FUJIFILM
Value from Innovation

Wako

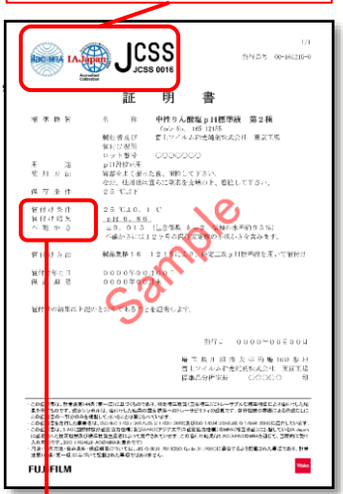
Japan Calibration Service System

JCSS Reference Material (CRM)

JCSS (Japan Calibration Service System) is a traceability system based on the Measurement Law of Japan. It is developed from time to time and used as a reference material for various official methods in Japan. JCSS are reference materials that ensure traceability to specific reference materials, managed by CERI (Chemicals Evaluation and Research Institute, Japan), a designated calibration institute under the Measurement Law of Japan. JCSS standard solutions are accompanied by a calibration certificate bearing the IAJapan and MRA (Mutual Recognition Agreement) symbols, and the concentrations on the calibration certificate are accepted internationally through the MRA of ILAC/APAC. Fujifilm Wako provides JCSS reference materials such as inorganic (ion/metal), organic, and pH standard solutions.

JCSS calibration certificate

IAJapan, MRA, JCSS symbol

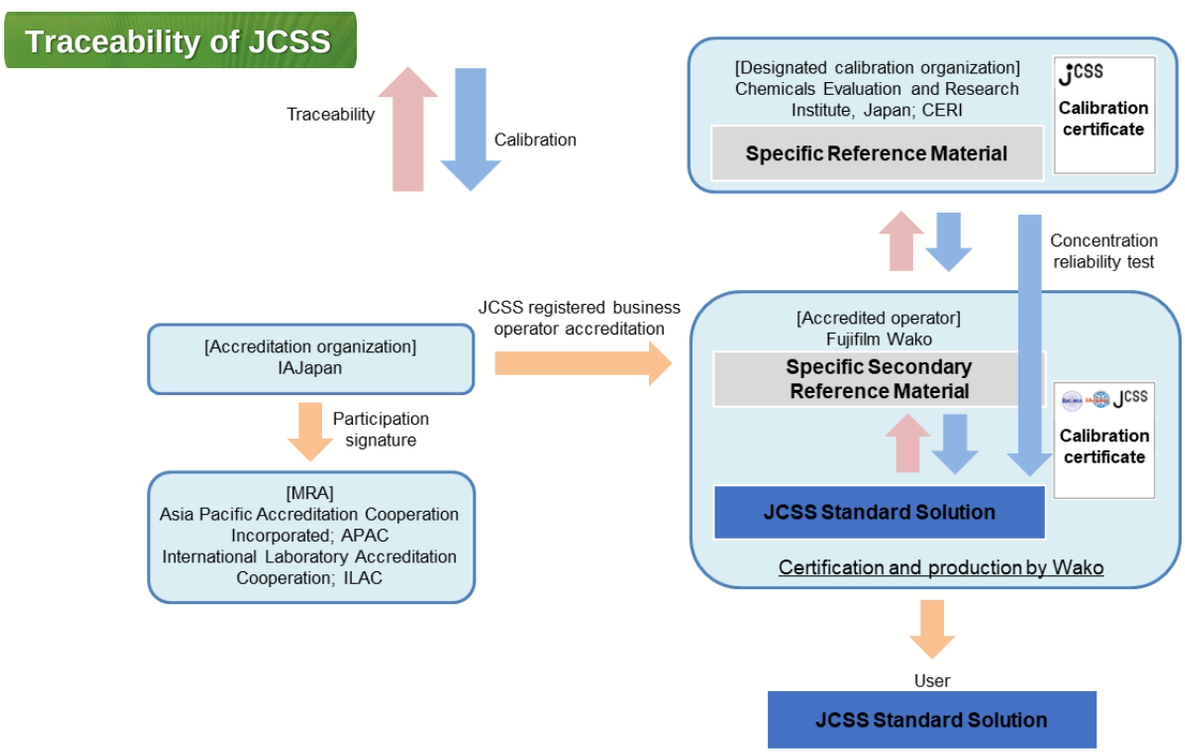


Concentration, uncertainty, etc.

