

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 8802 : 2011

(SICE/JSA)

**Methods for determination of pH of
aqueous solutions**

ICS 71.040.40

Reference number : **JIS Z 8802 : 2011 (E)**

Z 8802 : 2011

Date of Establishment: 1958-03-03

Date of Revision: 2011-05-20

Date of Public Notice in Official Gazette: 2011-05-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Basic Engineering

JIS Z 8802:2011, First English edition published in 2012-02

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.

© JSA 2012

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

NH/AT

PROTECTED BY COPYRIGHT

Contents

	Page
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 General matters.....	2
5 Classification and type of pH meter.....	2
5.1 Classification.....	2
5.2 Type.....	2
6 Construction of pH meter.....	3
7 pH standard solution.....	3
7.1 Classification of pH standard solutions and quality and composition.....	3
7.2 pH value of pH standard solution at each temperature.....	4
7.3 Preparing method of prepared pH standard solution.....	6
7.4 Storing method of pH standard solution.....	8
8 Operating method.....	8
8.1 Test of pH meter.....	8
8.2 Measuring method.....	9
9 Record of measured results.....	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 the Society of Instrument and Control Engineers (SICE)/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 Z 8802:1984** 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 a patent right, application for a patent after opening to the public or utility model right which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public or utility model right which have the said technical properties.

Methods for determination of pH of aqueous solutions

1 Scope

This Japanese Industrial Standard specifies the methods for determination of pH of aqueous solutions of 0 °C to 95 °C with the pH meter using glass electrode.

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 K 0050 *General rules for chemical analysis*
- JIS K 0211 *Technical terms for analytical chemistry (General part)*
- JIS K 0213 *Technical terms for analytical chemistry (Electrochemistry part)*
- JIS K 8474 *Potassium trihydrogen dioxalate dihydrate (Reagent)*
- JIS K 8514 *Sodium bromide (Reagent)*
- JIS K 8622 *Sodium hydrogen carbonate (Reagent)*
- JIS K 8625 *Sodium carbonate (Reagent)*
- JIS K 8809 *Potassium hydrogen phthalate (Reagent)*
- JIS K 8866 *Sodium tetraborate decahydrate (Reagent)*
- JIS K 9007 *Potassium dihydrogen phosphate (Reagent)*
- JIS K 9020 *Disodium hydrogenphosphate (Reagent)*
- JIS Z 8805 *Glass electrodes for measurement of pH*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS K 0211**, **JIS K 0213** and **JIS Z 8805**, and the following apply.

3.1 pH

the value obtained from the electromotive force measured with a glass electrode pH meter utilizing the pH value of pH standard solution specified in this Standard as reference

NOTE : It is read as PÎETTI or PÎEITI.

3.2 certified pH standard solution

the pH standard solution of which the pH value is measured according to the primary method determined by CCQM of CIPM, or the pH standard solution being traceable to it in which the expanded uncertainty to give 95 % of confidence interval is approximately within 0.015