

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

Certificate of Accreditation

(Certificate No: R001-240920)

This is to certify that

National Measurement Laboratory, R.O.C. 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

Yi-Ling Chem

Yi-Ling Chen President, Taiwan Accreditation Foundation September 20, 2024

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The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

Accreditation Number : R001 Producer Head : LAN, Yu-Ping

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	CRM	C ₃ H ₈ in N ₂ :	ISO 6142-1	gravimetric	LIU, Hsin-
Gas mixtures		(0.1 to 50) mmol/mol $U_r = (0.5 \text{ to } 1.0) \%$	ISO 6143	method	Wang
	CF ₄ in N ₂ : (100 to 3000) μ mol/mol $U_r = (0.3 \text{ to } 1.0) \%$			FENG, Yun	
	CH ₄ in Air : (1.0 to 20) mmol/mol $U_r = (0.3 \text{ to } 0.8) \%$				
	CH ₄ in N ₂ : (>1.0 to 100) mmol/mol U _r = (0.1 to 0.8) %				
	CH ₄ in N ₂ : (100 to 1000) μ mol/mol $U_r = (0.8 \text{ to } 1.0) \%$				
		CO in N ₂ : (>0.1 to 100) mmol/mol $U_r = (0.2 \text{ to } 1.0) \%$			
	CO in N ₂ : (1.0 to 100) μ mol/mol $U_{\rm r}$ = (1.0 to 3.0) %				
	CO ₂ in N ₂ : (>1.0 to 160) mmol/mol $U_r = (0.1 \text{ to } 0.8) \%$				
	CO ₂ in N ₂ : (100 to 1000) μ mol/mol $U_r = (0.2 \text{ to } 1.2) \%$				





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Category and Subcategory of RMs	RM Types (CRM/RM)	Item/Parameter	Measurement Method /Technique	Approach used to assign Property	Approval Signatory
Produced	CDM	NO: N	100 (140 1	values	
A7.1 Gas	CRM	NO in N ₂ : (50 to 2000) μ mol/mol $U_r = (0.8 \text{ to } 2.0) \%$	ISO 6142-1 ISO 6143	gravimetric method	LIU, Hsin- Wang
mixtures	$O_2 \text{ in } N_2$: (>10 to 250) mmol/mol $U_r = (0.3 \text{ to } 1.0) \%$			FENG, Yun	
		O ₂ in N ₂ : (1.0 to 10) μ mol/mol U _r = (1.5 to 3.0) %			
		O ₂ in N ₂ : (1.0 to 10) mmol/mol $U_r = (0.5 \text{ to } 1.5) \%$			
		SF ₆ in N ₂ : (10 to 1000) μ mol/mol $U_r = (0.5 \text{ to } 1.5) \%$			
		SO ₂ in N ₂ : (50 to 2000) μ mol/mol U_r = (0.5 to 1.5) %			

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The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix