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(JCA)

**Determination of the heat of hydration of  
cement — Solution method**

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Mita Avanti, 3-11-28, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

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In the event of any doubts arising as to the contents,  
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## Foreword

This Japanese Industrial Standard has been 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 Cement Association (JCA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied *mutatis mutandis* pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS R 5203** : 2015), which has been technically revised.

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# Determination of the heat of hydration of cement — Solution method

## Introduction

This Japanese Industrial Standard has been prepared based on **ISO 29582-1** : 2009, Edition 1, without modifications such as those on the basic measuring principle, but with the addition of tolerances for the measurement of heat of solution of hydrated cement as well as solution conditions for respective types of cement, which are not covered in the corresponding International Standard.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA. A list of technically significant revisions from the previous edition with reasons is given in Annex JB.

## 1 Scope

This Standard specifies the measuring method for the heat of hydration of portland cement, portland blast-furnace slag cement and portland fly-ash cement.

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

ISO 29582-1 : 2009 *Methods of testing cement — Determination of the heat of hydration — Part 1: Solution method* (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

Part or all of the provisions of the following standards, 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 K 0050 | <i>General rules for chemical analysis</i>                      |
| JIS K 8001 | <i>General rules for test methods of reagents</i>               |
| JIS K 8005 | <i>Reference materials for volumetric analysis</i>              |
| JIS K 8405 | <i>Zinc oxide (Reagent)</i>                                     |
| JIS K 8541 | <i>Nitric acid (Reagent)</i>                                    |
| JIS R 5202 | <i>Methods for chemical analysis of cements</i>                 |
| JIS R 5204 | <i>Chemical analysis method of cement by X-ray fluorescence</i> |