



# SLOVENSKI STANDARD SIST EN 212:2004

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Wood preservatives - General guidance on sampling and preparation for analysis of wood preservatives and treated timber

Holzschutzmittel - Allgemeine Anleitung für die Probenahme und Probenvorbereitung von Holzschutzmitteln und von behandeltem Holz für die Analyse

Produits de préservation du bois - Guide général d'échantillonnage et de préparation pour l'analyse des produits de préservation du bois et du bois traité

Ta slovenski standard je istoveten z: EN 212:2003

**ICS:**

71.100.50 S^ { ä æ Á Á æ ä Á • æ Wood-protecting chemicals

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
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**EN 212**

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## Wood preservatives - General guidance on sampling and preparation for analysis of wood preservatives and treated timber

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This European Standard was approved by CEN on 21 April 2003.

CEN 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 Management Centre or to any CEN 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 CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 212:2003) has been prepared by the Technical Committee CEN/TC 38 "Durability of wood and wood-based products", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

This document supersedes EN 212:1986.

Significant technical differences between this edition and EN 212:1986 are as follows:

- a) addition of a clause "Introduction";
- b) introduction of a clause "Normative references";
- c) introduction of a clause "Terms and definitions";
- d) taking into account the requirements of EN 351-1 and of the guidance of sampling in EN 351-2;
- e) for thin section samples, use of a specific borer;
- f) addition of a sampling report.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

Sampling is a vital step in analysis and testing. Its importance is recognized in this European Standard which gives guidance on general methods for the sampling of wood preservatives and preservative-treated timber.

Such samples should be representative of the materials under examination and in a form that makes the determination of the required data possible.

No attempt has been made here to define rigidly any detailed methodology to be followed in operations in these areas because this may depend upon the nature of the preservative, the method of treatment and the particular requirements of e.g. national authorities or quality control and certification bodies.

Furthermore, the objectives of each analysis, and the demands of the individual analytical techniques, can impose their own requirements with regard to sampling and subsequent handling. Therefore, it is essential that the sampling plan for each operation should be devised in the light of the particular objective, using professional judgement based on experience.

The techniques described can be employed in a wide variety of applications ranging from laboratory research to the checking of preservatives and treated timber for arbitration purposes.

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## 1 Scope

This European Standard gives guidance on the general procedures to be followed in the sampling and preparation for analysis of wood preservatives and preservative-treated timber.

This European Standard is applicable to the provision of appropriate samples for analysis which can be used to check the content of active and other ingredients in preservative formulations, and the content of active and other ingredients of wood preservatives in treated timber, either before, during or after the service life of the timber.

NOTE 1 Methods of sampling creosote and creosote-treated timber are described in EN 1014-1, 1014-2 and EN 12490. These are to be used in preference to the recommendations in this European Standard.

NOTE 2 No attempt has been made in this document to lay down detailed procedures to be adopted for control purposes at manufacturing plants where large volumes of preservatives are to be sampled. Nor does it attempt to establish procedures for checking the compliance of batches of treated timber with specifications demanding a defined level of treatment (see 6.2).

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 351-1, *Durability of wood and wood-based products – Preservative-treated solid wood – Part 1: Classification of preservative penetration and retention.*

EN 351-2, *Durability of wood and wood-based products – Preservative-treated solid wood – Part 2: Guidance on sampling for the analysis of preservative-treated wood.*

ISO 6206:1979, *Chemical products for industrial use – Sampling – Vocabulary.*

## 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply:

### 3.1 sampling unit

defined quantity of material having a boundary which may be physical, for example a container, or hypothetical, for example a particular time or time interval in the case of a stream of material

NOTE 1 A number of sampling units may be gathered together, for example in a package or box.

NOTE 2 In French, the term "individu" is sometimes used as a synonym of "unité d'échantillonnage". In English, the terms "individual", "unit" and "item" are sometimes used in practice as synonyms of "sampling unit".

[ISO 6206:1979]

### 3.2 sample

one or more sampling units taken from a larger number of sampling units, or one or more increments taken from a sampling unit

[ISO 6206:1979]

**EN 212:2003 (E)****3.3****representative sample**

sample assumed to have the same composition as the material sampled when the latter is considered as a homogeneous whole

[ISO 6206:1979]

**3.4****sampling plan**

planned procedure of selection, withdrawal and preparation of a sample or samples from a lot (3.6) to yield the required knowledge of the characteristic(s) from the final sample (3.9) so that a decision can be made regarding the lot

NOTE Considerations of cost, effort and delay usually determine an acceptable sampling plan.

