



22·09·16- NITE-AC-002  
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## Certificate of Accreditation

International Accreditation Japan (IAJapan) hereby accredits the following conformity assessment body as a Reference Material Producer of ASNITE accreditation program.

Accreditation Identification: ASNITE 0005 RMP

Name of Conformity Assessment Body: CERI TOKYO,  
Chemicals Evaluation and Research Institute, JAPAN

Name of Legal Entity: Chemicals Evaluation and Research Institute, JAPAN

Location of Conformity Assessment Body: 1600 Shimotakano, Sugito-machi, Kitakatsushika-gun,  
Saitama 345-0043, JAPAN

Scope of Accreditation: as the following pages

Accreditation Requirement: ISO 17034:2016\*

\* The relevant accreditation requirements described in the Accreditation Scheme Document for ASNITE-R(NMI) are also applied.

Effective Date of Accreditation: 2023-02-01

Expiry Date of Accreditation: 2028-01-31

Date of Initial Accreditation: 2003-01-31

A handwritten signature in black ink, appearing to read 'K. Saito', is written over a horizontal line.

SAITO Kazunori

Chief Executive, International Accreditation Japan (IAJapan)

National Institute of Technology and Evaluation

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- International Accreditation Japan (IAJapan) is an RMP accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation).
  - MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programs, surveillance and reassessment, and the policy on the traceability of measurement for MRA purpose.
  - This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system in accordance with the recognized International Standard ISO 17034:2016.
  - The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

Category: Chemical Reference Materials

Type: Certified Reference Material

Property Characterized: Concentration

Measurement technique: Gravimetric blending method

The Approach Used to Assign a Property Value: a single reference measurement procedure in a single laboratory  
(ISO 17034:2016 7.12.3 NOTE 1 a))

Sub-Category	Analyte or Component	Range of Property Value	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	Effective Date of Accreditation
Standard gas (jess)	Methane (air dilution)	From 1 vol ppm to less than 5 vol ppm	0.50 %	2023-02-01
		From 5 vol ppm to 50 vol ppm	0.20 %	
	Propane (air dilution)	From 3.5 vol ppm to 500 vol ppm	0.25 %	
	Propane (nitrogen dilution)	From 150 vol ppm to 1.5 vol %	0.25 %	
	Carbon monoxide (nitrogen dilution)	From 3 vol ppm to less than 10 vol ppm	0.40 %	
		From 10 vol ppm to 15 vol %	0.30 %	
	Carbon dioxide (nitrogen dilution)	From 3 vol ppm to less than 200 vol ppm	0.45 %	
		From 200 vol ppm to 16 vol %	0.30 %	
	Nitric oxide (nitrogen dilution)	From 0.05 vol ppm to less than 0.1 vol ppm	12 %	
		0.1 vol ppm	4.5 %	
		More than 0.1 vol ppm to less than 0.5 vol ppm	3.0 %	
		From 0.5 vol ppm to less than 1 vol ppm	0.80 %	
	Nitric dioxide (air dilution)	From 1 vol ppm to 5 vol %	0.40 %	
		From 5 vol ppm to 50 vol ppm	0.80 %	
	Oxygen (nitrogen dilution)	From 1 vol % to 25 vol %	0.15 %	
		From 98 vol % to 100 vol %	0.05 %	
	Sulfur dioxide (air dilution)	From 0.05 vol ppm to less than 0.1 vol ppm	19 %	
		0.1 vol ppm	9.0 %	
	Sulfur dioxide (nitrogen dilution)	From 0.1 vol ppm to less than 0.5 vol ppm	3.2 %	
		From 0.5 vol ppm to less than 1 vol ppm	0.80 %	
From 1 vol ppm to less than 20 vol ppm		0.60 %		
From 20 vol ppm to 1 vol %		0.40 %		

Accreditation Category for Certified Reference Materials Producer: Chemical Reference Materials  
RM/CRM: CRM

