

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS R 1701-2 : 2016

(JFCA/AIST/JSA)

**Fine ceramics (advanced ceramics,
advanced technical ceramics)—
Test method for air purification
performance of photocatalytic
materials—Part 2: Removal of
acetaldehyde**

ICS 81.060.30

Reference number : **JIS R 1701-2 : 2016 (E)**

R 1701-2 : 2016

Date of Establishment: 2008-03-20

Date of Revision: 2016-07-20

Date of Public Notice in Official Gazette: 2016-07-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Metal and Inorganic
Materials

JIS R 1701-2:2016, First English edition published in 2016-12

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

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

© JSA 2016

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HT/AT

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction.....	1
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	2
4 Test equipment	2
5 Test piece	3
6 Test methods	4
6.1 General.....	4
6.2 Pretreatment of test piece.....	4
6.3 Preparation for measurement.....	5
6.4 Pretest.....	5
6.5 Acetaldehyde removal test	5
6.6 Acetaldehyde removal test (to be applied where CO ₂ concentration cannot be measured)	7
7 Calculation of test results	7
7.1 Removal percentage and removed quantity of acetaldehyde	7
7.2 Conversion to CO ₂ and quantity of CO ₂ converted	8
8 Test method for test pieces with lower performance	9
9 Test report	10
Annex JA (informative) Comparison table between JIS and corresponding International Standard	11

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Fine Ceramics Association (JFCA)/ National Institute of Advanced Industrial Science and Technology (AIST)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS R 1701-2:2008** is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS R 1701 series consists of the following five parts under the general title “*Fine ceramics (advanced ceramics, advanced technical ceramics)—Test method for air purification performance of photocatalytic materials*”:

Part 1: Removal of nitric oxide

Part 2: Removal of acetaldehyde

Part 3: Removal of toluene

Part 4: Removal of formaldehyde

Part 5: Removal of methyl mercaptan

Fine ceramics (advanced ceramics, advanced technical ceramics)— Test method for air purification performance of photocatalytic materials— Part 2: Removal of acetaldehyde

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 22197-2** published in 2011, by modifying some of the technical contents to ensure consistency among **JIS R 1701-1** to **JIS R 1701-5** and **JIS R 1751-1** to **JIS R 1751-5** which have been established after the publication of **ISO 22197-2**.

Sidelines and dotted underlines represent the parts modified from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the method to test the removal performance of acetaldehyde (CH_3CHO) gas, among air purification performances, of the photocatalytic materials supported on the surface of building materials and other products.

This Standard is mainly intended for photocatalysts which are effective in ultraviolet (UV) region within a wavelength range of 300 nm to 380 nm, under solar radiation. To the testing of acetaldehyde removal performance under visible light, the method given in **JIS R 1751-2** shall be applied instead of the method specified in this Standard.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 22197-2:2011 *Fine ceramics (advanced ceramics, advanced technical ceramics)—Test method for air-purification performance of semiconducting photocatalytic materials—Part 2: Removal of acetaldehyde* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

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

JIS A 1962 *Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air—Active sampling method*

JIS K 0055 *General rules for calibration method of gas analyzer*

JIS K 0114 *General rules for gas chromatography*