

ICS 91.140.80  
CCS Z 15

**CJ**

**INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**CJ/T 307-2009**

---

**Test methods for the gas from town wastewater facilities**

城镇排水设施气体的检测方法

**(English Translation)**

**Issued on: April 7, 2009**

**Implemented on: October 1, 2009**

---

**Issued by: Ministry of Housing and Urban-Rural Development of the  
People's Republic of China**

## Table of Contents

Preface

1 Scope

2 Normative references

3 Terms and definitions

4 Overview

5 Sample Collection and Quality Control

6 Laboratory determination method

6.1 Determination of methane gas chromatography

6.2 Determination of hydrogen sulfide methylene blue spectrophotometry

6.3 Determination of ammonia Nessler reagent colorimetric method

6.4 Determination of sulfur dioxide Formaldehyde absorption - pararosaniline spectrophotometry

6.5 Determination of chlorine Methyl orange spectrophotometry

7 Field portable measurement method

7.1 Determination of combustible gases Catalytic combustion method

7.2 Determination of hydrogen sulfide electrochemical sensor method

7.3 Determination of oxygen electrochemical sensor method

7.4 Determination of ammonia gas electrochemical sensor method

7.5 Determination of carbon monoxide electrochemical sensor method

7.6 Determination of sulfur dioxide electrochemical sensor method

7.7 Determination of chlorine gas electrochemical sensor method

7.8 Determination of carbon dioxide irrespective of infrared gas analysis

7.9 Determination of total volatile organic compounds Direct detection of photo-ionization

## Foreword

This standard proposed by the Ministry of Housing and Urban Standard and Design Institute.

This standard by the Ministry of Housing and Urban Water Supply and Drainage Products Standardization Technical Committee.

## 1 Scope

This standard specifies the town sewers flammable gas, hydrogen sulfide, oxygen, ammonia, carbon monoxide, sulfur dioxide, chlorine, dioxide Laboratory testing of carbon and total volatile organic gases and/or rapid on-site testing methods.

This standard applies to urban areas to accept and transport urban sewage, industrial wastewater and rainwater pipe network, ditches and pumping stations, sewage treatment facilities, sludge Determination of accumulated gas in final disposal facilities and other related facilities.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. All dated references, which are subsequently owned Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to reach an agreement based on this standard research Whether you can use the latest versions of these files. For undated references, the latest version applies to this standard.

GB/T 11742 residential area hydrogen sulfide health inspection standard method  
methylene blue spectrophotometry Air quality - Determination of ammonia - Nessler 's reagent colorimetric method GB/T 15262 Ambient air - Determination of sulfur dioxide Formaldehyde absorption - pararosaniline spectrophotometry Ambient air - Determination of total hydrocarbons - Gas chromatography GB/T 18204.23 public places - Determination of carbon monoxide in air GB 50014 outdoor drainage design specifications Stationary sources - Determination of chlorine - HJ/T 30 Methyl orange spectrophotometric method HJ/T 167 Indoor air quality monitoring specifications

## 3 Terms and definitions

The following terms and definitions apply to this standard.

Drainage in the pipeline, structures and equipment collectively.

Refers to the common structures in the drainage of flammable and explosive and toxic and harmful gases, namely flammable gas, hydrogen sulfide, oxygen, ammonia, monoxide Carbon, sulfur dioxide, chlorine, carbon dioxide and total volatile organic compounds.

Refers to the temperature of 273K, the pressure of 101.325kPa dry matter state.

TenaxGC or TenaxTA samples were run on a non-polar column (polarity index less than 10) for analysis with retention times in n-hexane and n-hexadecane volatile organic compounds.

## 4 Overview

### 4.1

Laboratory determination methods include. "Determination of methane gas chromatography," "Determination of ammonia gas Nessler reagent colorimetric method", "hydrogen sulfide