ICS 75.060 PREDBEŽNÁ SLOVENSKÁ TECHNICKÁ NORMA November 2023

STN P	**Analýza zemného plynu Biometán Stanovenie obsahu amínov (ISO/TS 2610: 2022)**	**STN P CEN ISO/TS 2610** 38 6131

Analysis of natural gas - Biomethane - Determination of amines content (ISO/TS 2610:2022)

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. 10/23

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do júla 2025 Úradu pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky.

Obsahuje: CEN ISO/TS 2610:2023, ISO/TS 2610:2022

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TECHNICAL SPECIFICATION
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CEN ISO/TS 2610

July 2023

ICS 75.060

English Version

Analysis of natural gas - Biomethane - Determination of amines content (ISO/TS 2610:2022)

Analyse du gaz naturel - Biométhane - Détermination de la teneur en amines (ISO/TS 2610:2022)

Analyse von Erdgas - Biomethan - Bestimmung des Amingehalts (ISO/TS 2610:2022)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

The text of ISO/TS 2610:2022 has been prepared by Technical Committee ISO/TC 193 "Natural gas" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TS 2610:2023 by Technical Committee CEN/TC 408 "Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid" the secretariat of which is held by AFNOR.

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Endorsement notice

The text of ISO/TS 2610:2022 has been approved by CEN as CEN ISO/TS 2610:2023 without any modification.

TECHNICAL SPECIFICATION

ISO/TS 2610

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Analysis of natural gas — Biomethane — Determination of amines content

Analyse du gaz naturel — Biométhane — Détermination de la teneur en amines

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Foreword

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This document was prepared by Technical Committee ISO/TC 193, *Natural gas*, Subcommittee SC 1, *Analysis of natural gas*.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document was developed in response to biomethane specifications such as EN 16723 (all parts)[7]. In other regions, other specifications can apply for biomethane.

In the process of biogas upgrading into biomethane, alkanolamines are used for removing of sulphur-containing components and carbon dioxide. Due to this reason, trace level of these components can be present in biomethane. This method is suited for the detection of these components as well as the determination of their concentration. To inject biomethane into natural gas grids and to use it as an automotive fuel, it needs to meet specifications. For amines the maximum limit value in biomethane is set as 10 mg/m^3 is set in EN 16723 (all parts)[7]. Other specifications can state other thresholds.

Analysis of natural gas — Biomethane — Determination of amines content

1 Scope

This document specifies the determination of the concentration of alkanolamines in biomethane. The measurement method involves thermal desorption gas chromatography with flame ionization and/or mass spectrometry detectors (TD-GC-MS/FID). The described method is specifically developed for the analysis of five amine compounds, namely:

— monoethanolamine (MEA);

— diglycolamine (DGA);

— diethanolamine (DEA);

— *N*-methyldiethanolamine (MDEA);

— piperazine (PZ).

Information about the compounds is given in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10715, *Natural gas — Sampling guidelines*

ISO 14532, *Natural gas — Vocabulary*

ISO 16000-6, *Indoor air — Part 6: Determination of organic compounds (VVOC, VOC, SVOC) in indoor and test chamber air by active sampling on sorbent tubes, thermal desorption and gas chromatography using MS or MS FID*

ISO 19229, *Gas analysis — Purity analysis and the treatment of purity data*