

Translated and Published by Japanese Standards Association

$JIS \; H \; 1051 : {}^{\tiny 2022}$

(JCBA/JSA)

Copper and copper alloys — Determination of copper content

H 1051 : 2022

Date of Establishment: 1982-11-01

Date of Revision: 2022-08-22

Date of Public Notice in Official Gazette: 2022-08-22

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

JIS H 1051 : 2022, First English edition published in 2024-01

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 2024

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

Contents

Page

| Intro | duction ····· | 1 |
|------------|--|-------------|
| 1 | Scope ····· | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | General requirements | 2 |
| 5 | Classification of determination methods | 2 |
| 6 | Copper electrogravimetric analysis by decomposition with nitric acid and sulfuric acid | 9 |
| 6.1 | Summary ····· | |
| 6.2 | Reagents ····· | |
| 6.3 | Implements ····· | |
| 6.4 | Mass of analytical sample | |
| 6.5 | Procedure ······ | |
| 6.6 | Blank test | |
| 6.7 | Calculation | - |
| 6.8 | Tolerance ····· | 15 |
| 7 | Copper electrogravimetric analysis by decomposition with nitric acid, | |
| | hydrofluoric acid and boric acid | |
| 7.1 | Summary ····· | |
| 7.2 | Reagents ····· | |
| 7.3 | Implements ····· | |
| 7.4 | Mass of analytical sample | |
| 7.5 | Procedure | |
| 7.6 | Blank test | |
| 7.7 | Calculation | |
| 7.8 | Tolerance ····· | ······20 |
| 8 | Copper electrogravimetric analysis by separation with selenium and | |
| | bismuth ····· | |
| 8.1 | Summary | |
| 8.2 | Reagents ····· | |
| 8.3 | Implements | |
| 8.4 | Mass of analytical sample | |
| 8.5 | Procedure ······ | $\cdots 21$ |
| | | |
| 8.6 8.7 | Blank test ······ Calculation ····· | 25 |

H 1051:2022

| Annex JA (informative) | Comparison table between JIS and corresponding |
|------------------------|--|
| | International Standard |

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 Copper and Brass Association (JCBA)/Japanese Standards Association (JSA) 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 H 1051 : 2013), which has been technically revised.

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

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

Blank

Copper and copper alloys — Determination of copper content

Introduction

This Japanese Industrial Standard has been prepared based on ISO 1554: 1976, Edition 1, with some modifications of the technical contents to reflect the unique condition of the Japanese market.

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.

1 Scope

This Standard specifies methods for determination of the copper content of copper and copper alloys. Copper and copper alloy products covered by this Standard include wrought products, copper billets and cakes, <u>ingots for castings</u> and castings.

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

ISO 1554 : 1976 Wrought and cast copper alloys — Determination of copper content — Electrolytic 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 H 1012 General rules for chemical analysis of copper and copper alloys

JIS K 0211 Technical terms for analytical chemistry (General part)

JIS K 0212 Technical terms for analytical chemistry (optical part)

JIS K 0215 Technical terms for analytical chemistry (Analytical instrument part) JIS Z 8401 Rounding of numbers

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS H 1012**, **JIS K 0211**, **JIS K 0212** and **JIS K 0215** apply.