

ICS 71.080.10
CCS G 16



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

GB/T 13289-2014

Replacing GB/T 13289-1991

**Ethylene for industrial use -- Sampling in the liquid and the
gaseous phase**

工业用乙烯液态和气态采样法

(English Translation)

Issued on: July 8, 2014

Implemented on: December 1, 2014

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Safety Precautions
- 4 Sampling means
- 4.1 Sampler

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 13289-1991 "industrial liquid and gaseous ethylene sampling method." this standard and GB/T 13289-1991 main differences are as follows.

- Modify the "Normative references" (see Chapter 2);
- Adjust the standard configuration (see Chapter 3, Chapter 4, Chapter 5, 1991 edition, Chapter 4, Chapter 5);
- Added "samples should meet the safety requirements of GB/T 3723" provisions;
- Increased sampling and its connecting pipelines inside special treatment when trace amounts of polar compounds analysis requirements (see Section 4.1.3);
- Original standard sample line renamed "non-enclosed sample line," modify the diagram (see 4.2.1 and Figure 2, 1991 edition 3.2 and Figure 2), increasing the sampling lines and closed schematic (see 4.2.2 and Figure 3, Figure 4);
- Amend non-hermetic sampling sampler replacement pattern (see 5.1, Chapter 4, 1991 edition.);
- Increased closed sampling requirements (see 5.2).

The standard reference method using redrafted ISO 7382. 1986 "industrial liquid and gaseous ethylene sampling method" (in English), and ISO 7382:1986 non-equivalent degree of consistency;

This standard and ISO 7382. 1986 is the main differences.

- Added "normative references";
- Increased sampling requirements and its connecting pipelines inside special treatment when trace polar compound analysis;

--- Modified sampler replacement mode;

--- Increased airtight sampling requirements.

The standard proposed by China Petroleum and Chemical Corporation.

This standard by the National Standardization Technical Committee Petrochemical Chemical Technical Committee (SAC/TC63/SC4) centralized.

This standard was drafted. China Petroleum & Chemical Co., Shanghai Research Institute of Petroleum, China Petroleum & Chemical Corporation North Beijing Yanshan Company.

1 Scope

This standard applies to ethylene industrial liquid and gaseous samples. This standard specifies the liquid ethylene and take samples of the gaseous ethylene method and related considerations, the samples taken for analysis of ethylene.

This standard is not intended to illustrate its use of all safety-related issues. The user's responsibility to take appropriate safety and health measures Facilities, to ensure compliance with the provisions of relevant state laws and regulations.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3723 Sampling of chemical products for industrial use General Safety (GB/T 3723-1999, idt ISO 3165. 1976)

3 Safety Precautions

3.1

Industrial ethylene flammable volatiles, samples should meet the safety requirements GB/T 3723.

3.2

When the liquid evaporates from the surface of the metal ethylene will cause drama cold, if the contact surface of the cylinder will cause frostbite, so sampling can be configured Handle, the operator should wear protective goggles and gloves.

3.3

ethylene highly flammable, mixed with air can form an explosive atmosphere. Thus, the sampling site should ensure good ventilation.

3.4

Since the boiling point of liquid ethylene $-103.9\text{ }^{\circ}\text{C}$, when it produced a lot of vent sample vapor will immediately spread to the surrounding atmosphere.

Therefore, when handling liquid sample, shall comply with the following rules.

- a) To eliminate static electricity, when the sample is emptied, the sampler should be grounded;
- b) If the operation is not in the open air, you should use high wind hood;
- c) the power supply, ventilation hoods, fans, motors and other electrical equipment shall be explosion-proof structure, and in accordance with relevant state regulations.

3.5

when cleaning the sampler, the sampler is discharged within the sample, and processing waste steam to safety, emissions and safety point should meet safety Full and environmental requirements. Illustrated exhaust system gives the remaining samples in Appendix A.

3.6

If you need to transport samples containing high pressure sampler, transport of dangerous goods shall comply with the relevant laws and regulations.

4.1 Sampler

4.1.1

use two-valve with the regulator dedicated sampling cylinders (see Figure 1). Volume of $0.1\text{L} \sim 1\text{L}$, working pressure 19.6MPa (200kg/cm^2). To ensure that the sample does not exceed 30% of the volume, adjust the position of the end of the pipe should ensure that 70% of the space reserved inside the sampler between. Sample outlet end should be set to the disk. Sampler biennial pressure test, hydrostatic test pressure 29.4MPa (300kg/cm^2).

NOTE: When you take ethylene gas, can also be used to adjust the cylinder without sampling tube.