[ISO 6206:1979]

**3.5****consignment**

quantity of material covered by a particular order or shipping document

[Adapted from ISO 6206:1979]

**3.6****lot**

total quantity of material to be sampled using a particular sampling plan. A lot can consist of a number of consignments, batches or items

[Adapted from ISO 6206:1979]

**3.7****batch**

definite quantity of material that can be one item or a number of items that belong together because of their manufacture or production under conditions which are presumed to be uniform

[Adapted from ISO 6206:1979]

**3.8****bulk sample**

collect set of samples which do not maintain their individual identity

[ISO 6206:1979]

**3.9****final sample**

sample obtained or prepared under the sampling plan for possible subdivision into identical portions for testing, reference or storage

[ISO 6206:1979]

**4 Safety precautions**

All preservatives should be considered potentially toxic both to man and to the environment and should be handled with care and in accordance with the specific recommendations for safe use agreed with National and International Authorities. The manufacturers' instructions should also be observed.

In handling solid timber after treatment, protective gloves and glasses should be worn if the timber is still wet or contains solvent. Once the timber has dried, unless preservative residues on the surface are noted, no special precautions are necessary in handling such timber, other than the normal practice of washing hands before handling food or smoking.



When treated timber is machined or mechanically sanded or sawn, an efficient dust extraction system should be used or, failing this, the operator should be provided with, and should wear, appropriate respiratory protection.

The organic solvents commonly used for applying preservatives are flammable and it is essential that care be exercised in handling such materials.

NOTE Attention is drawn to the need to comply with any statutory regulations that govern the use and storage of flammable liquids.

## 5 Guidance on sampling preservatives

### 5.1 General

The method of sampling chosen should ensure that the sample obtained is as representative as possible of the total consignment.

#### 5.1.1 Suspect consignment

A consignment should be considered suspect if:

- a) a container is damaged or defective;
- b) there is any doubt as to the nature of the contents of a container, for example because of the presence of an old label or incorrect markings;
- c) obvious and unusual variations are observed in the consignment.

Such samples should be fully reported and should not be regarded as acceptable without mutual agreement between the parties concerned.

#### 5.1.2 Number of items in consignment

The least number of containers, e.g. drums, to be sampled from any given consignment of preservative materials, irrespective of whether the materials are solid or liquid, should be the nearest whole number to the square root of half the total number of containers in the consignment (see Table 1). The containers to be sampled should be taken at random.

Table 1 — Sampling of containers

Number of containers in consignment (x)	$\sqrt{\frac{x}{2}}$	Number of containers to be sampled
10	2,24	2
20	3,16	3
30	3,87	4
50	5,00	5
100	7,07	7

**EN 212:2003 (E)****5.1.3 Choice of materials for sample container and sampling devices**

It is essential in all cases that the sampling devices and the sample container and its closure be made from material which is inert to the particular preservative under investigation.

NOTE 1 Polyethylene containers should not be used for hydrocarbon solvents. Glass containers are recommended.

NOTE 2 Glass containers should not be used for fluorine and boron based preservatives. Containers of polyethylene are recommended.

**5.1.4 Marking and storage of samples**

All sample containers should be clearly and permanently labelled as to their contents. All samples should be stored in their containers in a cool, dark place prior to analysis.

**5.2 Sampling of solid preservatives****5.2.1 Sampling device**

A suitable sampling device for the purpose of sampling the preservative in a drum is a sampling spear of internal diameter approximately 30 mm and sufficiently long to reach the bottom of the drum.

**5.2.2 Procedure (see Figure 1)**

Before sampling, mix the contents of the drum as thoroughly as possible. Take great care to minimize the moisture picked up by the sample during the sampling, mixing and reducing processes. Using the sampling device, take five samples, one from the centre of the drum and the other four from points on a pair of diameters at right angles to each other, which are mid-way between the centre and the side of each drum selected for testing (operation A). Ensure that the sampling spear reaches to the bottom of the drum.