Features

- ✓ By valuing our products using specific reference materials and conducting concentration reliability tests on the valued products at CERI, **we maintain the high reliability of the value**.
- ✓ The calibration certificate included with the product **bears the IAJapan and JCSS symbols.**
- ✓ The calibration certificate bears the MRA symbol, which indicates that the **listed characteristic values are internationally acceptable.**

Traceability of JCSS



Organic standard solution (single standard solution)

Code No.	Product Name	Concentration (mg/L)	Volume
066-06561	Formaldehyde Standard Solution (Methanol Solution)	1,000	2 mL×5A
086-10571	Heptaoxyethylene Dodecyl Ether Standard Solution (Methanol Solution)	100	2 mL×5A
205-20711	Total Organic Carbon Standard Solution	1,000	10 mL

Organic standard solution (mixture standard solution)

Code No.	Product Name Composition	Volume
018-28861	**Anionic Surfactants Mixture Standard Solution (Methanol Solution)** C_{10}-LAS, C_{11}-LAS, C_{12}-LAS, C_{13}-LAS, C_{14}-LAS 100 mg/L each	1 mL×5A
084-10491	**4 Haloacetic Acid Mixture Standard Solution(*t*-Butyl Methyl Ether Solution)** Bromoacetic Acid, Chloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid 1,000 mg/L each	2 mL×5A
134-18901	**2 Musty Odor Substances Mixture Standard Solution (Methanol Solution)** Geosmin, 2-Methylisoborneol 100 mg/L each	2 mL
163-28521	**6 Phenols Mixture Standard Solution (Acetone Solution)** 2-Chlorophenol, 4-Chlorophenol, 2,4-Dichlorophenol, 2,6-Dichlorophenol, Phenol, 2,4,6-Trichlorophenol 1,000 mg/L each	2 mL×5A

Inorganic standard solution

: JCSS available

: JCSS not available

Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra																

La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Ac	Th	Pa	U											

Ion	Br^-	BrO_3^-	Cl^-	ClO_2^-	ClO_3^-	F^-	NH_4^+	NO_2^-	NO_3^-	PO_4^{3-}	SO_4^{2-}

Ion standard solution (mixture standard solution)

Code No.	Product Name	Composition: Concentration (mg/L)	Volume
019-24011	Anion Mixture Standard Solution 1	Br^-: 100, Cl^-: 20, F^-: 20, NO_2^-: 100, NO_3^-: 100, PO_4^{3-}: 200, SO_4^{2-}: 100	50 mL
012-28021	5 Anion Mixture Standard Solution	NO_3^- (as N): 100, NO_2^-(as N): 10, F^-: 100, Cl^-: 200, ClO_3^-: 100	50 mL

Ion standard solution (single standard solution)

Code No.	Product Name		Composition	Concentration (mg/L)	Volume
024-15331	Bromide Ion Standard Solution	Br^-	KBr in H_2O	1,000	50 mL
024-18913	Bromate Ion Standard Solution	BrO_3^-	$KBrO_3$ in H_2O	2,000	100 mL
038-16153	Chloride Ion Standard Solution	Cl^-	NaCl in H_2O	1,000	100 mL
036-25581	Chlorite Ion Standard Solution	ClO_2^-	Na_2ClO in H_2O	1,000	100 mL
031-24953	Chlorate Ion Standard Solution	ClO_3^-	$NaClO_3$ in H_2O	1,000	100 mL
066-03401	Fluoride Ion Standard Solution	F^-	NaF in H_2O	1,000	50 mL
019-15461	Ammonium Ion Standard Solution	NH_4^+	NH_4NO_3 in 0.02 mol/L HNO_3	1,000	50 mL
146-06453	Nitrite Ion Standard Solution	NO_2^-	$NaNO_2$ in H_2O	1,000	100 mL
149-06443	Nitrate Ion Standard Solution	NO_3^-	$NaNO_3$ in H_2O	1,000	100 mL
164-17463	Phosphate Ion Standard Solution	PO_4^{3-}	NaH_2PO_4 in H_2O	1,000	100 mL
198-10823	Sulfate Ion Standard Solution	SO_4^{2-}	Na_2SO_4 in H_2O	1,000	100 mL

Please check our website for details.
TOP>Analytical Chemistry>Reference Material (SI Traceable)>JCSS Ion Standard Solution
https://labchem-wako.fujifilm.com/asia/category/01833.html

Metal standard solution (single standard solution)

