
Safety requirements for electrical equipment for measurement, control and laboratory use - Part 3-043: Conformity verification report for IEC 61010-2-043:1997 - Particular requirements for dry heat sterilizers using either hot air or hot inert gas for treatment of medical materials and for laboratory processes

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ICS:

11.080.10	Sterilizacijska oprema	Sterilizing equipment
19.080	Električno in elektronsko preskušanje	Electrical and electronic testing
71.040.10	Kemijski laboratoriji. Laboratorijska oprema	Chemical laboratories. Laboratory equipment

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TECHNICAL REPORT

IEC TR 61010-3-043

First edition
2001-07

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

Part 3-043:

Conformity verification report for IEC 61010-2-043:1997 –

Particular requirements for dry heat sterilizers using either hot air or hot inert gas for treatment of medical materials and for laboratory processes

<https://standards.iteh.ai/catalog/standards/sist/2d2f9520-c8ca-4001-bccb-4ca6e851ef45/sist-iec-61010-3-043-2002>

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

Partie 3-043:

Rapport de vérification de la conformité de la CEI 61010-2-043:1997 –

Prescriptions particulières pour les stérilisateurs à chaleur utilisant de l'air chaud ou un gaz inerte chaud pour le traitement des matériels à usage médical et durant les procédés de traitement de laboratoire

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International Electrotechnical Commission
Telefax: +41 22 919 0300

3, rue de Varembe Geneva, Switzerland
e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT
FOR MEASUREMENT, CONTROL, AND LABORATORY USE –**
**Part 3-043: Conformity verification report for IEC 61010-2-043:1997–
Particular requirements for dry heat sterilizers using either hot air
or hot inert gas for 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.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
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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 61010-3-043, 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:

Committee draft	Report on voting
66/223/CDV	66/230/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 test houses and other users to assist them with determining and recording verification of conformity of the equipment under test with the requirements of:

IEC 61010-2-043: 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 file can also 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.

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The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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

Conformity Verification Report IEC 61010-2-043 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-043: Particular requirements for dry heat sterilizers using either hot air or hot inert gas for 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.....:	iTeh STANDARD PREVIEW (standards.iteh.ai)
Address.....:	SIST IEC 61010-3-043:2002 https://standards.iteh.ai/catalog/standards/sist/2d2f9520-c8ca-4001-bccb-4ca6e851ef45/sist-iec-61010-3-043-2002
Standard.....:	IEC 61010-2-043:1997 and IEC 61010-1:1990 + amendment 1:1992 + amendment 2:1995
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.....:	<input type="checkbox"/> Laboratory
Trademark.....:	
Model/type reference.....:	
Manufacturer.....:	
Rating.....:	
Copy of rating plate:	

Description of equipment function.....:	
INSTALLATION/OVERVOLTAGE CATEGORY:	
POLLUTION DEGREE:	
Environmental rating:	<input type="checkbox"/> Standard <input type="checkbox"/> Other (specify):
Equipment mobility:	<input type="checkbox"/> Portable <input type="checkbox"/> Hand-held <input type="checkbox"/> Floorstanding <input type="checkbox"/> Fixed <input type="checkbox"/> Built in <input type="checkbox"/> Benchmounted <input type="checkbox"/> Other (specify):
Connection to mains supply:	<input type="checkbox"/> Permanent <input type="checkbox"/> Detachable <input type="checkbox"/> Non-detachable <input type="checkbox"/> None
Operating conditions:	<input type="checkbox"/> Continuous <input type="checkbox"/> Short-time <input type="checkbox"/> Intermittent
Overall size of the equipment (Length x Width x Height):	
Mass of the equipment (kg):	
Marked degree of protection to IEC 60529: <u>SIST IEC 61010-3-043:2002</u> https://standards.iteh.ai/catalog/standards/sist/2d2f9520-c8ca-4001-bccb-4ca0c851c4f5/sist-iec-61010-3-043-2002	
Accessories and detachable parts included in the evaluation:	
Options:	
NOTE "(see form A.X)" refers to a form appended to the report.	

