

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

**JIS K 0110** : 2018

(JEMCA/JSA)

**Methods for determination of  
dinitrogen monoxide in flue gas**

---

ICS 13.040;71.040.40

Reference number : **JIS K 0110 : 2018 (E)**

K 0110 : 2018

Date of Establishment: 2018-03-20

Date of Public Notice in Official Gazette: 2018-03-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board for ISO area

Technical Committee on Chemical Products and  
Analytical Methods

---

JIS K 0110:2018, First English edition published in 2019-01

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 2019

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

KK/AT

## Contents

	Page
Introduction .....	1
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 General requirements .....	2
5 Classification and outlines of analysis methods .....	2
6 Sampling .....	3
6.1 Sampling position .....	3
6.2 Types of sampling methods .....	3
6.3 Sampling apparatus and instruments .....	3
6.4 Construction of sampling apparatus and sampling operation .....	4
7 Analysis methods .....	8
7.1 Gas chromatograph .....	8
7.2 Gas chromatography/mass spectrometry .....	14
8 Automatic measuring method .....	18
9 Record of analysis results .....	18
9.1 Expression of analysis results and management of data quality .....	18
9.2 Information to be included in the record .....	18
Annex A (informative) Example of conditions for gas chromatography and gas chromatography/mass spectrometry .....	20

## Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by The Japan Environmental Measurement and Chemical Analysis Association (JEMCA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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.

# Methods for determination of dinitrogen monoxide in flue gas

## Introduction

This Japanese Industrial Standard has been established to standardize methods for analysis of dinitrogen monoxide performed in laboratories equipped with necessary analytical devices.

No corresponding International Standard has been established at this point.

## 1 Scope

This Standard specifies the methods for determination of dinitrogen monoxide in flue gas which results from combustion or chemical reaction, etc. and is exhausted through flue, chimney, duct, etc.

## 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 B 7988 *Continuous analyzers for dinitrogen monoxide in flue gas*
- JIS K 0050 *General rules for chemical analysis*
- JIS K 0055 *General rules for calibration method of gas analyzer*
- JIS K 0095 *Methods for sampling of flue gas*
- JIS K 0114 *General rules for gas chromatography*
- JIS K 0123 *General rules for gas chromatography/mass spectrometry*
- JIS K 0211 *Technical terms for analytical chemistry (General part)*
- JIS K 0214 *Technical terms for analytical chemistry (Chromatography part)*
- JIS K 0215 *Technical terms for analytical chemistry (Analytical instrument part)*
- JIS K 0216 *Technical terms for analytical chemistry (Environmental part)*
- JIS K 1107 *Nitrogen*
- JIS K 1123 *Calcium chloride (for U-tube)*
- JIS K 8576 *Sodium hydroxide*
- JIS K 8603 *Soda lime (Reagent)*
- JIS M 8813 *Coal and coke—Determination of constituents*
- JIS R 3503 *Glass apparatus for chemical analysis*
- JIS Z 8401 *Guide to the rounding of numbers*
- JIS Z 8808 *Methods of measuring dust concentration in flue gas*