Sub-Category	Analyte or Component	Range of Property Value	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	Effective Date of Accreditation
Standard gas (jess)	Ammonia (nitrogen dilution)	From 20 vol ppm to 100 vol ppm	1.5 %	2023-02-01
	Ethanol (nitrogen dilution)	From 100 vol ppm to less than 500 vol ppm	0.9 %	
		500 vol ppm	0.6 %	
	Ethanol (air dilution)	From 100 vol ppm to less than 500 vol ppm	1.1 %	
		500 vol ppm	0.7 %	
	Zero gas (Air or N <sub>2</sub> )	coexisting analytes CH <sub>4</sub> : 0.1 vol ppm or less than, CO: 0.1 vol ppm or less than, CO <sub>2</sub> : 0.1 vol ppm or less than, NO <sub>x</sub> : 0.005 vol ppm or less than, SO <sub>2</sub> : 0.005 vol ppm or less than,	—	

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Sub-Category	Analyte or Component	Range of Property Value	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	Effective Date of Accreditation
Standard gas (CCQM)	Methane (air dilution)	From 1 vol ppm to less than 10 vol ppm	3.6 % to 0.36 %	2023-02-01
		From 10 vol ppm to 50 vol ppm	0.36 %	
	Propane (air dilution)	From 3.5 vol ppm to less than 10 vol ppm	0.31 % to 0.25 %	
		From 10 vol ppm to 500 vol ppm	0.25 %	
	Propane (nitrogen dilution)	From 150 vol ppm to 1.5 vol %	0.25 %	
	Carbon monoxide (nitrogen dilution)	From 3 vol ppm to less than 5 vol ppm	0.60 % to 0.40 %	
		From 5 vol ppm to 15 vol %	0.40 %	
	Carbon dioxide (nitrogen dilution)	From 10 vol ppm to 16 vol %	0.36 %	
	Nitric oxide (nitrogen dilution)	From 0.1 vol ppm to less than 10 vol ppm	32 % to 0.40 %	
		From 10 vol ppm to 5 vol %	0.40 %	
	Nitric dioxide (air dilution)	From 5 vol ppm to 50 vol ppm	3.0 %	
	Oxygen (nitrogen dilution)	From 1.0 vol % to 25 vol %	0.15 %	
	Sulfur dioxide (nitrogen dilution)	From 0.1 vol ppm to less than 10 vol ppm	6.0 % to 0.60 %	
		From 10 vol ppm to 1 vol %	0.60 %	
	Ammonia (nitrogen dilution)	From 20 vol ppm to 100 vol ppm	1.5 %	
Ethanol (nitrogen dilution)	From 100 vol ppm to 500 vol ppm	1.1 %		
Ethanol (air dilution)	From 100 vol ppm to 500 vol ppm	1.1 %		

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Sub-Category	Analyte or Component	Range of Property Value	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	Effective Date of Accreditation
Standard gas (CCQM)	8 mixture (nitrogen dilution)			2023-02-01
	benzene	50 vol ppb ~ 100 vol ppm	2 % to 1 %	
	chloroform		2 % to 1 %	
	dichloromethane		2 % to 1 %	
	trichloroethylene		2 % to 1 %	
	1,2-dichloroethane		3 % to 2 %	
	tetrachloroethylene		2 % to 1 %	
	1,3-butadiene		2 % to 1 %	
	vinyl chloride		2 % to 1 %	
	5 mixture (nitrogen dilution)			
	benzene	20 vol ppb ~ 100 vol ppb	1.6 vol ppb *	
	toluene		1.0 vol ppb *	
	<i>m</i> - xylene		1.0 vol ppb *	
	<i>o</i> - xylene		1.0 vol ppb *	
	ethylbenzene		1.0 vol ppb *	
	3 mixture (nitrogen dilution)			
benzene	2 vol ppb ~ 20 vol ppb	0.9 vol ppb *		
toluene		0.7 vol ppb *		
<i>o</i> - xylene		0.7 vol ppb *		

note) \*: absolute value

Accreditation Category for Certified Reference Materials Producer: Chemical Reference Materials  
RM/CRM: CRM

