ISO 14167:2018 (E)

Gas analysis — General quality aspects and metrological traceability of calibration gas mixtures

Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 Symbols

5 Preparation of gas mixtures

- 5.1 Static and dynamic methods
- 5.2 Purity of parent gases
- 5.3 Use of gas mixtures as parent gases
- 5.4 Gravimetric methods
- 5.5 Volumetric methods
- 5.6 Hybrid methods

6 Composition of calibration gas mixtures by comparison

- 6.1 General
- 6.2 Multipoint calibration
- 6.3 Simple calibration approaches

7 Verification of composition of gas mixtures

- 7.1 Objectives
- 7.2 Statistical tests for consistency and uncertainty due to verification
- 7.3 Maintaining measurement standards
- 7.4 Assessing gas mixture stability
- 7.5 Initial losses, chemical reactions and other effects

8 Metrological traceability and quality assurance

- 8.1 Preparation methods
- 8.2 Comparison methods
- 8.3 Conversion of composition data
- 8.4 Transfer of metrological traceability
- 8.5 Quality assurance and quality control

9 Evaluating measurement uncertainty

- 9.1 General
- 9.2 Sources of uncertainty
- 9.3 Certificates under ISO/IEC 17025 and ISO 17034

Annex A (informative) Hierarchy

Page count: 21