Clause Subclause	Requirement	Result	Comments
5	Marking and documentation		
5.1.1	<p>General</p> <p>Required equipment markings are:</p> <p>a) visible:</p> <ul style="list-style-type: none"> – from the exterior or – after removing a cover or – opening a door or – after removal from a rack or panel <p>b) not put on parts which can be removed by an OPERATOR</p> <p>c) Letter symbols (IEC 60027) used</p> <p>d) Graphic symbols (IEC 61010-1, Table 1) used</p>		
5.1.2	<p>Identification</p> <p>Equipment is identified by:</p> <ul style="list-style-type: none"> – manufacturer's name or registered trade mark – model number, name or other means 		
5.1.3	<p>Mains supply</p> <p>Equipment is marked as follows:</p> <p>a) nature of supply:</p> <ul style="list-style-type: none"> – a.c. RATED mains frequency or range of frequencies – d.c. with symbol 1 <p>b) RATED supply voltage(s) or range</p> <p>c) – maximum RATED power (W or VA) or input current</p> <p>If more than one voltage range:</p> <ul style="list-style-type: none"> – separate values marked or – values differ by less than 20 % (see Form A.3) <p>d) OPERATOR – set for different RATED supply voltages:</p> <ul style="list-style-type: none"> – indicates the equipment set voltage – PORTABLE EQUIPMENT indication is visible from the exterior – changing the setting changes the indication 		
F			

Clause Subclause	Requirement	Result	Comments
	e) Accessory mains socket-outlets accepting standard mains plugs are marked: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – 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		Not applicable
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: <ul style="list-style-type: none"> – 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 hazard, 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)		

Clause Subclause	Requirement	Result	Comments
5.1.8	<p>Battery charging</p> <p>Equipment with means to charge re-chargeable batteries is marked:</p> <ul style="list-style-type: none"> – to warn against the charging of non-rechargeable batteries – to indicate the type of rechargeable battery used 		
5.2	<p>Warning markings</p> <ul style="list-style-type: none"> – visible when ready for NORMAL USE – if necessary, marked with symbol 14 – are near or on applicable parts – statement to isolate or disconnect – advice how to avoid contact with ACCESSIBLE HAZARDOUS LIVE parts – easily touched high temperature parts (symbol 13) – if lockable door, to lock and retain key – load type 		
5.2.101	<p>Equipment with high ACCESSIBLE current</p> <p>If equipment must be permanently connected to protect against high ACCESSIBLE current, a warning marking is provided</p>		
5.2.102	<p>Hot items falling out of equipment</p> <p>If hot items can fall onto the equipment support surface, a warning marking is provided</p>		
5.3	<p>Durability of markings</p> <p>The required markings remain clear and legible in NORMAL USE (see Form A.4)</p>		
5.4	<p>Documentation</p>		
5.4.1	<p>General</p> <p>Equipment is accompanied by documentation which includes:</p> <ul style="list-style-type: none"> – technical specification – instructions for use – name and address of manufacturer or supplier <p>Definition of INSTALLATION CATEGORY</p> <p>Warning statements and a clear explanation of warning symbols:</p> <ul style="list-style-type: none"> – provided in the documentation or – information is marked on the equipment 		

Clause Subclause	Requirement	Result	Comments
5.4.2	<ul style="list-style-type: none"> – instructions on warning signs for country of use <p>Equipment RATINGS</p> <p>Documentation includes:</p> <ul style="list-style-type: none"> – supply voltage or voltage range – frequency or frequency range – power or current RATING – a description of all input and output connections – RATING of insulation of external circuits, when such circuits are nowhere ACCESSIBLE – statement of the range of environmental conditions 		
5.4.3	<p>Equipment Installation</p> <p>Instructions include:</p> <ul style="list-style-type: none"> – location and mounting instructions including space for maintenance – individual weights of principle heavy subassemblies – assembly instructions – main supply requirements and connections – ventilation – protective earthing – sound power data requirements – requirements for special services 		
5.4.3.101	<p>Drying-out</p> <p>After transport or storage in humid conditions, equipment could fail to meet the requirements in the standard; instructions shall include a warning</p>		
5.4.4	<p>Equipment operation</p> <p>Instructions include:</p> <ul style="list-style-type: none"> a) operating controls: <ul style="list-style-type: none"> i) interconnection ii) use b) positioned so that disconnection is difficult c) accessories: <ul style="list-style-type: none"> i) interconnection ii) suitability iii) detachable parts and special materials 		

Result: P = Pass F = Fail NA = Not Applicable