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INTERNATIONAL STANDARD

colour inside

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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

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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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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;
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   – 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).

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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

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 ~~by~~, 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 ~~to be~~ given to those other Part 2 documents.

1.1.2 Equipment excluded from scope

Addition:

Add ~~as~~, 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.

IEC 61010-2-061

Edition 4.0 2018-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

GROUP SAFETY PUBLICATION
PUBLICATION GROUPÉE 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

IEC 61010-2-061:2018-09(en-fr)

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

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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

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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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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La Norme internationale IEC 61010-2-061 a été établie par le comité d'études 66 de l'IEC: Sécurité des appareils de mesure, de commande et de laboratoire.

Elle a le statut d'une publication groupée de sécurité conformément au Guide IEC 104.

Cette quatrième édition annule et remplace la troisième édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) adaptation des modifications introduites par l'Amendement 1 de l'IEC 61010-1;

b) ajout à l'Article 6 de la tolérance pour la stabilité du matériel d'essai en tension alternative;

c) ajout à l'Article 15 d'une exigence relative aux systèmes de verrouillage contenant des composants électriques/électroniques ou programmables.

Le texte de cette Norme internationale est issu des documents suivants:

CDV	Rapport de vote
66/643/CDV	66/668/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61010, sous le titre général *Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire*, peut être consultée sur le site web de l'IEC.

Cette partie 2-061 est destinée à être utilisée conjointement avec l'IEC 61010-1. Elle a été établie sur la base de la troisième édition (2010) et de son Amendement 1 (2016).

La présente Partie 2-061 complète ou modifie les articles correspondants de l'IEC 61010-1 de façon à transformer cette publication en norme IEC: *Exigences particulières pour spectromètres atomiques de laboratoire avec vaporisation et ionisation thermiques.*

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans la présente Partie 2, ce paragraphe s'applique pour autant que cela soit raisonnable. Lorsque cette partie indique «addition», «modification», «remplacement» ou «suppression», il convient d'adapter en conséquence l'exigence, la modalité d'essai ou la note correspondante de la Partie 1.

Dans la présente norme:

1) les caractères d'imprimerie suivants sont utilisés:
   - exigences: caractères romains;
   - NOTES: petits caractères romains;
   - *conformité et essais: caractères italiques;*
   - termes définis à l'Article 3 et utilisés dans toute cette norme: PETITES CAPITALES EN CARACTÈRES ROMAINS;
2) les paragraphes, figures, tableaux et notes qui viennent en supplément de ceux de la Partie 1 sont numérotés à partir de 101. Les annexes complémentaires sont désignées à partir de AA et les listes de termes additionnels à partir de aa).

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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

1 Domaine d'application et objet

L'article de la Partie 1 est applicable à l'exception de ce qui suit:

1.1 Domaine d'application

1.1.1 Appareils inclus dans le domaine d'application

Remplacement:

Remplacer le texte, excepté le premier alinéa, par le nouveau texte suivant:

La présente partie de l'IEC 61010 s'applique aux spectromètres atomiques de laboratoire équipés d'une alimentation électrique et d'une vaporisation thermique.

NOTE 1 Il s'agit par exemple des spectromètres à absorption atomique, des photomètres de flamme, des spectrophotomètres à fluorescence atomique, des spectromètres à plasma couplé par induction, des spectromètres à plasma couplé par micro-onde et des spectromètres de masse, tous avec vaporisation et ionisation thermiques (y compris les tuyaux et les raccords des appareils qui sont fournis par le fabricant pour connexion aux alimentations externes).

NOTE 2 Si une ou toutes les parties de l'appareil relèvent du domaine d'application d'une ou plusieurs autres Parties 2 de la série IEC 61010, ainsi que du domaine d'application du présent document, ces autres Parties 2 sont prises en compte.

1.1.2 Appareils exclus du domaine d'application

Addition:

Ajouter, avant le premier alinéa, le nouveau texte suivant:

Le présent document ne s'applique pas aux détecteurs de vaporisation thermique (détecteurs à ionisation de flamme) utilisés en chromatographie en phase gazeuse.

2 Références normatives

L'article de la Partie 1 est applicable.