SLOVENSKI STANDARD
SIST EN 73:1996

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Zaščitna sredstva za les - Pospešeno staranje zaščitenega lesa pred biološkim preskušanjem - Postopek izparevanja

Wood preservatives - Accelerated ageing tests of treated wood prior to biological testing - Evaporative ageing procedure

Holzschutzmittel - Beschleunigte Alterung von behandeltem Holz vor biologischen Prüfungen - Verdunstungsbeanspruchung

Produits de préservation des bois - Epreuves de vieillissement accéléré des bois traités avant essais biologiques - Epreuve d'évaporation

Ta slovenski standard je istoveten z: **EN 73:1988**

ICS:

71.100.50	Kemikalije za zaščito lesa	Wood-protecting chemicals

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English version

Wood preservatives; Accelerated ageing of treated wood prior to biological testing; Evaporative ageing procedure

Produits de préservation des bois; Epreuves de vieillissement accéléré des bois traités avant essais biologiques; Epreuve d'évaporation

Holzschutzmittel; Beschleunigte Alterung von behandeltem Holz vor biologischen Prüfungen; Verdunstungsbeanspruchung

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

This European Standard exists in the 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 CEN Central Secretariat has the same status as the official versions.

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CEN

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

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B R I E F H I S T O R Y

This European Standard was drawn up by the Technical Committee CEN/TC 38 "Methods of test for wood preservatives", the Secretariat of which is held by AFNOR.

According to the Common CEN/CENELEC Rules, following countries are bound to implement this European Standard :

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

C O N T E N T S

1 OBJECT

This European Standard describes an evaporative ageing procedure, applicable to test specimens of wood which have previously been treated with a preservative, in order to evaluate any loss in effectiveness when these test specimens are subsequently subjected to biological tests, as compared with test specimens which have not undergone any evaporative ageing procedure.

2 PRINCIPLE

Exposure, for a specified period, in a dust-free current of air of a defined velocity and temperature, of test specimens which have been prepared for biological testing of their effectiveness against either fungi or insects using the appropriate standard methods.

3 EQUIPMENT

3.1 Wind tunnel, compartmented and fitted with devices for heating and distributing air.

The air shall be dust-free and shall not be polluted by chemical products which could have an effect on the test results.

The heating and distribution devices shall be such that the temperature and air velocity are maintained constant and uniform in each compartment.

The air leaving the tunnel shall be led away in such a manner that it cannot re-enter the tunnel.

3.2 Temperature recorder capable of measuring a temperature of 40 °C ± 2 °C.

3.3 Anemometer capable of measuring an air velocity of 1 m/s ± 0,1 m/s.

3.4 Conditioned room or environmental chamber at a temperature of 20 °C ± 2 °C and 65 % ± 5 % relative humidity for conditioning the test specimens after evaporative ageing.

4 TEST SPECIMENS

4.1 DEFINITION AND ORIGIN

The test specimens and their preparation are defined in the standards concerning the biological tests to which they are intended to be subjected.

The evaporative procedure is carried out, at the latest, 3 months after the end of the conditioning period that follows the treatment of the test specimens described in the relevant biological test standard.

4.2 NUMBER OF TEST SPECIMENS

The number of test specimens shall allow the relevant biological tests to be carried out in accordance with the instructions in the appropriate standards, bearing in mind that the evaporative ageing procedure shall be applied equally to treated test specimens which are subjected to biological agents and to control test specimens. The control test specimens shall be of the following kinds :

- treated control test specimens that will not be subjected to attack by biological agents after the evaporative ageint procedure. These will serve as controls for changes in mass in those tests in which this factor is taken into consideration.

- untreated control specimens which, after evaporative ageing, are subjected to the test by biological agents, to check any variation in the behaviour of untreated wood. These test specimens are only necessary for biological tests using insects.

- control test specimens of timber treated with solvent or diluent if necessary.

5 PROCEDURE

5.1 ARRANGEMENT OF THE TEST SPECIMENS

Place the test specimens in the compartments, resting them with one of their faces on the base so that none of the other faces is less than 10 mm from the side partitions. The faces parallel to the grain of the wood shall be parallel to the general direction of air flow and they shall be at least 10 mm from the corresponding faces of the adjacent test specimens. Do not place in the same compartment either test specimens treated with different products or with different concentrations of the same product or treated and control specimens. Arrange the test specimens according to type, as follows.

5.1.1 Test specimens treated on all surfaces (1)

Rest the test pieces on one of the small faces parallel to the grain of wood with the faces that are perpendicular to the grain of wood at least 20 mm away from the corresponding faces of adjacent test pieces.

5.1.2 Test pieces for which the faces perpendicular to the grain of wood are sealed before treatement (2)

Arrange the test pieces as in 5.1.1. The sealed faces may, however, be brought closer together.

5.1.3 Test specimens with one treated face only (3)

Rest the test specimens on the opposite face to that which has been treated.

5.2 STARTING AND ADJUSTMENT OF THE APPARATUS

With the test specimens in position, establish an air current controlled at a temperature of 40 °C ± 2 °C which emerges at a speed of 1 m/s ± 0,1 m/s. Check this velocity with an anemometer, at the outlet, on the axis of each compartment.

5.3 PROCEDURE

Maintain the test specimens in the arrangement specified in 5.1 and under the conditions specified in 5.2 for a complete week (7 days).

In order obtain homogeneous evaporation from all the treated faces of a test specimen, rotate the test specimen through an angle of 180° on its small horizontal axis on the first day of each week (see 5.4) (see figure 2).

Test specimens with only one treated surface shall be rotated through an angle of 180° on their vertical axis (see figure 3).

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(1) For example, test specimens intended for tests determining the toxic values (basidiomycetes, soft rot fungi, Anobium punctatum by larval transfer and by observing egg-laying, and the rate of survival of larvae, Hylotrupes bajulus, termites).

(2) For example, test specimens intended for tests for determining the preventive action against Lyctus brunneus or Hylotrupes bajulus.

(3) For example, test specimens intended for the test determining preventive action against termites.

If a compartment contains more than one test specimen, at the same time as rotating the test specimens, change the position of the specimens within this compartment, the method depending on the number of test specimens which it contains and on the duration of the procedure (see figure 1).

5.4 EXPOSURE PERIOD IN THE TUNNEL

The duration of the exposure period is 12 weeks. For certain specific applications, alternative periods of ageing may be used, in which case, the ageing period should be mentioned in the report of the biological test concerned.

5.5 CONDITIONING OF THE TEST SPECIMENS

At the end of the exposure period (5.4) allow the specimens to stabilize in the conditioned room (3.4) for a week.

6 DESTINATION OF THE TEST SPECIMENS AFTER THE EVAPORATIVE AGEING PROCEDURE

After completion of the ageing procedure, tests specimens shall be subjected to biological tests within three months. Such biological tests shall be carried out in accordance with the proceduces described in the relevant standard, commencing with the clause entitled "Exposure of the test specimens to insects (or fungi)".

7 REFERENCE IN THE TEST REPORTS

Quote the evaporative ageing procedure by giving the number of this European Standard (i. e. EN 73) and the duration(s) of evaporative ageing in the test report of each biological test.

The duration and conditions of storrage of the test specimen between initial preparation and the start of the ageing procedure shall also be reported.