Sub-Category	Analyte or Component	Range of Property Value (mg/L)	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		Effective Date of Accreditation
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	Chloroform	100 to 1000	Methanol	2.0 %	1.7 %	2023-02-01
			Hexane	0.6 %	0.7 %	
	1,2-Dichloroethane	100 to 1000	Methanol	0.8 %	1.3 %	
			Hexane	1.6 %	0.8 %	
	Dichloromethane	100 to 1000	Methanol	1.5 %	1.4 %	
			Hexane	1.4 %	1.2 %	
	Carbon tetrachloride	100 to 1000	Methanol	2.0 %	1.2 %	
			Hexane	1.9 %	0.8 %	
	Tetrachloroethylene	100 to 1000	Methanol	2.8 %	1.7 %	
			Hexane	0.6 %	0.8 %	
	Toluene	100 to 1000	Methanol	0.9 %	2.4 %	
			Hexane	0.9 %	2.0 %	
	Trichloroethylene	100 to 1000	Methanol	2.4 %	1.6 %	
			Hexane	0.8 %	1.3 %	
	Benzene	100 to 1000	Methanol	1.0 %	0.8 %	
			Hexane	0.6 %	0.6 %	
	<i>o</i> -Xylene	100 to 1000	Methanol	1.0 %	0.8 %	
			Hexane	0.7 %	0.8 %	
	<i>m</i> -Xylene	100 to 1000	Methanol	1.2 %	0.7 %	
			Hexane	0.7 %	0.7 %	
<i>p</i> -Xylene	100 to 1000	Methanol	1.0 %	0.8 %		
		Hexane	0.7 %	0.6 %		
1,1-Dichloroethylene	100 to 1000	Methanol	1.5 %	1.2 %		
		Hexane	0.8 %	1.3 %		
<i>cis</i> -1,3-Dichloropropene	100 to 1000	Methanol	1.3 %	1.2 %		
		Hexane	1.6 %	0.9 %		
<i>cis</i> -1,2-Dichloroethylene	100 to 1000	Methanol	0.9 %	0.7 %		
		Hexane	1.0 %	0.9 %		

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Sub-Category	Analyte or Component	Range of Property Value (mg/L)	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		Effective Date of Accreditation
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	1,1,1-Trichloroethane	100 to 1000	Methanol	1.8 %	0.8 %	2023-02-01
			Hexane	1.3 %	0.9 %	
	1,1,2-Trichloroethane	100 to 1000	Methanol	0.9 %	0.6 %	
			Hexane	0.8 %	0.8 %	
	<i>trans</i> -1,3-Dichloropropene	100 to 1000	Methanol	1.5 %	1.3 %	
			Hexane	0.8 %	0.8 %	
	Diethyl phthalate	1000	Methanol	—	0.9 %	
			Hexane	—	0.7 %	
	Di- <i>n</i> -butyl phthalate	1000	Methanol	—	0.8 %	
			Hexane	—	1.0 %	
	Di-2-ethylhexyl phthalate	1000	Methanol	—	0.9 %	
			Hexane	—	1.5 %	
	Butylbenzyl phthalate	1000	Methanol	—	0.5 %	
			Hexane	—	0.7 %	
	4- <i>t</i> -Octylphenol	1000	Methanol	—	0.4 %	
			Hexane	—	0.7 %	
	4- <i>t</i> -Butylphenol	1000	Methanol	—	0.5 %	
			Hexane	—	0.5 %	
	4- <i>n</i> -Heptylphenol	1000	Methanol	—	0.7 %	
			Hexane	—	0.5 %	
	Tribromomethane	100 to 1000	Methanol	0.3 %	0.3 %	
			Hexane	0.4 %	0.3 %	
	Bromodichloromethane	100 to 1000	Methanol	0.4 %	0.3 %	
			Hexane	0.4 %	0.3 %	
Dibromochloromethane	100 to 1000	Methanol	0.3 %	0.2 %		
		Hexane	0.4 %	0.3 %		
<i>trans</i> -1,2-Dichloroethylene	100 to 1000	Methanol	0.5 %	0.3 %		
		Hexane	0.3 %	0.4 %		
1,2-Dichloropropane	100 to 1000	Methanol	0.4 %	0.4 %		
		Hexane	0.5 %	0.5 %		

