

IRISH STANDARD

I.S. EN 13150:2001

ICS 71.040.10

# WORKBENCHES FOR LABORATORIES DIMENSIONS, SAFETY REQUIREMENTS AND TEST METHODS

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This Irish Standard was published under the authority of the National Standards Authority of Ireland and comes into effect on October 26, 2001

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**EUROPEAN STANDARD** 

EN 13150

NORME EUROPÉENNE EUROPÄISCHE NORM

May 2001

ICS 71.040.10

# English version

# Workbenches for laboratories - Dimensions, safety requirements and test methods

Paillasses de laboratoire - Dimensions, spécification de sécurité et methodes d'essai Arbeitstische für Laboratorien - Maße, Sicherheitsanforderungen und Prüfverfahren

This European Standard was approved by CEN on 16 April 2001.

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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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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#### **Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by IBN.

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of an identical text or by endorsement, at the latest by November 2001, and conflicting national standards shall be withdrawn at the latest by November 2001.

This European Standard EN 13150 is applicable with date of publication (dop.) For workbenches for laboratories complying with a national standard before dop, this previous national standard may continue to apply for production and placing on the market until 2 years after dop. This standard does not apply to workbenches for laboratories, which have been put into service in the laboratory before 2 years after dop

Annex A is normative. Annex B is informative

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

# 1 Scope

This European Standard specifies safety requirements and test methods for workbenches for laboratories including laboratory tables and gives recommendations for their dimensions.

This European Standard applies to workbenches, movable tables and workbench shelves designed for use in research, educational, quality control and similar laboratories.

This European Standard does not apply to workbenches for pupils in scientific class rooms of schools. It does not apply to workbenches for special purposes, e.g. for heavy diagnostic or processing machines.

It should be understood that fulfilling the requirements does not ensure that failure will not occur as a result of habitual misuse or after an excessively long period of service. The tests are designed to be applied to a standalone workbench that is fully assembled and ready for use.

Requirements and test methods related to the fire safety of workbenches and to the resistance of the work surface are not included in this European Standard.

#### 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 527-1:2000, Office furniture - Work tables and desks - Part 1: Dimensions

EN 1730, Domestic furniture - Tables - Test methods for determination of strength, durability and stability

prEN 12600:1999, Glass in building - Pendulum test - Impact test method for flat glass and performance requirements

EN 61010-1, Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements (IEC 61010-1:1990 + A1:1992, modified)

ISO 48, Rubber, vulcanized or thermoplastic – Determination of hardness (hardness between 10 IRHD and 100 IRHD)

ISO 2813, Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°

# 3 Terms and definitions

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

#### 3.1

# work surface height, h,

vertical distance between the floor and the top of the work surface (see Figure 1)

#### 3.2

# overworkbench shelf height, h,

vertical distance between the floor and the top of the shelf surface (see Figure 1)

# 3.3

# bottom rail height, h<sub>3</sub>

vertical distance between the floor and the lower part of bottom rail (see Figure 2)

# 3.4

#### overall depth, d,

horizontal distance between the front and the rear edge of the workbench including possible service zones (see Figure 2)

#### 3.5

# clear work surface depth, $d_2$

horizontal distance between the front and the rear edge of the workbench excluding edges and possible service zones (see Figure 2)

#### 3.6

# overworkbench shelf depth, $d_3$

horizontal distance between the front and the rear edge of the overworkbench shelf (see Figure 2)

#### 3.7

# service zone depth, $d_{a}$

horizontal distance of overall depth  $d_1$  minus clear work surface depth  $d_2$  (see Figure 2)

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#### 3.8

#### static test

test consisting of heavy loads being applied a few times to ensure that the workbench has sufficient strength to perform its function under the highest levels of loading that might reasonably be expected to occur

#### 3.9

#### impact test

test to assess the strength of the workbench under the rapid rates of loading that occasionally occur

#### 3.10

#### fatique test

test simulating the repeated application of loads or movement of components occurring during long-term use and assessing the durability of the workbench under such conditions

#### 3.11

#### structure

load bearing parts of the workbench including the frame, top and legs

#### 3.12

#### workbench

work surface with supporting structure and services as required

#### 3.13

#### movable workbench or table

unit which is not fixed to the floor or wall nor has any service connections

NOTE This definition is for the purpose of the drop test only (see A.3.7)

# 4 Recommended dimensions

Other dimensions than those recommended in this clause 4 may be agreed between customer and manufacturer.

# 4.1 Heights

# 4.1.1 Work surface height

The nominal heights  $h_1$  are listed in Table 1. In every case there should be an levelling range of minimum 20 mm. For seated work the relationship between seat height and work surface height is critical. The use of adjustable height seat is recommended.

Table 1 - Work surface heights

Type of workbench	Nominal heights $h_1$ in mm
Sitting Standing <sup>a)</sup>	720 900
a) or sitting on high chairs or stoo	ls

#### 4.1.2 Leg room

Minimum leg room under the workbench should be in accordance with clause 6 of EN 527-1:2000.



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