

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS A 1460 : 2001

**Building boards Determination of
formaldehyde emission—
Desiccator method**

ICS 13.040.99; 71.080.80; 79.060.10

Descriptors : wall coverings, formaldehyde, chemical hazards, pollutant gases

Reference number : JIS A 1460 : 2001 (E)

A 1460 : 2001

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

Date of Establishment: 2001-03-20

Date of Public Notice in Official Gazette: 2001-03-21

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Architecture

JIS A 1460:2001, First English edition published in 2003-07

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Printed in Japan

Building boards Determination of formaldehyde emission— Desiccator method

1 Scope This Japanese Industrial Standard specifies a method of test for determination of quantity of formaldehyde emitted from building boards.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS K 0050 *General rules for chemical analysis*
- JIS K 0557 *Water used for industrial water and wastewater analysis*
- JIS K 8001 *General rule for test methods of reagents*
- JIS K 8005 *Reference materials for volumetric analysis*
- JIS K 8027 *Acetylacetone*
- JIS K 8180 *Hydrochloric acid*
- JIS K 8355 *Acetic acid*
- JIS K 8359 *Ammonium acetate*
- JIS K 8576 *Sodium hydroxide*
- JIS K 8625 *Sodium carbonate*
- JIS K 8637 *Sodium thiosulfate pentahydrate*
- JIS K 8659 *Starch, soluble*
- JIS K 8872 *Formaldehyde solution*
- JIS K 8913 *Potassium iodide*
- JIS K 8920 *Iodine*
- JIS K 8951 *Sulfuric acid*
- JIS R 3503 *Glass apparatus for chemical analysis*
- JIS R 3505 *Volumetric glassware*
- JIS Z 8401 *Guide to the rounding of numbers*
- JIS Z 8703 *Standard atmospheric conditions for testing*

3 Principle of test The test for determination of quantity of formaldehyde emitted from building boards by desiccator method is carried out by using the glass desiccator as shown in Fig. 1. The emitted quantity of formaldehyde is obtained from the concentration of formaldehyde absorbed in distilled water or deionized water when the test pieces of specified surface area are placed in the desiccator filled with the specified amount of distilled water or deionized water and 24 h has elapsed.

The principle for determination of concentration of formaldehyde absorbed in distilled water or deionized water is based on the Hantzsch reaction in which the formaldehyde reacts with ammonium ions and acetylacetone to yield diacetyldihydrolutidine (DDL).

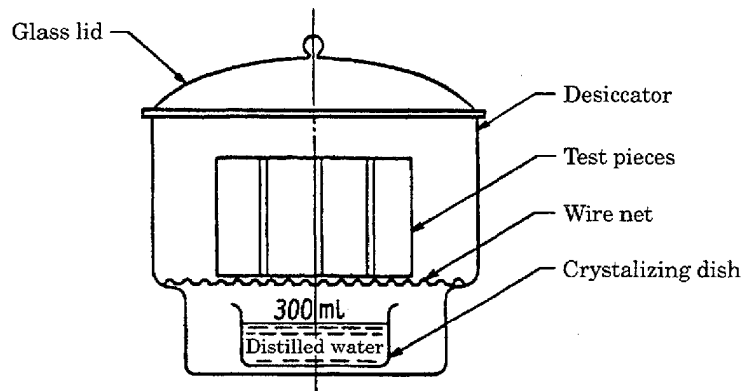


Fig. 1 Desiccator method (schematic diagram)

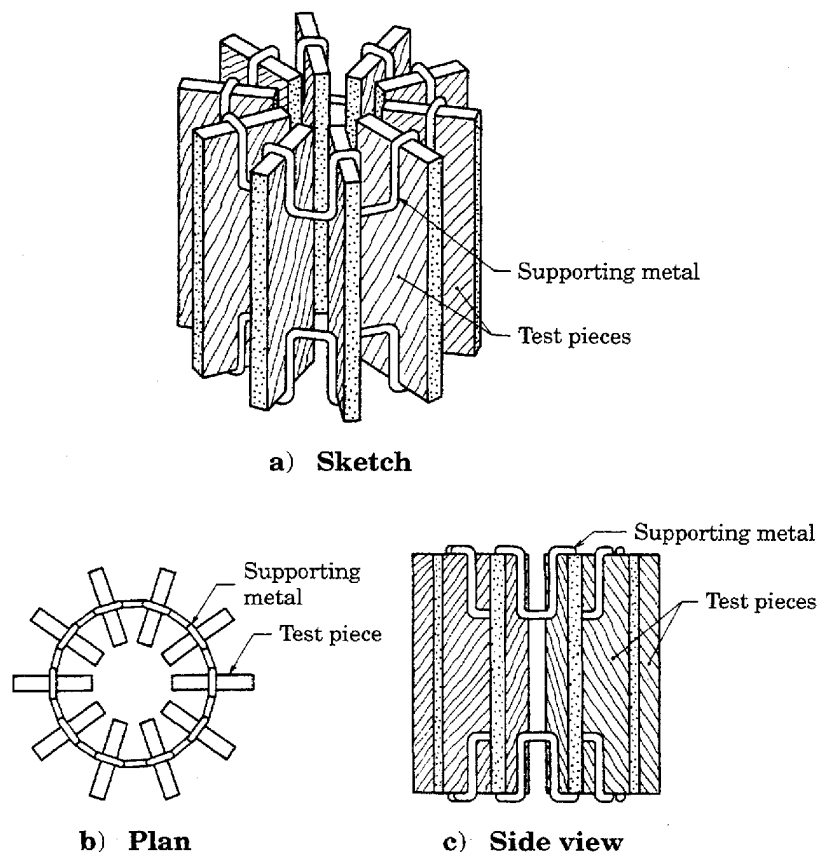


Fig. 2 Specimen supporting metal

4 General conditions

4.1 Test atmosphere The conditions of test place shall be 20 °C temperature grade 0.5 (20 °C ± 0.5 °C) specified in **JIS Z 8703**.