



財團法人全國認證基金會  
Taiwan Accreditation Foundation

**Certification Accreditation**  
(Certificate No : R001-220921)

This is to certify that

**National Measurement Laboratory, R.O.C.**

321, Sec. 2, Kuang Fu Rd., Hsinchu, Taiwan, R.O.C.

**is accredited in respect of Reference Material Producer**

**Accreditation Criteria** : ISO 17034:2016

**Accreditation Number** : R001

**Originally Accredited** : April 16, 2012

**Effective Period** : October 28, 2020 to October 27, 2025

**Accredited Scope** : Gas mixtures, see described in the Appendix



Scan to verify

*Ching-Chang Lien*

Ching-Chang Lien  
President, Taiwan Accreditation Foundation  
September 21, 2022

Accreditation Number : R001

Producer Head : LIN, Tzeng-Yow

Category and Subcategory of RMs Produced	RM Types (CRM/RM)	Item/Parameter	Measurement Method /Technique	Approach used to assign property values	Approval Signatory
A7.1 Gas mixtures	CRM	<p>C<sub>3</sub>H<sub>8</sub> in N<sub>2</sub> : (0.1 to 50) mmol/mol <math>U_r = (0.5 \text{ to } 1.0) \%</math></p> <p>CF<sub>4</sub> in N<sub>2</sub> : (100 to 3000) <math>\mu\text{mol/mol}</math> <math>U_r = (0.3 \text{ to } 1.0) \%</math></p> <p>CH<sub>4</sub> in Air : (1.0 to 20) mmol/mol <math>U_r = (0.3 \text{ to } 0.8) \%</math></p> <p>CH<sub>4</sub> in N<sub>2</sub> : (&gt;1.0 to 100) mmol/mol <math>U_r = (0.1 \text{ to } 0.8) \%</math></p> <p>CH<sub>4</sub> in N<sub>2</sub> : (100 to 1000) <math>\mu\text{mol/mol}</math> <math>U_r = (0.8 \text{ to } 1.0) \%</math></p> <p>CO in N<sub>2</sub> : (&gt;0.1 to 100) mmol/mol <math>U_r = (0.2 \text{ to } 1.0) \%</math></p> <p>CO in N<sub>2</sub> : (1.0 to 100) <math>\mu\text{mol/mol}</math> <math>U_r = (1.0 \text{ to } 3.0) \%</math></p> <p>CO<sub>2</sub> in N<sub>2</sub> : (&gt;1.0 to 160) mmol/mol <math>U_r = (0.1 \text{ to } 0.8) \%</math></p> <p>CO<sub>2</sub> in N<sub>2</sub> : (100 to 1000) <math>\mu\text{mol/mol}</math> <math>U_r = (0.2 \text{ to } 1.2) \%</math></p>	ISO 6142-1 ISO 6143	gravimetric method	LIU, Hsin-Wang  FENG, Yun



Category and Subcategory of RMs Produced	RM Types (CRM/RM)	Item/Parameter	Measurement Method /Technique	Approach used to assign property values	Approval Signatory
		<p>NO in N<sub>2</sub> : (50 to 2000) μmol/mol <math>U_r = (0.8 \text{ to } 2.0) \%</math></p> <p>O<sub>2</sub> in N<sub>2</sub> : (&gt;10 to 250) mmol/mol <math>U_r = (0.3 \text{ to } 1.0) \%</math></p> <p>O<sub>2</sub> in N<sub>2</sub> : (1.0 to 10) μmol/mol <math>U_r = (1.5 \text{ to } 3.0) \%</math></p> <p>O<sub>2</sub> in N<sub>2</sub> : (1.0 to 10) mmol/mol <math>U_r = (0.5 \text{ to } 1.5) \%</math></p> <p>SF<sub>6</sub> in N<sub>2</sub> : (10 to 1000) μmol/mol <math>U_r = (0.5 \text{ to } 1.5) \%</math></p> <p>SO<sub>2</sub> in N<sub>2</sub> : (50 to 2000) μmol/mol <math>U_r = (0.5 \text{ to } 1.5) \%</math></p>			

