

Atomic Absorption Spectrophotometers

# AA-6200 Series Consumables



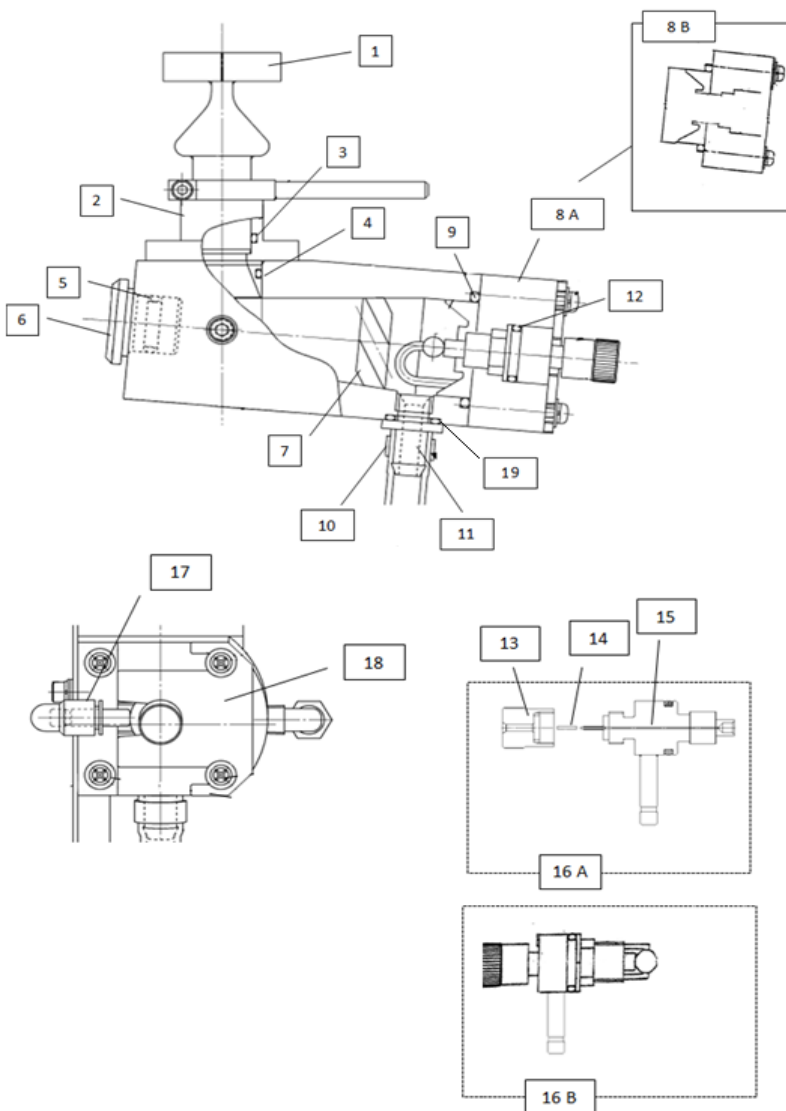
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# AA-6200

