

ICS 75.060

English Version

**Analysis of natural gas - Validation methods for gaseous
reference materials (ISO/TR 24094:2006)**

Analyse du gaz naturel - Méthodes de validation pour
matériaux de référence gazeux (ISO/TR 24094:2006)

Erdgasanalyse - Validierungsverfahren für gasförmige
Referenzmaterialien (ISO/TR 24094:2006)

This Technical Report was approved by CEN on 2 November 2007. It has been drawn up by the Technical Committee CEN/SS N21.

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Foreword

The text of ISO/TR 24094:2006 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/TR 24094:2007 by Technical Committee CEN/SS N21 "Gaseous fuels and combustible gas", the secretariat of which is held by CMC.

Endorsement notice

The text of ISO/TR 24094:2006 has been approved by CEN as CEN ISO/TR 24094:2007 without any modifications.

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Analysis of natural gas — Validation methods for gaseous reference materials

1 Scope

This Technical Report describes the validation of the calorific value and density calculated from current practice natural gas analysis by statistical comparison with values obtained by measurement using a reference calorimeter and a density balance.

2 Normative references

The following referenced documents are indispensable for the application 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 6142, *Gas analysis — Preparation of calibration gas mixtures — Gravimetric method*

ISO 6974-1, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 1: Guidelines for tailored analysis*

ISO 6974-2, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 2: Measuring-system characteristics and statistics for processing of data*

ISO 6974-3, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 3: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and hydrocarbons up to C₈ using two packed columns*

ISO 6974-4, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 4: Determination of nitrogen, carbon dioxide and C₁ to C₅ and C₆+ hydrocarbons for a laboratory and on-line measuring system using two columns*

ISO 6974-5, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 5: Determination of nitrogen, carbon dioxide and C₁ to C₅ and C₆+ hydrocarbons for a laboratory and on-line process application using three columns*

ISO 6974-6, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 6: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and C₁ to C₈ hydrocarbons using three capillary columns*

ISO 6976, *Natural gas — Calculation of calorific values, density, relative density and Wobbe index from composition*

Guide to the expression of uncertainty in measurement (GUM), BIPM/IEC/IFCC/ISO/IUPAC/IUPAP/OIML, 1995