1 (2016).

This Part 2-061 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization*.

Where a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. Where this part states “addition”, “modification” or “replacement”, or “deletion”, the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

In this standard:

- 1) the following print types are used:
 - requirements: in roman type;
 - NOTES: in small roman type;
 - *conformity and test: in italic type*;
 - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101. The additional annexes are lettered starting from AA and additional list items are lettered from aa).

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1 Scope

1.1.1 Equipment included in scope

Replacement:

Replace the text, except the first paragraph, with the following new text:

This part of IEC 61010 applies to electrically powered laboratory atomic spectrometers with thermal atomization.

NOTE 1 Examples include atomic absorption spectrometers, emission flame photometers, atomic fluorescence spectrophotometers, inductively coupled plasma spectrometers, microwave coupled plasma spectrometers and mass spectrometers, all with thermal atomization and ionization (including tubing and connectors which are provided by the manufacturer for connection to external supplies).

NOTE 2 If all or part of the equipment falls within the scope of one or more other Part 2 documents of IEC 61010 as well as within the scope of this document, consideration is given to those other Part 2 documents.

1.1.2 Equipment excluded from scope

Addition:

Add, before the first paragraph, the following new text:

This document does not apply to thermal atomization detectors (flame ionization detectors) used in gas chromatography.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

Addition:

Add the following new terms:

3.2.101

SPRAY CHAMBER

chamber in which droplets of sample in aerosol are allowed to separate so that the droplets of necessary size can be passed onward to the burner, with the remainder draining to waste