

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrotechnical products – Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers)

Produits électrotechniques – Détermination des niveaux de six substances réglementées (plomb, mercure, cadmium, chrome hexavalent, diphényles polybromés, diphényléthers polybromés)

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTROTECHNICAL PRODUCTS –
DETERMINATION OF LEVELS OF SIX REGULATED SUBSTANCES
(LEAD, MERCURY, CADMIUM, HEXAVALENT CHROMIUM,
POLYBROMINATED BIPHENYLS, POLYBROMINATED DIPHENYL ETHERS)**

FOREWORD

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International Standard IEC 62321 has been prepared by IEC technical committee 111: Environmental standardization for electrical and electronic products and systems.

The text of this standard is based on the following documents:

FDIS	Report on voting
111/116/FDIS	111/125/RVD

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

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

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

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- withdrawn,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

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INTRODUCTION

The widespread use of electrotechnical products has drawn increased attention to their impact on the environment. In many countries all over the world this has resulted in the adaptation of regulations affecting wastes, substances and energy use of electrotechnical products.

The use of certain substances such as lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr(VI)) contained in inorganic and organic compounds, and two types of brominated flame retardants, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) in electrotechnical products, is regulated in current and proposed regional legislation.

The purpose of IEC 62321 is therefore to provide test methods that will allow the electrotechnical industry to determine the levels of regulated substances Pb, Hg, Cd, Cr(VI) and their compounds, as well as PBB and PBDE in electrotechnical products on a consistent global basis.

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ELECTROTECHNICAL PRODUCTS – DETERMINATION OF LEVELS OF SIX REGULATED SUBSTANCES (LEAD, MERCURY, CADMIUM, HEXAVALENT CHROMIUM, POLYBROMINATED BIPHENYLS, POLYBROMINATED DIPHENYL ETHERS)

1 Scope

IEC 62321, which is an International Standard, specifies the determination of the levels of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr(VI)) contained in inorganic and organic compounds, and two types of brominated flame retardants, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) contained in electrotechnical products.

This standard refers to the sample as the object to be processed and measured. The nature of the sample and the manner in which it is acquired is defined by the entity carrying out the tests and not by this standard.

NOTE 1 Further guidance on obtaining representative samples from finished electronic products to be tested for levels of regulated substances may be found in the future IEC Publicly Available Specification (PAS) for sampling disjointment¹.

It is noted that the selection of the sample may affect the interpretation of the test results.

This standard does not determine:

- the definition of a “unit” or “homogenous material” as the sample;
- the disassembly procedure employed for obtaining a sample;
- assessment procedures.

NOTE 2 Further guidance on assessment procedures may be found in the future IEC Technical Specification IEC/TS 62476¹⁾².

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC Guide 98:1995, *ISO Guide to the expression of uncertainty in measurement (GUM)*

ISO 3696, *Water for analytical laboratory use – Specification and test methods*

ISO 5961, *Water quality – Determination of cadmium by atomic absorption spectrometry*

ISO 17025, *General requirements for the competence of testing and calibration laboratories*

¹ Under consideration, no number yet assigned.

² Figures in square brackets refer to the bibliography.

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