



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 0306 : 2004

Measuring method for volatile
organic compounds in airborne
by gas detector tube

ICS 13.040.20; 71.040.40; 71.080.01

Reference number : JIS K 0306 : 2004 (E)

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Foreword

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Date of Establishment: 2004-05-20

Date of Public Notice in Official Gazette: 2004-05-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Environment and
Recycling Policy

JIS K 0306 : 2004, First English edition published in 2004-08

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,
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Measuring method for volatile organic compounds in airborne by gas detector tube

Introduction In order to perform the environmental management dealing with volatile organic compounds, it is often required the measurement of their concentration in the neighboring air. This Japanese Industrial Standard specifies so that these measurements are able to be easily performed.

1 Scope This Standard specifies the method for measuring the concentration of trichloroethylene (trichloroethene) and tetrachloroethylene (tetrachloroethene) in the airborne volatile organic compounds by a length-of-strain type long term gas detector tube. Furthermore, this Standard applies in the case where the concentration of the target substance to be measured is that of several $10 \mu\text{g}/\text{m}^3$ to several $100 \mu\text{g}/\text{m}^3$ and the concentration less than or more than that, and the influence of the interfering substance on a gas detector tube is negligible.

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

JIS B 7516 *Metal rules*

JIS K 0804 *Gas detector tube measurement system (Length-of-strain type)*

JIS Z 8703 *Standard atmospheric conditions for testing*

JIS Z 9010 *Sequential sampling plans for inspection by variables for percent nonconforming (known standard deviation)*

JIS Z 9015-0 *Sampling procedures for inspection by attributes—Part 0 : Introduction to the JIS Z 9015 attribute sampling system*

3 Definitions For the purposes of this Standard, the following definitions shall apply.

- a) **detection reagent** carrier particles impregnated with reagents capable of clearly distinguishing a reaction portion from a non-reaction portion by quickly reacting with the target substance to be measured in sample air
- b) **length-of-strain type gas detector tube** a transparent tube filled with detection reagents, which measures the concentration of the target substance to be measured by a length of a coloured layer
- c) **long term gas detector tube** a gas detector tube used for the purpose of the determination of the mean substance concentration for several 10 min
- d) **pretreatment tube** a tube filled with a pretreatment reagent of sample air, such as a dehumidification reagent or a decomposition reaction reagent, which is used by connecting to the front stage of gas detector tube