

STANDARD SOLUTIONS (Traceable to NIST)

Multi Element ICP Standard Solutions
(Inductively Coupled Plasma Spectroscopy)

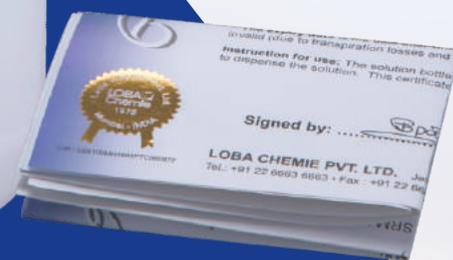
Single Element ICP Standard Solutions
(Inductively Coupled Plasma Spectroscopy)

AAS Standard Solutions
(Atomic Absorption Spectrophotometry)

**Ready to use Volumetric
Standard Solutions**

Conductivity Standards

IC standards



Standard Solutions (Traceable to NIST)

In choosing the most appropriate analytical method to determine metals, each laboratory must consider the sample type and concentration levels, the number of elements to be determined and the costs the choice implies.

As a result, flame and atomic absorption spectrophotometry (AAS) and inductively coupled plasma (ICP) emission spectrometry are the most widely used analytical methods for determining trace elements.

Certified reference materials

Loba Chemie offers the following product lines for reference analytical techniques for the analysis of metals (AAS & ICP). They differ by the purity of the raw materials used, the type of packaging and the ratio of traceability to a NIST primary standard.

- for plasma emission spectrometry (ICP)
 - ready-to-use single-element standard solution
 - ready-to-use multi-element standard solution
- for atomic absorption spectrophotometry
 - ready-to-use single-element standard solution
- conductivity standard solution for measurement of conductivity
- ready to use volumetric standard solution
- IC standards (Ion Chromatography Standards)

For Plasma Emission Spectrometry

ICP is a widely used analytical technique for trace metal analysis. It is based on a simultaneous system which allows quick and convenient analyses for a large number of determinable elements. One of the latest technological advances in the area of coupled analytical techniques involves the optimization of the ICP technique, a versatile and vital instrument for the quick and reliable analysis of trace and ultra-trace metals.

Single-Element Standard Solution for ICP

These standard solutions are obtained by dissolution of the metal, at a purity level of 99.99%, in an acid (usually hydrochloric or nitric acid). They are characterized by:

- Concentrations of 1000 ppm and 10000 ppm;
- Guaranteed titer with a tolerance of 0.2% at the 95% confidence level;
- Raw materials selected and verified against N.I.S.T. Standard Reference Materials;
- Available in 100 ml and 500 ml polyethylene bottles with Certificate of analysis with references to the analytical method;
- Shelf life, for the unopened product package, is 4 years.

Element	Matrix	Code			
		1 gm/l		10 gm/l	
		100 ml	500 ml	100 ml	500 ml
Aluminium (Al)	Hydrochloric Acid	I100H00100	I100H00500	I200H00100	I200H00500
Calcium (Ca)	Nitric Acid	I115N00100	I115N00500	I116N00100	I116N00500
Gold (Au)	Hydrochloric Acid	I127H00100	I127H00500	I128H00100	I128H00500

for complete list visit www.lobachemie.com

Multi-Element Standard Solution for ICP

These standard solutions are obtained by dissolution of the metal, at a purity level of 99.99%, in an acid (usually hydrochloric or nitric acid). They are characterized by:

- Concentrations of 10 ppm and 100 ppm;
- Available in 50 ml and 100 ml polyethylene bottles with 2 years of shelf life.

Code	Element	Packing	Packing Code
I165N	20 components; 10mg/l each of Ce ; Dy ; Er ; Eu ; Ga ; Gd ; Ho ; In ; La ; Lu ; Nd ; Pr ; Sc ; Sm ; Tb ; Th ; Tm ; U ; Y ; Yb in 2% HNO ₃	50 ml 100 ml	I165N00050 I165N00100

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For Atomic Absorption Spectrophotometry

Atomic absorption is the most sensitive technique available to analysts for the determination of metal impurities. It is a technique based on a sequential system which is generally slow but achieves sensitivity limits unattainable with other instrumental techniques.

These standard solutions are obtained by dissolution of the metal, at a purity level of 99.9%, in an acid (usually hydrochloric or nitric acid). They are characterized by:

- Concentration of the metal equal to 1000 ppm
- Guaranteed titer with a ± 0.002 unit tolerance
- Available in 100ml and 500ml bottles in polyethylene or glass depending on compatibility
- Certificate of analysis with references on the analytical method, the N.I.S.T. Standard Reference Materials and the confidence interval;
- Shelf life, for the unopened product package, of 4 years.

Element	Matrix	Code	
		100 ml	500 ml
Silver (Ag)	Nitric Acid	A100N00100	A100N00500
Arsenic (As)	Hydrochloric Acid	A300H00100	A300H00500
Arsenic (As)	Nitric Acid	A300N00100	A300N00500
Palladium (Pd)	Hydrochloric Acid	A310H00100	A310H00500

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Ready to use volumetric standard solution

Ready-to-use analytical solutions are manufactured to stringent specifications and utilize quality control procedures to reduce lot-to-lot variability. You can eliminate the time and expense of preparation and standardization of solutions, helping streamline high-volume analytical work in applications such as quality control, and you can also obtain customized solutions and packaging sizes.