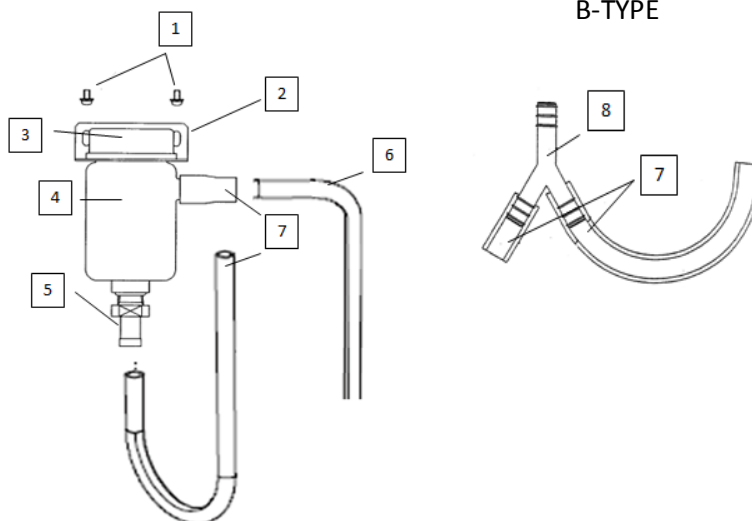
## Burner ASSY



Item	Part Number	Part Name
1	206-50370-91	10 cm TITANIUM BURNER HEAD
2	206-50179-00	BURNER SOCKECT
3	036-15551-16	O-RING, AS568-11640
4	036-11222-84	O-Ring, 4D P22
5	036-11217-00	O-RING 4D P16
6	206-50123-00	PLUG FOR CHAMBER ASSY AA
7	206-50486-00	PADDLE MIXER
8A	206-50362-92	JACKET, FIXED BEAD
8B	206-50362-92	JACKET, MOVABLE BEAD
9	036-11237-00	O-RING 4D P35
10	072-60315-01	WIRING BAND
11	206-52702-91	JOINT DRAIN
12	036-11203-00	O-Ring, 4D P5
13	206-50321-00	CAP
14	200-31328-01	TUBING POLYETHYLENE
15	206-50230-91	CAPILLARY
16A	206-50226-92	NEBULIZER ASSY, NO BEAD
16B	206-50226-91	NEBULIZER ASSY, WITH BEAD
17	035-65268-02	ELBOW
18	206-51389-00	RETAINTING PLATE
19	036-11215-84	O-RING 4D P14

## Drain ASSY

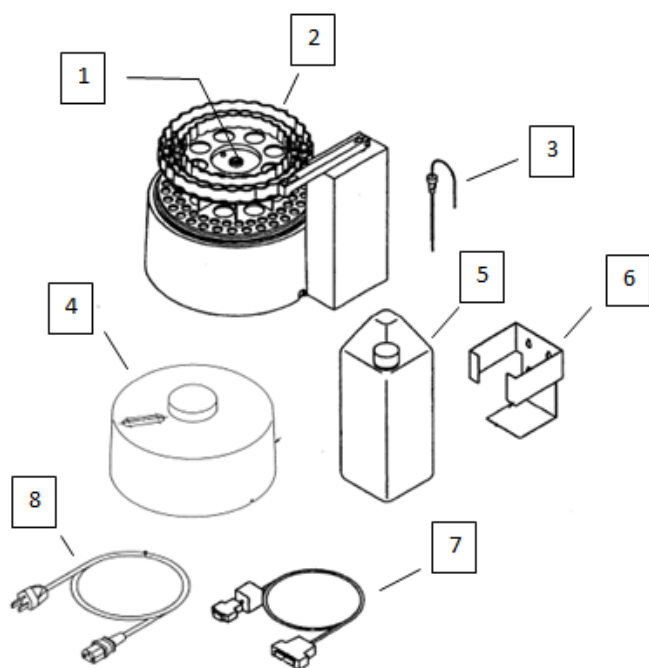
Item	Part Number	Part Name
1	020-46534-00	SCREW, M3 X 6
2	206-80448-00	BOTTLE HOLDER
3	201-48255-00	POLY-CAP 33PHI
4	206-63698-00	DRAIN BOTTLE
5	206-50747-00	JOINT, AA
6	016-43201-02	DRAIN TUBE
7	016-43200-08	U-SHAPE, DRAIN TRAP
8	035-61561-04	Y - JOINT



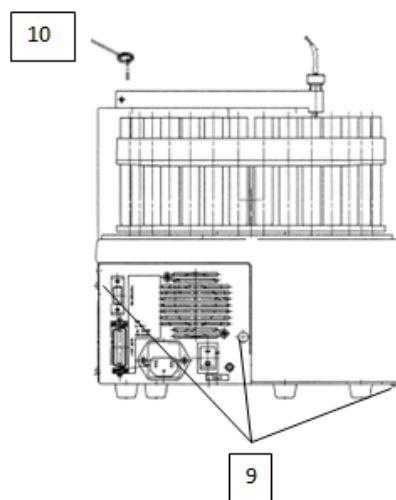
## Maintenance Parts: AA-6200

	<u>Part Name</u>	<u>Part Number</u>	<u>Remarks</u>	<u>Replacement</u>
D2-Lamp	Lamp, D2 L6380	062-65055-05	Deuterium lamp	1 Year
O-Ring Sets	O-Ring Set	206-82037-92	STD O-ring (Fluorine-containing rubber)	* <a href="#">See Chemical Compatibility</a>
	O-Ring Set, Organics	206-82037-96	Perfluoroelastomer (FFKM)	* <a href="#">See Chemical Compatibility</a>
	O-Ring Set, Silicon	206-82037-94	Silicon Rubber (VQM)	* <a href="#">See Chemical Compatibility</a>
Burner Head	Burner Head ASSY	206-50370-91	Titanium, 10 cm	3 Years
	High Temp Burner Head	206-50300-91	Titanium, N2O-C2H2, 5 cm	3 Years
Hoses	Hose, 8×2B-BK	016-02101-04	For support gas (Air/Argon), Black	3 Years
	Hose, 8×2B-R	016-02101-03	For fuel gas (C2H2), Red	3 Years
	Hose, 8×2B-G	016-02101-01	For support gas (N2O), Green	3 Years
Atomizer	Nebulizer	206-50226-91	With Impact bead	2 Years
	Nebulizer	206-50226-92	Without Impact bead	
	Burner Socket	206-50179-00		3 Years
	Chamber ASSY	206-50363-91	Engineering plastic PP	6 Years
	Mixer	206-50486-00		6 Years
Tubing	Sampling tube	206-50438-91	Teflon tube for sample uptake	* <a href="#">See Chemical Compatibility</a>
	Drain ASSY	206-50748-92	Overflow-type drainage trap	
	Polyethylene capillary No.3	200-31328-01	For sealing the capillary	
	Drain Tubing	016-43201-02	Drain tube, connects to drain bottle. Specify 3 meters.	
Misc.	Software, WizaArd 2.40	206-58481-91	Compatible with Windows 7, 32-bit	
	Cleaning wire	201-79229-01	For cleaning the capillary	
	Seal Joint Assembly	206-52039-91	For gas leak checking	
	Window Panel w(30)-Q	205-82661-02	Optical windows, inside atomization chamber	

