



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 calibration laboratory of ASNITE accreditation program.

Accreditation Identification: ASNITE 0005 Calibration

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/IEC 17025:2017*

* The relevant accreditation requirements described in the Accreditation Scheme Document for ASNITE-C(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 a laboratory 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 for the traceability of measurement for MRA purpose.
 - This laboratory fulfills ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation means this laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).
 - The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

Accreditation Category for Calibration Laboratory: ChemistryLaboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities			Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	
Standard gas (jcss)	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 %	
		From 1 vol ppm to 5 vol %	0.40 %	
	Nitric dioxide (air dilution)	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 %		

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	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	
Standard gas (jcss)	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 ₂)	coexisting analytes CH ₄ : 0.1 vol ppm or less than, CO: 0.1 vol ppm or less than, CO ₂ : 0.1 vol ppm or less than, NO _x : 0.005 vol ppm or less than, SO ₂ : 0.005 vol ppm or less than	—		

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Quantity	Calibration and Measurement Capabilities			Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	
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	60 % 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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Quantity	Calibration and Measurement Capabilities			Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	
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 %	
	Tetrachloroethylen		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 *	
	Ethylbenzen		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

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Quantity	Calibration and Measurement Capabilities					Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	Chloroform	From 100mg/L to 1000 mg/L	Methanol	2.0 %	1.7 %	2023-02-01
			Hexane	0.6 %	0.7 %	
	1,2-Dichloroethane	From 100mg/L to 1000 mg/L	Methanol	0.8 %	1.3 %	
			Hexane	1.6 %	0.8 %	
	Dichloromethane	From 100mg/L to 1000 mg/L	Methanol	1.5 %	1.4 %	
			Hexane	1.4 %	1.2 %	
	Carbon tetrachloride	From 100mg/L to 1000 mg/L	Methanol	2.0 %	1.2 %	
			Hexane	1.9 %	0.8 %	
	Tetrachloroethylene	From 100mg/L to 1000 mg/L	Methanol	2.8 %	1.7 %	
			Hexane	0.6 %	0.8 %	
	Toluene	From 100mg/L to 1000 mg/L	Methanol	0.9 %	2.4 %	
			Hexane	0.9 %	2.0 %	
	Trichloroethylene	From 100mg/L to 1000 mg/L	Methanol	2.4 %	1.6 %	
			Hexane	0.8 %	1.3 %	
	Benzene	From 100mg/L to 1000 mg/L	Methanol	1.0 %	0.8 %	
			Hexane	0.6 %	0.6 %	
	<i>o</i> -Xylene	From 100mg/L to 1000 mg/L	Methanol	1.0 %	0.8 %	
			Hexane	0.7 %	0.8 %	
	<i>m</i> -Xylene	From 100mg/L to 1000 mg/L	Methanol	1.2 %	0.7 %	
			Hexane	0.7 %	0.7 %	
	<i>p</i> -Xylene	From 100mg/L to 1000 mg/L	Methanol	1.0 %	0.8 %	
			Hexane	0.7 %	0.6 %	
	1,1-Dichloroethylene	From 100mg/L to 1000 mg/L	Methanol	1.5 %	1.2 %	
			Hexane	0.8 %	1.3 %	
<i>cis</i> -1,3-Dichloropropene	From 100mg/L to 1000 mg/L	Methanol	1.3 %	1.2 %		
		Hexane	1.6 %	0.9 %		
<i>cis</i> -1,2-Dichloroethylene	From 100mg/L to 1000 mg/L	Methanol	0.9 %	0.7 %		
		Hexane	1.0 %	0.9 %		

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Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

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

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Quantity	Calibration and Measurement Capabilities					Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	1,4-Dichlorobenzene	From 100mg/L to 1000 mg/L	Methanol	0.4 %	0.3 %	2023-02-01
			Hexane	0.4 %	0.3 %	
	Bisphenol A	1000 mg/L	Methanol	—	0.3 %	
			Hexane	—	—	
	4- <i>n</i> -Nonylphenol	1000 mg/L	Methanol	—	0.4 %	
			Hexane	—	0.5 %	
	2,4-Dichlorophenol	1000 mg/L	Methanol	—	0.4 %	
			Hexane	—	0.4 %	

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Quantity	Calibration and Measurement Capabilities				Effective Date of Accreditation	
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		
				From 100 mg/L less than 1000 mg/L		1000 mg/L
Standard solution	23 VOC Mixture Standard Solution				2023-02-01	
	Dichloromethane	1000 mg/L	Methanol	—		0.5 %
	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 %					

Accreditation Category for Calibration Laboratory: Chemistry

Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities					Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	6 Alkylphenol Mixture Standard Solution					2023-02-01
	4- <i>t</i> -Octylphenol	100 mg/L	Methanol	0.5 %	-	
	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 mg/L	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 mg/L	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 %	-	

Accreditation Category for Calibration Laboratory: ChemistryLaboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities					Effective Date of Accreditation
	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Diluted Solution	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)		
				From 100 mg/L less than 1000 mg/L	1000 mg/L	
Standard solution	Di- <i>n</i> -hexyl phthalate	100 mg/L	Hexane	1.0 %	—	2023-02-01
	Dicyclohexyl phthalate	100 mg/L	Hexane	1.0 %	—	
	Di- <i>n</i> -pentyl phthalate	100 mg/L	Hexane	0.5 %	—	
	Di- <i>n</i> -propyl phthalate	100 mg/L	Hexane	1.5 %	—	

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	Calibration Procedures and Type of Instruments/Materials to be calibrated	Measurand Level or Range	Expanded Uncertainty (level of confidence approximately 95 %) (relative value)	
Purity determination by NMR method (including purity verification by GC method)	High-purity organic reference materials	From 0.900 kg/kg to 1.000 kg/kg	0.5 %	2023-02-01
Purity determination by NMR method (including purity verification by HPLC method)	High-purity organic reference materials	From 0.900 kg/kg to 1.000 kg/kg	0.5 %	

(End of Attachment)