

Determination of certain substances in electrotechnical products - Part 1: Introduction and overview (IEC 62321-1:2013)

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62321-1:2013 sisaldab Euroopa standardi EN 62321-1:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 62321-1:2013 consists of the English text of the European standard EN 62321-1:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.07.2013.	Date of Availability of the European standard is 26.07.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.020, 43.040.10

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

English version

**Determination of certain substances in electrotechnical products -
Part 1: Introduction and overview
(IEC 62321-1:2013)**

Détermination de certaines substances
dans les produits électrotechniques -
Partie 1: Introduction et présentation
(CEI 62321-1:2013)

Verfahren zur Bestimmung von
bestimmten Substanzen in Produkten der
Elektrotechnik -
Teil 1: Einleitung und Übersicht
(IEC 62321-1:2013)

This European Standard was approved by CENELEC on 2013-06-21. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 111/295/FDIS, future edition 1 of IEC 62321-1, prepared by IEC TC 111 "Environmental standardization for electrical and electronic products and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62321-1:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-03-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-06-21

EN 62321-1:2013 is a partial replacement of EN 62321:2009, forming a structural revision and replacing Clauses 1 to 4.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62321-1:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60730-1:2010 NOTE Harmonised as EN 60730-1:2011 (modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC 17025	-	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	-
ISO 78-2	1999	Chemistry - Layouts for standards - Part 2: Methods of chemical analysis	-	-

This document is a preview generated by EVS

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms, definitions and abbreviations	6
3.1 Terms and definitions	6
3.2 Abbreviations	8
4 Test methods – Overview	8
4.1 Field of application	8
4.2 Sample.....	9
4.3 Test methods – Flow chart	9
4.4 Quality assurance and control	12
4.5 Blank solution.....	12
4.6 Adjustment to the matrix.....	12
4.7 Limits of detection (LOD) and limits of quantification (LOQ).....	12
4.8 Test report	13
4.9 Alternative test methods	13
Annex A (informative) Limit of detection (LOD) or method detection limit (MDL) – Example of calculation	14
Bibliography.....	16
Figure 1 – Flow chart of the test methods	10
Table 1 – Overview of typical screening and verification testing procedure elements – Preparation.....	11
Table 2 – Overview of typical screening and verification testing procedure elements – Substance type	12
Table A.1 – Experimental results	14
Table A.2 – Students <i>t</i> -values (<i>t</i> -statistic).....	14
Table A.3 – Calculation results	15

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.