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## Method for determination of phosgene in flue gas

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pollutants, industrial wastes, sampling methods, spectrophotometry,  
gas chromatography, determination of content

**Reference number** : JIS K 0090 : 1998 (E)

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## 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:

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Date of Revision: 1998-03-20

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## Method for determination of phosgene in flue gas

**1 Scope** This Japanese Industrial Standard specifies the method for determination of phosgene (carbonyl chloride) in flue gas.

Remarks 1 In this Standard, flue gas means ones which is generated by being accompanied with manufacturing processes of various chemical products, combustion, other chemical reactions and manufacturing process using phosgene, etc., and exhausted to flue, chimney or duct.

2 The normative references are shown in Attached Table 1.

**2 Common items** The common items of chemical analysis, sampling methods of flue gas and molecular absorptiometric analysis shall be in accordance with **JIS K 0050**, **JIS K 0095** and **JIS K 0115**, respectively.

**3 Classification of analytical methods and their outlines** Classification of analytical methods and their outlines shall be as shown in Table 1.

**Table 1 Classification of analytical methods and their outlines**

Classification of analytical method	Outlines of analytical method			Applicable condition
	Summary	Sampling	Range of determination vol ppm	
Diphenylurea ultraviolet absorptiometry	After absorbing phosgene in the sample gas into absorbent, generated diphenylurea is extracted by solvent and the absorbance (257 nm in wavelength) of this extracted solution is measured.	Absorption bottle method Absorbent : Aniline solution (2.5 g/l, pH 7 to pH 9) Absorption volume : 10 ml × 1	0.1 to 5 (20 l)	In accordance with <b>5.1</b>

**4 Sampling method of sample gas** Sampling position of gas for analysis shall be selected the point where the typical gas can be collected and, after collected at least twice in the same position within adjacent time, and these gases shall be analyzed respectively.

**4.1 Sampling method** Absorption bottle method

**4.2 Reagents and preparation method of reagent solution**

(1) **Reagents**

- (a) **Water** A2 grade specified in **JIS K 0557**.
- (b) **Hydrochloric acid** Specified in **JIS K 8180**.
- (c) **Sodium hydroxide** Specified in **JIS K 8576**.
- (d) **Aniline** Specified in **JIS K 8042**.