# ASC-6100



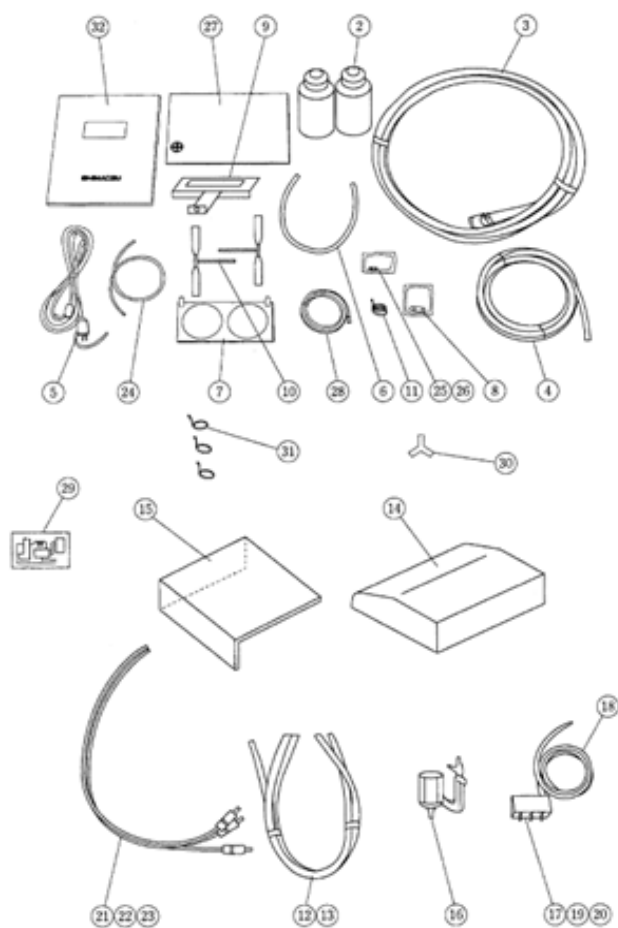
Item	Part Number	Part Name
1	037-02881-03	KNOB
2	206-50062-00	TURNTABLE FOR ASC-6100
3	206-50290-91	NOZZLE ASSY, F
4	206-50295-01	COVER, TURNTABLE
5	206-87284-91	2 LITER RINSE BOTTLE
6	206-50265-00	BOTTLE HOLDER
7	206-50468-91	RS232C CABLE
8	071-60816-12	POWER CABLE
9	037-51260-09	CANOE CLIP-WHITE
10	036-11206-00	O-RING, 4D P8



## Maintenance Parts: ASC-6100

	<u>Part Name</u>	<u>Part Number</u>	<u>Remarks</u>	<u>Replacement</u>
<b>Nozzles</b>	Nozzle ASSY, F	206-50290-91	Standard	
	Nozzle ASSY, HVG	206-67563-00	For HVG	
<b>Vials &amp; Cups</b>	16 mL Sample vial	046-00147-04	Each, polypropylene, Flame Cont.	
	16 mL Sample vial	220-95369-00	1000/PK, polypropylene, Flame Cont.	
	53 mL Glass Vial	200-93113-05	Each, glass, Flame Cont.	
	Glass Test tube (12 mL)	046-00150-27	12 mL Glass	
<b>Misc.</b>	Rinse liquid bottle	206-87284-91	2 L plastic tank for rinse liquid	
	COMMUNICATION CABLE	206-50468-91		
	POWER CABLE	071-60816-12		
	Fuse	072-02004-11	250 V, 3.15 A, Type T	

