INTERNATIONAL STANDARD

ISO 6142-1

First edition
2015-08-01

AMENDMENT 1

Gas analysis — Preparation of calibration gas mixtures —

Part 1: Gravimetric method for Class I mixtures

AMENDMENT 1: Corrections to formulae in Annex E and Annex G

Analyse des gaz — Préparation des mélanges de gaz pour étalonnage —

Partie 1: Méthode gravimétrique pour les mélanges de Classe I

AMENDEMENT 1: Correction des formules à l'Annexe E et à l'Annexe G

PROOF/ÉPREUVE

Reference number
ISO 6142-1:2015/Amd.1:2020(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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This document was prepared by Technical committee ISO/TC 158, *Analysis of gases*.

A list of all parts in the ISO 6142 series can be found on the ISO website.

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Gas analysis — Preparation of calibration gas mixtures —

Part 1:
Gravimetric method for Class I mixtures

AMENDMENT 1: Corrections to formulae in Annex E and Annex G

Annex E, Formulae (E.3) and (E.4)

Replace Formula (E.3) with the following:

$$M_i = \sum_{z=1}^{Z} v_{z,i} A_z$$

Replace Formula (E.4) with the following:

$$u^2(M_i) = \sum_{z=1}^{Z} v_{z,i}^2 u^2(A_z)$$

Annex G, Formulae (G.1), (G.2), (G.3), (G.4), (G.5). (G.6) and (G.7)

Replace Formula (G.1) with the following:

$$\frac{\partial y_k}{\partial m_j} = \frac{1}{n_\Omega}\frac{x_{k,j}}{M_j} - \frac{n_k}{n_\Omega^2}\frac{1}{M_j}$$

Replace Formula (G.2) with the following:

$$\frac{\partial y_k}{\partial M_i} = -\frac{1}{n_\Omega}\sum_{j=1}^{r}\frac{x_{k,j}m_j}{M_j^2}x_{ij} + \frac{n_k}{n_\Omega^2}\sum_{j=1}^{r}\frac{m_j}{M_j^2}x_{i,j}$$

Replace Formula (G.3) with the following:

$$\frac{\partial y_k}{\partial x_{i,j}} = -\frac{1}{n_\Omega}\frac{x_{k,j}m_j}{M_j^2}M_i + \frac{n_k}{n_\Omega^2}\frac{m_j}{M_j^2}M_i \quad (\text{for } i \neq k)$$

Replace Formula (G.4) with the following:

$$\frac{\partial y_k}{\partial x_{k,j}} = \frac{1}{n_\Omega}\left(-\frac{x_{k,j} m_j}{M_j^2} M_k + \frac{m_j}{M_j} \right) + \frac{n_k}{n_\Omega^2} \frac{m_j}{M_j^2} M_i$$

Replace Formula (G.5) with the following:

$$n_k = \sum_{j=1}^{r} \frac{x_{k,j} m_j}{M_j}$$

Replace Formula (G.6) with the following:

$$n_\Omega = \sum_{j=1}^{r} \frac{m_j}{M_j}$$

Replace Formula (G.7) with the following:

$$M_j = \sum_{i=1}^{q} x_{i,j} M_i$$