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Sub-Category	Analyte or Component	Range of Property Value (mg/L)	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		Effective Date of Accreditation
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	1,4-Dichlorobenzene	100 to 1000	Methanol	0.4 %	0.3 %	2023-02-01
			Hexane	0.4 %	0.3 %	
	Bisphenol A	1000	Methanol	—	0.3 %	
			Hexane	—	—	
	4- <i>n</i> -Nonylphenol	1000	Methanol	—	0.4 %	
			Hexane	—	0.5 %	
	2,4-Dichlorophenol	1000	Methanol	—	0.4 %	
			Hexane	—	0.4 %	



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Sub-Category	Analyte or Component	Range of Property Value (mg/L)	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		Effective Date of Accreditation
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	23 VOC Mixture Standard Solution					
	Dichloromethane	1000	Methanol	—	0.5 %	2023-02-01
	Chloroform				0.5 %	
	Carbon tetrachloride				0.5 %	
	Trichloroethylene				0.5 %	
	Tetrachloroethylene				0.5 %	
	1,2-Dichloroethane				0.5 %	
	Toluene				0.5 %	
	Benzene				0.5 %	
	<i>o</i> -Xylene				0.5 %	
	<i>m</i> -Xylene				0.5 %	
	<i>p</i> -Xylene				0.5 %	
	1,1,1-Trichloroethane				0.5 %	
	1,1-Dichloroethylene				1.0 %	
	<i>cis</i> -1,2-Dichloroethylene				0.5 %	
	1,1,2-Trichloroethane				0.5 %	
	<i>trans</i> -1,3-Dichloropropene				2.5 %	
	<i>cis</i> -1,3-Dichloropropene				2.0 %	
	Tribromomethane				0.5 %	
	Bromodichloromethane				0.5 %	
	Dibromochloromethane				0.5 %	
	<i>trans</i> -1,2-Dichloroethylene				0.5 %	
	1,2-Dichloropropane				0.5 %	
1,4-Dichlorobenzene	0.5 %					

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Sub-Category	Analyte or Component	Range of Property Value (mg/L)	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		Effective Date of Accreditation	
				From 100 mg/L less than 1000 mg/L	1000 mg/L		
Standard solution	6 Alkylphenol Mixture Standard Solution						
	4- <i>t</i> -Octylphenol	100	Methanol	0.5 %	-	2023-02-01	
	2,4-Dichlorophenol			0.5 %	-		
	4- <i>n</i> -Nonylphenol			1.0 %	-		
	Bisphenol A			1.0 %	-		
	4- <i>t</i> -Butylphenol			0.5 %	-		
	4- <i>n</i> -Heptylphenol			1.0 %	-		
	5 Alkylphenol Mixture Standard Solution						
	4- <i>t</i> -Octylphenol	100	Hexane	0.5 %	-		
	2,4-Dichlorophenol			0.5 %	-		
	4- <i>n</i> -Nonylphenol			1.0 %	-		
	4- <i>t</i> -Butylphenol			1.0 %	-		
	4- <i>n</i> -Heptylphenol			1.0 %	-		
	8 Ester Phthalates Mixture Standard Solution						
	Diethylphthalate	100	Hexane	0.5 %	-		
	Di-2-ethylhexyl phthalate			1.0 %	-		
	Di- <i>n</i> -butyl phthalate			0.5 %	-		
	Butylbenzyl phthalate			0.5 %	-		
	Di- <i>n</i> -hexyl phthalate			1.0 %	-		
	Dicyclohexyl phthalate			1.0 %	-		
	Di- <i>n</i> -pentyl phthalate			0.5 %	-		
Di- <i>n</i> -propyl phthalate	1.5 %			-			

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				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	Di- <i>n</i> -hexyl phthalate	100	Hexane	1.0 %	—	2023-02-01
	Dicyclohexyl phthalate	100	Hexane	1.0 %	—	
	Di- <i>n</i> -pentyl phthalate	100	Hexane	0.5 %	—	
	Di- <i>n</i> -propyl phthalate	100	Hexane	1.5 %	—	

*(End of Attachment)*