

Conservation of cultural heritage - Determination of
water absorption by contact sponge method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 17655:2022 sisaldab Euroopa standardi EN 17655:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 17655:2022 consists of the English text of the European standard EN 17655:2022.
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English Version

Conservation of cultural heritage - Determination of water absorption by contact sponge method

Conservation du patrimoine culturel - Détermination de l'absorption d'eau par la méthode de l'éponge de contact

Erhaltung des kulturellen Erbes - Bestimmung der Wasseraufnahme durch Kontaktschwamm-Methode

This European Standard was approved by CEN on 29 May 2022.

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European foreword

This document (EN 17655:2022) has been prepared by Technical Committee CEN/TC 346 “Conservation of cultural heritage”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by January 2023, and conflicting national standards shall be withdrawn at the latest by January 2023.

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Introduction

This test method can be applied if it does not adversely affect any of the values of the object and following ethical codes of conservation practice.

The test measurements are generally used during effective evaluation of conservation treatments; different specific evaluation campaigns can be compared only when the same sponge material is used.

There is another non invasive method, EN 16302, recommended to measure water absorption at low hydrostatic pressure of porous inorganic materials either untreated or subjected to any treatment or ageing applied both in laboratory and *in situ*.

1 Scope

This document establishes the methodology to measure the quantity of water absorbed by a defined surface of a porous inorganic material used for and constituting cultural property, by contact sponge method.

This test describes the water absorption behaviour of the near-surface zone.

The method can be used on porous inorganic materials, which are untreated or have undergone any treatment or ageing.

The method can be used both in the laboratory and *in situ* on flat vertical and/or horizontal surfaces

NOTE 1 Treated materials are those which have been subjected to cleaning; to the application of water repellent, consolidating and/or biocidal products; to artificial aging tests, etc.

NOTE 2 The test is not intended to be used on surfaces which are severely deteriorated, where application of the sponge is likely to cause material loss. The operator is expected to ensure good contact with the perimeter of the container. The test is not accurate when applied to rough surfaces.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

porous inorganic material

materials including natural stones e.g. sandstone, limestone, marble, granite, gneiss, gypsum as well as artificial materials, such as mortar, plaster, brick, ceramics, concrete and others

[SOURCE: EN 15801:2009, 3.1 modified]

3.2

water absorption by sponge method

amount of water (mg) transferred from the sponge through a defined test area (cm²) after a fixed time, expressed as mg/cm² min

3.3

test surface area

location where the measurement is carried out