Code No.	Product Name		Composition	Concentration (mg/L)	Volume
191-18691	Silver Standard Solution	Ag	$Ag(NO_3)$ in 5 w/w% HNO_3	1,000	100 mL
016-15471	Aluminium Standard Solution	Al	$Al(NO_3)_3$ in 0.5 mol/L HNO_3	1,000	100 mL
013-15501	Arsenic Standard Solution	As	As_2O_3 and NaOH in H_2O pH 5.0 with HCl	100	100 mL
013-15481				1,000	100 mL
025-16581	Boron Standard Solution	B	H_3BO_3 in H_2O	1,000	100 mL
027-15321	Barium Standard Solution	Ba	$BaCO_3$ in 0.1 mol/L HNO_3	1,000	100 mL
027-19961	Beryllium Standard Solution	Be	$BeSO_4$ in 0.1 mol/L HNO_3	1,000	100 mL
021-12661	Bismuth Standard Solution	Bi	$Bi(NO_3)_3$ in 0.5 mol/L HNO_3	1,000	100 mL
039-16161	Calcium Standard Solution	Ca	$CaCO_3$ in 0.1 mol/L HNO_3	1,000	100 mL
030-16211	Cadmium Standard Solution	Cd	$Cd(NO_3)_2$ in 0.1 mol/L HNO_3	100	100 mL
036-16171				1,000	100 mL
033-16181	Cobalt Standard Solution	Co	$Co(NO_3)_2$ in 0.1 mol/L HNO_3	1,000	100 mL
037-16221	Chromium Standard Solution	Cr	$K_2Cr_2O_7$ in 0.1mol/L HNO_3	100	100 mL
030-16191				1,000	100 mL
030-21341	Cesium Standard Solution	Cs	CsCl in H_2O	1,000	100 mL
034-16231	Copper Standard Solution	Cu	$Cu(NO_3)_2$ in 0.1 mol/L HNO_3	100	100 mL
033-16201				1,000	100 mL
091-03851	Iron Standard Solution	Fe	$Fe(NO_3)_3$ in 0.1 mol/L HNO_3	100	100 mL
094-03841				1,000	100 mL
070-05781	Gallium Standard Solution	Ga	Ga in 0.5 mol/L HNO_3	1,000	100 mL
135-13671	Mercury Standard Solution	Hg	$HgCl_2$ in 0.1 mol/L HNO_3	100	100 mL
138-13661				1,000	100 mL
092-05841	Indium Standard Solution	In	In in 0.5 mol/L HNO_3	1,000	100 mL
165-17471	Potassium Standard Solution	K	KCl in H_2O	1,000	100 mL
129-05221	Lithium Standard Solution	Li	Li_2CO_3 in 0.2 mol/L HNO_3	1,000	100 mL
136-12121	Magnesium Standard Solution	Mg	$Mg(NO_3)_2$ in 0.1 mol/L HNO_3	1,000	100 mL
139-12111	Manganese Standard Solution	Mn	$Mn(NO_3)_2$ in 0.1 mol/L HNO_3	100	100 mL
133-12131				1,000	100 mL
130-14961	Molybdenum Standard Solution	Mo	Mo in 0.4 mol/L HCl・0.2 mol/L HNO_3	1,000	100 mL
199-10831	Sodium Standard Solution	Na	NaCl in H_2O	1,000	100 mL

Code No.	Product Name		Composition	Concentration (mg/L)	Volume
147-06461	Nickel Standard Solution	Ni	$Ni(NO_3)_2$ in 0.1 mol/L HNO_3	1,000	100 mL
127-04301	Lead Standard Solution	Pb	$Pb(NO_3)_2$ in 0.1 mol/L HNO_3	100	100 mL
124-04291				1,000	100 mL
188-01951	Rubidium Standard Solution	Rb	RbCl in H_2O	1,000	100 mL
010-15491	Antimony Standard Solution	Sb	$SbCl_3$ in 3 mol/L HCl	1,000	100 mL
192-13861	Selenium Standard Solution	Se	Se in 0.1 mol/L HNO_3	1,000	100 mL
196-19481	Silicon Standard Solution	Si	Si in 0.5mol/L KOH	1,000	100 mL
202-16311	Tin Standard Solution	Sn	Sn in 3 mol/L HCl	1,000	100 mL
199-13871	Strontium Standard Solution	Sr	$SrCO_3$ in 0.1 mol/L HNO_3	1,000	100 mL
209-17921	Tellurium Standard Solution	Te	Te in 1 mol/L HCl	1,000	100 mL
204-21761	Titanium Standard Solution	Ti	$Ti(SO_4)_2$ in 1 mol/L H_2SO_4	1,000	100 mL
205-16301	Thallium Standard Solution	Tl	$TlNO_3$ in 1 mol/L HNO_3	1,000	100 mL
221-01851	Vanadium Standard Solution	V	V in 0.2 mol/L HCl・0.5 mol/L HNO_3	1,000	100 mL
261-01431	Zinc Standard Solution (Zn 100)	Zn	$Zn(NO_3)_2$ in 0.1 mol/L HNO_3	100	100 mL
264-01421				1,000	100 mL

Please check our website for details.
TOP>Analytical Chemistry>Elemental Analysis>Single Element Standard Solutions
>Standard for JCSS and AAS Analysis https://labchem-wako.fujifilm.com/asia/category/01299.html

pH standard solution

Code No.	Product Name	pH	Volume
151-01845	Oxalate pH Standard Solution	1.68	500 mL
166-12141	Phthalate pH Standard Solution	4.01	100 mL
168-12145			500 mL
163-12151	Phosphate pH Standard Equimolal Solution	6.86	100 mL
165-12155			500 mL
166-17445	Phosphate pH Standard Solution	7.41	500 mL
203-08771	Tetraborate pH Standard Solution	9.18	100 mL
205-08775			500 mL
037-16145	Carbonate pH Standard Solution	10.01	500 mL

Please check our website for details.
TOP>Analytical Chemistry>Reference Material (SI Traceable)>JCSS pH Standard Solution
https://labchem-wako.fujifilm.com/asia/category/01297.html

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