TECHNICAL REPORT

IEC TR 61010-3-042

First edition
1999-10

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

Part 3-042:
Conformity verification report for IEC 61010-2-042:1997, Particular requirements for autoclaves and sterilizers using toxic gas for the treatment of medical materials, and for laboratory processes

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

Partie 3-042:
Rapport de vérification de la conformité de la CEI 61010-2-042:1997, Prescriptions particulières pour autoclaves et stérilisateurs utilisant des gaz toxiques pour le traitement des matériels à usage médical et durant les procédés de traitement de laboratoire

Reference number
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- **IEC web site***
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  (On-line catalogue)*
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Terminology, graphical and letter symbols

For general terminology, readers are referred to IEC 60050: *International Electrotechnical Vocabulary* (IEV).

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: *Letter symbols to be used in electrical technology*, IEC 60417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets* and IEC 60617: *Graphical symbols for diagrams*.

* See web site address on title page.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 3-042: Conformity verification report for IEC 61010-2-042:1997, Particular requirements for autoclaves and sterilizers using toxic gas for the treatment of medical materials, and for laboratory processes

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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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Technical reports do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

IEC 61010-3-042, which is a technical report, has been prepared by IEC technical committee 66: Safety of measuring, control, and laboratory equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
66/194/CDV	66/218/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

This report is a Technical Report and is of a purely informative nature and is therefore by itself not to be regarded as an International Standard. It is for use by testhouses and other users to assist them with determining and recording verification of conformity of the equipment under test with the requirements of:

IEC 61010-2-042: 1997,

and

IEC 61010-1: 1990 + amendment 1: 1992 + amendment 2: 1995

The protocol for completion of this report is contained in publication IEC 61010-3:1997.

The IEC sells read-only PDF files as a general rule. In the present instance, and quite exceptionally, to enable the user to fill in the forms, a revisable file is included in a pocket affixed to the back cover of this publication.

This publication can be downloaded from the Web as a PDF file. There is, however, at the end of the document, a revisable file containing the forms. Please use the zip/unzip function.

A bilingual version will not be issued.

A French version may be issued.

Conformity Verification Report
IEC 61010-2-042
Safety requirements for electrical equipment
for measurement, control, and laboratory use:
Part 2-042: Particular requirements for autoclaves and sterilizers using toxic gas
for the treatment of medical materials, and for laboratory processes

Report reference No ..... :	
Compiled by (+ signature)..... :	
Approved by (+ signature)..... :	
Date of issue ..... :	
Testing organization..... :	
Address..... :	
Testing location..... :	
Applicant ..... :	
Address..... :	
Standard ..... :	IEC 61010-1:1990 + amendment 1:1992+ amendment 2:1995 IEC 61010-2-042: 1997
Copyright blank test report..... :	This report has been prepared by IEC/TC 66, which retains responsibility for any changes or corrections required.
Test procedure..... :	
Procedure deviation..... :	
Non-standard test method..... :	
Type of item tested ..... :	☐ Measurement ☐ Control ☐ Laboratory
Trademark..... :	
Model/type référence ..... :	
Manufacturer..... :	
Rating..... :	

Copy of rating plate:

Description of equipment function:

INSTALLATION/OVERVOLTAGE CATEGORY:

POLLUTION DEGREE:

Environmental rating: ☐ Standard ☐ Other (specify):

Equipment mobility: ☐ Portable ☐ Hand-held ☐ Floorstanding ☐ Fixed
☐ Built in ☐ Benchmounted ☐ Other (specify):

Connection to mains supply: ☐ Permanent ☐ Detachable ☐ Non-detachable ☐ None

Operating conditions: ☐ Continuous ☐ Short-time ☐ Intermittent

Overall size of the equipment (Length × Width × Height):

Mass of the equipment (kg):

Marked degree of protection to IEC 60529: IP___ ___

Accessories and detachable parts included in the evaluation:

Options:

NOTE "(see Form A.X)" refers to a form appended to the report.

Table 1 – Documents attached to this report

Document No.	Document description	Number of pages

Table 2 – Test equipment list

Item	Type	Equipment No.	Calibration date		Comments
			Last[1)]	Due	

1) or interval between calibrations.

Table 3 – List of components relied on for safety

Unique component reference or location (including drawing reference if required)	Application/Function	Manufacturer and part number (note 1)	RATING (note 2)	Licence number, file number or other documentary evidence of acceptance

NOTE 1 List all manufacturers concerned.

NOTE 2 Electrical, mechanical, flammability, etc.

Clause Subclause	Requirement	Result	Comments
5	**Marking and documentation**		
5.1.1	**General** Required equipment markings are a) visible – from the exterior or – after removing a cover or – opening a door or – after removal from a rack or panel b) not put on parts which can be removed by an OPERATOR c) Letter symbols (IEC 60027) used d) Graphic symbols (IEC 61010-1, Table 1) used		
5.1.2	**Identification** Equipment is identified by – manufacturer's name or registered trade mark – model number, name or other means – PRESSURE VESSEL markings (see 5.1.102) If jacket pressure differs from CHAMBER, data for both marked on PRESSURE VESSEL		
5.1.3	**Mains supply** Equipment is marked as follows: a) nature of supply: – a.c. RATED mains frequency or range of frequencies – d.c. with symbol 1 b) RATED supply voltage(s) or range c) – maximum RATED power (W or VA) or input current If more than one voltage range: – separate values marked or – values differ by less than 20 % (see Form A.3)		
		F	

Clause Subclause	Requirement	Result	Comments
	d) equipment which can be set for different RATED supply voltages: – for PORTABLE EQUIPMENT, indication is visible from the exterior – if the supply voltage can be altered without the use of a tool, changing the setting also changes the indication e) accessory mains socket-outlets accepting standard mains plugs are marked – with the voltage if it is different from the mains supply voltage – for use only with specific equipment If not marked for specific equipment it is marked with – the maximum RATED current or power, and maximum permitted leakage current or – symbol 14 with full details in the documentation		
F	The measured value not more than 110 % (see Form A.3)		
5.1.4	**Fuses** OPERATOR replaceable fuse marking (see also 5.4.5)		
5.1.5	**Measuring circuit TERMINALS** RATED maximum working voltage or current marked Unless clear indication that below limits: – maximum RATED voltage to earth is marked or – for specific connection only, and means for identifying provided – is adjacent to TERMINALS or – if insufficient space: – on the RATING plate or scale plate or – if the TERMINAL is marked with symbol 14 INSTALLATION CATEGORY marked TERMINALS permanently connected and not ACCESSIBLE		

Clause Subclause	Requirement	Result	Comments
5.1.6	**TERMINALS and operating devices** Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators Mains supply TERMINALS identified Power supply switch on or off position marked if used as disconnecting device TERMINAL marking: a) FUNCTIONAL EARTH TERMINALS b) PROTECTIVE CONDUCTOR TERMINALS: – symbol 6 is placed close to or on the TERMINAL or – part of appliance inlet c) TERMINALS of measuring and control circuits d) TERMINALS supplied from the interior e) ACCESSIBLE FUNCTIONAL EARTH TERMINALS aa) NORMAL USE setting a control could cause a harzard, an indicating device is provided		
5.1.7	**Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION** Protected throughout (symbol 11 used) Only partially protected (symbol 11 not used)		
5.1.8	**Battery charging** Equipment with means to charge rechargeable batteries is marked: – to warn against the charging of non-rechargeable batteries – to indicate the type of rechargeable battery used		
5.1.101	**Overpressure safety device** Identification includes – model number, etc. – pressure setting – if bursting disc: – pressure – temperature		