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

GB/T 19206-2020

Replacing GB/T 19206-2003

**Requirements and test methods for organic sulfur compounds
used as odorants for natural gas**

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Foreword

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

This standard replaces GB/T 19206-2003 "Requirements and test methods for organic sulfur compound odorants for natural gas", and

Compared with GB/T 19206-2003, the main technical changes are as follows.

---Added some normative references (see Chapter 2, Chapter 2 of the.2003 edition);

---Added the definitions of "odorization", "odor characteristics", "odor intensity", "threshold concentration", and "odor intensity curve" (see Chapter 3,.2003 edition)

Chapter 3);

---Added the requirements that the odorant should meet (see 4.1);

---Added the description of the composition requirements of the sulfur-free odorant based on acrylate (see 4.2, 4.1 in the.2003 edition);

---Added the requirements for the vapor pressure curve of odorant and thinner (see 4.4.2);

--- Deleted the requirements for gas chromatography parameters, simplified the description of composition determination (see 6.3,.2003 edition 6.3);

---Added the compound used as odorant and the method for measuring the vapor pressure curve of odorant suitable for odorizing liquefied petroleum gas (see 6.5,

6.5 in the.2003 edition);

---Added the content that should be included in the safety data and additional information provided by the supplier to the user (see 7.2);

---Added the characteristics of odorant (see Appendix A).

This standard uses the translation method equivalent to ISO 13734.2013 "Requirements and test methods for organic components of natural gas used as odorants"

law". The Chinese documents that have a consistent correspondence with the international documents cited in this standard are as follows.

---GB/T 7534-2004 Determination of the boiling range of volatile organic liquids for industrial use (ISO 4626.1980, MOD)

---GB/T 20604-2006 Natural gas vocabulary (ISO 14532.2001, IDT)

This standard has made the following editorial changes.

---The name of the standard was changed to "Requirements and test methods for organic sulfur compound odorants for natural gas."

This standard was proposed and managed by the National Natural Gas Standardization Technical Committee (SAC/TC244).

Drafting organizations of this standard. China National Petroleum Corporation Southwest Oil and Gas Field Branch Natural Gas Research Institute, China National Petroleum Corporation

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Introduction

Processed natural gas supplied by suppliers usually has a weak or no odor. For safety reasons, natural gas

Odor, so that when natural gas has a very low concentration in the air, it can be detected by the smell.

Note. It is usually required to detect the smell when the concentration of natural gas in the air reaches 20% of the lower explosive limit. The lower explosion limit of natural gas is generally 4%~

5%, expressed by its volume fraction in air.

Organic sulfur compound odorant for natural gas

Requirements and test methods

1 Scope

This standard specifies the requirements and test methods for organic sulfur compound odorants for natural gas.

This standard applies to organic sulfur compound odorizers that odorize public natural gas and natural gas substitutes.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

ISO 3007.2005 Petroleum products and crude oil vapor pressure determination Reid method (Petroleumproductsandcrudepetro-

leum-Determinationofvapourpressure-Reidmethod)

ISO 3015.1992 Determination of the cloud point of petroleum products (Petroleumproducts-Determination of cloudpoint)

ISO 4256.1996 Determination of the vapor pressure of liquefied petroleum gas. Liquefied petroleum gas method (Liquefied petroleum gas-De-

terminationofgaugevapourpressure-LPGmethod)

ISO 4626.1980 Determination of the boiling point range of organic solvents used as raw materials for volatile organic liquids (Volatileorganic

liquids-Determinationofboilingrangeoforganicsolventsusedasrawmaterials)

ISO 14532 natural gas vocabulary (Naturalgas-Vocabulary)

3 Terms and definitions

The following terms and definitions defined by ISO 14532 apply to this document. For ease of use, ISO 14532 is listed repeatedly below

Some terms and definitions in.

3.1

Odorization

Add odorant to natural gas (usually odorless), the latter is usually a strong smell of organic

sulfur compounds, so that when natural gas leaks,

Can be detected by odor at trace concentrations (before the accumulation of dangerous concentrations in the air).

Note 1. Rewrite ISO 14532.

Note 2. Natural gas is usually odorless. For safety reasons, an odorant is added to the gas entering the distribution system, which can be detected by odor at trace concentrations.

3.2

Odorant

Organic chemicals with strong odor or their combination (such as sulfur compounds) added to the fuel gas; they can make the fuel gas

There are special and obvious (usually unpleasant) warning smells so that they can be detected by the smell when the gas leaks.

[Source. ISO 14532]

3.3

Odour character

The type of smell.

[Source. ISO 14532]