Combine the five samples in a clean, dry, airtight container (operation B). If necessary, grind the whole of the bulk sample to pass a test sieve of nominal aperture size 2,00 mm, ensuring that no residue is left on the sieve.

NOTE To ascertain the homogeneity of the contents of a drum, individual spear samples can be analysed.

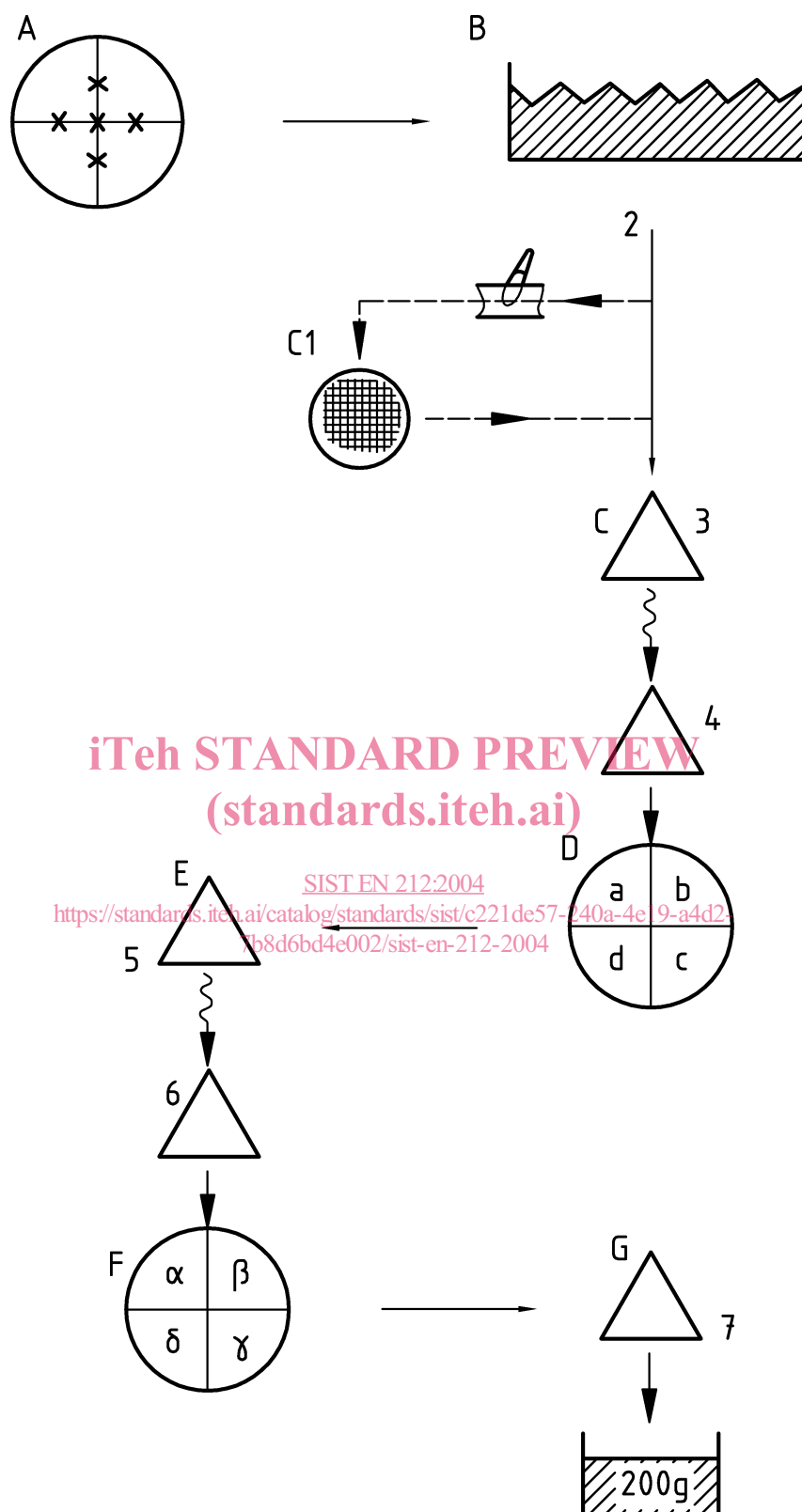


Figure 1 — Sampling of a solid preservative