These ready to use volumetric standard solution are characterized by:

- Certificate of analysis with references on the analytical method, the NIST standard reference material
- Traceable to NIST standard reference materials
- Available in 1000ml bottles in polyethylene or glass depending on compatibility
- Shelf life, for the unopened product package, of 3-4 years.

Product Code	Product Name	Packing	Packing Code
R100A	Acetic Acid 0.1M (0.1N)	1 L	R100A01000
R600A	Barium Chloride 0.05M (0.1N)	1 L	R600A01000
R900B	Calcium Chloride 0.01M (0.02N)	1 L	R900B01000
R130A	Edta Disodium Salt 0.01M (0.02N)	1 L	R130A01000
R700A	Hyamine 1622 Solution 0.004M (0.004N)	1 L	R700A01000
R150A	Iodine 0.02365M (0.0473N)	1 L	R150A01000
R150C	Iodine 0.5M (1N)	1 L	R150C01000
R170A	Lead (II) Nitrate 0.01M (0.02N)	1 L	R170A01000
R210A	Nitric Acid 0.01M (0.01N)	1 L	R210A01000
R190B	Mercuric (Mercury) (II) Nitrate 0.01M (0.02N)	1 L	R190B01000
R220A	Oxalic Acid 0.025M (0.05N)	1 L	R220A01000
R230A	Perchloric Acid 0.1M (0.1N)	1 L	R230A01000
R250A	Potassium Chloride 0.5M (0.5N)	1 L	R250A01000
R290A	Potassium Hydroxide 0.05M (0.05N)	1 L	R290A01000
R320A	Potassium Hydroxide 0.1M (0.1N)	1 L	R320A01000
R320B	Potassium Hydroxide 0.5M (0.5N)	1 L	R320B01000
R380B	Sodium Arsenite 0.005M (0.01N)	1 L	R380B01000
R410A	Sodium Chloride 0.05M (0.05N)	1 L	R410A01000
R480A	Sulphuric Acid 0.05M (0.1N)	1 L	R480A01000
R490C	Zinc Sulphate 0.05M (0.05N)	1 L	R490C01000

for complete list visit www.lobachemie.com

Conductivity Standard

Conductivity measurements are used routinely in many industrial and environmental applications as a fast, inexpensive and reliable way of measuring the ionic content in a solution.

These conductivity standard solution are characterized by:

- Standards ranging from 5microsiemens/cm to 20,000microsiemens/cm
- Traceable to NIST standard reference materials
- Available in 500ml bottles in polyethylene or glass depending on compatibility
- Certificate of analysis with references on the analytical method, the N.I.S.T. Standard Reference Materials and the confidence interval;
- Shelf life, for the unopened product package, of 4 years.

Product Code	Product Name	Packing	Packing Code
E0001	5 Microsiemens/cm	500 ml	E000100500
E0002	10 Microsiemens/cm	500 ml	E000200500
E0030	2000 Microsiemens/cm	500 ml	E003000500
E0035	5000 Microsiemens/cm	500 ml	E003500500
E0040	20000 Microsiemens/cm	500 ml	E004000500

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IC standards (Ion Chromatography Standards)

To perform fast and reliable calibration in ion chromatography, we offer a broad range of ready-to-use single and multi-element anion and cation standards.

Product Code	Product Name	Packing	Packing Code
F0005	BROMIDE IC STANDARD	100 ml	F000500100
F0007	CALCIUM IC STANDARD	100 ml	F000700100
F0009	CHLORIDE IC STANDARD	100 ml	F000900100
F0011	COMBINED SIX CATION STANDARD-I - 6 COMPONENTS	100 ml	F001100100
F0012	COMBINED SEVEN ANION STANDARD II - 7 COMPONENTS	100 mg	F001200100
F0018	FLUORIDE IC STANDARD	100 ml	F001800100
F0032	LITHIUM IC STANDARD	100 mg	F003200100
F0034	MAGNESIUM IC STANDARD	100 ml	F003400100
F0057	MULTI ION IC STANDARD - 6 COMPONENTS	100 ml	F005700100
F0055	MULTI ION IC STANDARD - 7 COMPONENTS	100 ml	F005500100
F0036	NITRATES IC STANDARD	100 ml	F003600100
F0038	NITRITES IC STANDARD	100 ml	F003800100
F0040	PHOSPHATES IC STANDARD	100 ml	F004000100
F0044	POTASSIUM IC STANDARD	100 mg	F004400100
F0052	SODIUM IC STANDARD	100 ml	F005200100
F0053	SULPHATE IC STANDARD	100 ml	F005300100

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Loba Chemie offers its clients the possibility of requesting quotes on and ordering custom-made inorganic standard blends. Just send your request to the e-mail address info@lobachemie.com.