



Ref No. : 0303/1116

## CERTIFICATE OF REFERENCE MATERIAL PRODUCER ACCREDITATION

This is to certify that

*National Institute of Metrology, Thailand  
3/4-5 Moo 3, Tambon Klong Ha, Amphoe Klong Luang,  
Changwat Pathumthani 12120*

has successfully undergone assessment according to ISO 17034 : 2016  
and under the Bureau of Laboratory Accreditation, Department of Science Service  
for the requirements, regulations and criteria for the competence of reference material producers

**Accreditation Number RMP - 0004**

The scope of accreditation is as annexed hereto

Issue date : *6<sup>th</sup> February 2025*

Expired date : *5<sup>th</sup> February 2029*

Signature : *Chantararat Vorasapavit*  
(Mrs. Chantararat Vorasapavit)

Director of Bureau of Laboratory Accreditation

## Scope of Reference Material Producer Accreditation

Name : National Institute of Metrology, Thailand

Address : 3/4-5 Moo 3, Tambon Klong Ha, Amphoe Klong Luang,  
Changwat Pathumthani 12120

Accreditation Number : RMP - 0004

Accreditation standard : ISO 17034 : 2016

Status :  Permanent  Site  Temporary  Mobile

Item Number	Reference material / Artifact or Matrix	Properties to be certified (Analyte/ Parameter or etc.)	Range of property value	Expanded uncertainty (Confidence level approximately 95%)	Characterization technique (s) used
Certified reference material					
1	Ethanol-water standard solution	Ethanol in aqueous matrix	0.1 mg/g to 5 mg/g	2 % to 5 % (Relative expanded uncertainty)	Gravimetric method
2	Ethanol-water standard solution	Ethanol in aqueous matrix	30 mg/g to 600 mg/g	2 % to 5 % (Relative expanded uncertainty)	Gravimetric method
3	Ethanol standard	Purity of ethanol	900 mg/g to 1 000 mg/g	0.6 % to 1.2 % (Relative expanded uncertainty)	Mass balance method

Initial Issue Date 6<sup>th</sup> February 2025

Issue Number 1

## Scope of Reference Material Producer Accreditation

Name : National Institute of Metrology, Thailand

Address : 3/4-5 Moo 3, Tambon Klong Ha, Amphoe Klong Luang,  
Changwat Pathumthani 12120

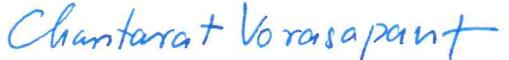
Accreditation Number : RMP - 0004

Accreditation standard : ISO 17034 : 2016

Status :  Permanent  Site  Temporary  Mobile

Item Number	Reference material / Artifact or Matrix	Properties to be certified (Analyte/ Parameter or etc.)	Range of property value	Expanded uncertainty (Confidence level approximately 95%)	Characterization technique (s) used
Certified reference material					
4	Sucrose standard solution	Sucrose in aqueous matrix	5 % Brix to 60 % Brix  1.34026 to 1.44193 refractive index	0.020 % Brix to 0.090 % Brix  0.00009 to 0.00010 refractive index	Gravimetric method  Refractometry

Issue Date : 6<sup>th</sup> February 2025

Signature :   
(Mrs. Chantarat Vorasapavit)

Director of Bureau of Laboratory Accreditation

Initial Issue Date 6<sup>th</sup> February 2025

Issue Number 1

Bureau of Laboratory Accreditation, Department of Science Service, Ministry of Higher Education, Science, Research and Innovation