

Zemný plyn. Stanovenie sírnych zlúčenín. Stanovenie celkového obsahu síry metódou oxidačnej mikrocoulometrie (ISO 16960: 2014).

**STN EN ISO 16960** 

38 5569

Natural gas - Determination of sulfur compounds - Determination of total sulfur by oxidative microcoulometry method (ISO 16960:2014)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/15

Obsahuje: EN ISO 16960:2014, ISO 16960:2014

## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

#### **EN ISO 16960**

October 2014

ICS 75.060

#### **English Version**

# Natural gas - Determination of sulfur compounds - Determination of total sulfur by oxidative microcoulometry method (ISO 16960:2014)

Gaz naturel - Détermination des composés soufrés -Détermination de la teneur totale en soufre par microcoulométrie oxydante (ISO 16960:2014) Erdgas - Bestimmung von Schwefelverbindungen - Bestimmung des Schwefelgehalts mittels oxidativem mikrocoulometrischen Verfahren (ISO 16960:2014)

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EN ISO 16960:2014 (E)

#### **Foreword**

This document (EN ISO 16960:2014) has been prepared by Technical Committee ISO/TC 193 "Natural gas".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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INTERNATIONAL STANDARD

ISO 16960

First edition 2014-10-01

# Natural gas — Determination of sulfur compounds — Determination of total sulfur by oxidative microcoulometry method

Gaz naturel — Détermination des composés soufrés — Détermination de la teneur totale en soufre par microcoulométrie oxydante



ISO 16960:2014(E)



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#### **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The committee responsible for this document is ISO/TC 193, *Natural gas*, Subcommittee SC 1, *Analysis of natural gas*.

### Introduction

Three methods for determination of sulfur compounds in natural gas already exist as International Standards:

- ISO 6326-3, Natural gas Determination of sulfur compounds Part 3: Determination of hydrogen sulfide, mercaptan sulfur and carbonyl sulfide sulfur by potentiometry;
- ISO 6326-5, Natural gas Determination of sulfur compounds Part 5: Lingener combustion method;
- ISO 19739, Natural gas Determination of sulfur compounds using gas chromatography.

# Natural gas — Determination of sulfur compounds — Determination of total sulfur by oxidative microcoulometry method

WARNING — The use of this International Standard can involve hazardous material, operations, and equipment. This International Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

#### 1 Scope

This International Standard specifies a method for the determination of total sulfur in the range from  $1~\text{mg/m}^3$  to  $200~\text{mg/m}^3$  in pipeline natural gas by oxidative microcoulometry. Natural gas with sulfur contents above  $200~\text{mg/m}^3$  can be analysed after dilution with a suitable sulfur-free solvent.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3696, Water for analytical laboratory use — Specification and test methods

ISO 6142, Gas analysis — Preparation of calibration gas mixtures — Gravimetric method

ISO 6144, Gas analysis — Preparation of calibration gas mixtures — Static volumetric method

ISO 6146, Gas analysis — Preparation of calibration gas mixtures — Manometric method

ISO 10715, Natural gas — Sampling guidelines

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