

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Determination of certain substances in electrotechnical products –
Part 1: Introduction and overview**

**Détermination de certaines substances dans les produits électrotechniques –
Partie 1: Introduction et présentation**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DETERMINATION OF CERTAIN SUBSTANCES
IN ELECTROTECHNICAL PRODUCTS –****Part 1: Introduction and overview****FOREWORD**

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International Standard IEC 62321-1 has been prepared by IEC technical committee 111: Environmental standardization for electrical and electronic products and systems.

The first edition of IEC 62321:2008 was a 'stand-alone' standard that included an introduction, an overview of test methods, a mechanical sample preparation as well as various test method clauses.

This first edition of IEC 62321-1 is a partial replacement of IEC 62321, forming a structural revision and replacing Clauses 1 to 4.

Future parts in the IEC 62321 series will gradually replace the corresponding clauses from IEC 62321:2008. Until such time as all parts are published, however, IEC 62321:2008 remains valid for those clauses not yet re-published as a separate part.

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

FDIS	Report on voting
111/295/FDIS	111/306/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 the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62321 series can be found on the IEC website under the general title: *Determination of certain substances in electrotechnical products*.

The committee has decided that the contents of this publication will remain unchanged until the stability 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

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INTRODUCTION

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

The use of certain substances (e.g. lead (Pb), cadmium (Cd) and polybrominated diphenyl ethers (PBDEs)) in electrotechnical products, is a source of concern in current and proposed regional legislation.

The purpose of the IEC 62321 series is therefore to provide test methods that will allow the electrotechnical industry to determine the levels of certain substances of concern in electrotechnical products on a consistent global basis.

The first edition of IEC 62321:2008 was a single 'stand-alone' standard that included an introduction, an overview of test methods, a mechanical sample preparation as well as various test method clauses.

The structure of the new multi-part IEC 62321 series comprises:

- Determination of certain substances in electrotechnical products – Part 1: Introduction and overview.
- Determination of certain substances in electrotechnical products – Part 2: Disassembly, disjointment and mechanical sample preparation.

The remaining parts specify screening and verification test methods for the determination of certain substances, each part representing a given substance.

WARNING – Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

DETERMINATION OF CERTAIN SUBSTANCES IN ELECTROTECHNICAL PRODUCTS –

Part 1: Introduction and overview

1 Scope

This part of IEC 62321 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.

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

While this standard provides guidance on the disassembly procedure employed for obtaining a sample, it does not determine or specify:

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

NOTE Further guidance on assessment procedures may be found in IEC/TR 62476 [2].

2 Normative references

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

ISO 78-2:1999, *Chemistry – Layouts for standards – Part 2: Methods of chemical analysis*

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

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

analyte

substance to be measured

3.1.2

electronics

material used in electrical or electronic equipment that is not metal or plastic (e.g. ceramic) or not uniform in composition throughout and cannot be practically disassembled to individual discrete materials

EXAMPLE Resistors, capacitors, diodes, integrated circuits, hybrids, application-specific integrated circuits, wound components, relays and their materials.