JIS

JAPANESE INDUSTRIAL STANDARD

Translated and Published by
Japanese Standards Association

JIS K 0086 : 1998

Methods for determination of phenols in flue gas

ICS 13.040.40; 71.040.40

Descriptors : phenols, exhaust gases, gas analysis, industrial air pollutants, industrial wastes, sampling methods, spectrophotometry, ultraviolet radiation, gas chromatography, determination of content

Reference number : **JIS K 0086 : 1998 (E)**

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

Date of Establishment: 1978-03-01

Date of Revision: 1998-03-20

Date of Public Notice in Official Gazette: 1998-03-20

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Environment
Technical Committee on Air Quality

JIS K 0086:1998, First English edition published in 1998-10
Second edition : 2002-04

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.

Methods for determination of phenols in flue gas

1 Scope This Japanese Industrial Standard specifies the methods for determination of phenols in flue gas.

Remarks 1 In this standard, flue gas means ones which are generated by being accompanied with chemical reaction, etc. and exhausted out to flue, chimney or duct.

2 The normative references to this Standard are shown in Attached Table 1.

2 Common Items The common items concerned with chemical analysis, sampling method of flue gas, gas chromatography and molecular absorptuometric analysis shall be in accordance with **JIS K 0050**, **JIS K 0095**, **JIS K 0114** and **JIS K 0115** respectively.

3 Classification of analytical methods and their outline The method for determination and their outline shall be shown in Table 1.

Table 1 Classification of analytical methods and their outlines

Classification of analytical methods	Outlines of analytical methods			Application requirement
	Summary	Sampling	Range of determination vol ppm	
Gas chromatography	Absorb phenols in sample gas into absorption solution or collect in collecting bag, etc. Introduce it into gas chromatograph and determine phenols with chromatogram obtained.	Absorption bottle method Vacuum collection bottle method Collection bag method	1 to 2 000 (1)	
4-Aminoantiprine spectrophotometric method	After absorbing phenols in sample gas into absorption solution, add 4-aminoantipyrine solution and potassium ferricyanide solution. Measure the absorbance (510 nm) of colored antipyrine compound.	Absorption bottle method absorption solution:0.4% Sodium hydroxide solution amounts : 50 ml × 2	1 to 20 (1)	According to **5.2.1**
Ultraviolet absorptiometry	After absorbing phenols in sample gas into absorption solution, measure the absorbance (270 nm) of this solution.	Absorption bottle method absorption solution: water	1 to 50 (1)	According to **5.3.1**

Note (1) : It is the case of the sample solution in which 20 *l* of sample gas is collected and the absorption solution is diluted to 200 ml.