# Hydride Vapor Generator



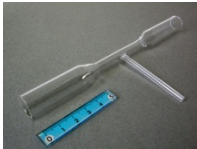


Item	Part Name	Part Number
1	Hydride vapor generator main body	
2	Reagent bottle (polyethylene)	204-09363-01
3	Gas Hose	204-05845-02
4	Drain tube (Tygon)	206-60250-02
5	AC Cable (110-117 V)	206-13774-00
6	Power cable (220-240 V)	071-60814-05
7	Guide plate	206-60250-01
8	Fuse 1 A (110-117 V)	206-18033-00
8	Fuse 0.3 A (220-240 V)	072-01214-02
9	Cell holder	072-01664-12
10	Absorption cell	206-77610-91
11	Hose clamp, 16 mm	206-77607-00
12	Pump tube 080 (reagent)	037-61019-00
13	Pump tube 130 (sample)	208-90038-08
14	Front cover	208-90038-13
15	Side cover	206-17878-00
16	Gas/liquid separator	206-17879-00
17	Manifold	206-17839-00
18	Reaction Coil	206-17825-00
19	Hose nipple	206-18037-00
20	O-ring, EPR	204-64601-00
21	Suction tube (yellow-marked) for NaBH <sub>4</sub>	200-62522-00
22	Suction tube (blue-marked) for HCl	206-18036-01
23	Suction tube (not marked, 30 cm) for sample	206-18036-02
24	Suction tube (not marked, 80 cm) for ASC	206-18036-03
25	Wire mark (yellow)	206-18036-04
26	Wire mark (blue)	072-83083-03
27	Vinyl cover	072-83083-02
28	Grounding line	206-18068-00
29	Label (flow path diagram)	202-32982-00
30	Hose nipple, HN802	206-18616-00
31	Hose clamp, 14 mm	035-61522-00
32	Instruction manual	037-61018-00
		206-96739-00


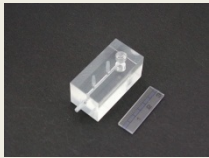

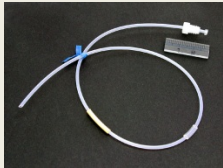
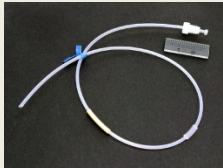
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Order at 800-477-1227, x1710 or online at [store.shimadzu.com](http://store.shimadzu.com)

## Consumables: HVG Unit

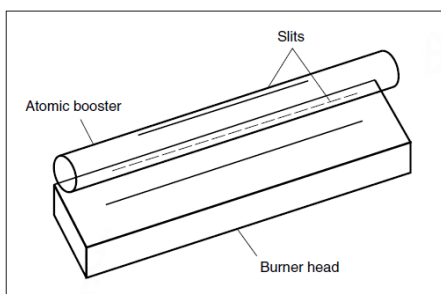
<u>Part Name</u>	<u>Part Number</u>	<u>Appearance</u>
Pump tube 080 (reagent)	208-90038-08	
Pump tube 130 (sample)	208-90038-13	
Absorption cell	206-77607-00	

## Maintenance Parts: HVG Unit

<u>Part Name</u>	<u>Part Number</u>	<u>Appearance</u>
Gas/liquid separator	206-17839-00	
Manifold (except for O-ring, hose nipple)	206-17825-00	
Reaction Coil	206-18037-00	
Suction tube (yellow-marked) for NaBH4	206-18036-01	
Suction tube (blue-marked) for HCl	206-18036-02	

		
Suction tube (not marked, 30 cm) for sample	206-18036-03	
Suction tube (not marked, 80 cm) for ASC	206-18036-04	
Fluorinated rubber tube	206-60250-01	
Joint (reagent)	206-17826-01	
Joint (sample)	206-17826-02	

## Atom Booster



Atomic Booster

Item	Part Number	Part Name
1	206-50957-91	Atom Booster Assembly
2	206-50937-01	Quartz Tube Replacement

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# Chemical Compatibility

## AA-6200

Chemical Name	Drain Tank	Drain Tube		O-Rings			Chamber	Conditions of Use
	(Polyethylene)	Standard	Optional (PTFE)	Standard	FFKM	VQM	Nebulizer	
Water <sup>1</sup>	A	A	A	A	A	A	A	
Ethanol	B	B	B	B	B	B	B	
Hydrochloric acid	B	B	B	B	B	B	B	
Nitric acid	B	B	B	B	B	B	B	
Sulfuric acid	B	B	B	B	B	B	B	
Hydrofluoric acid	B	B	B	B	B	X	B	
Perchloric acid	B	B	B	B	B	X	B	
Methanol	B	B	B	C	B	B	B	Change O-rings
Sodium hydroxide	B	B	B	X	B	X	B	
Gasoline	C	C	B	B	B	X	B	Change the drain tank once every month. Change the standard drain tube once every month, or replace it with the optional product
Petroleum	C	C	B	B	B	C	B	
Acetic acid	C	C	B	X	B	B	B	Change the O-rings to the optional products. Change the drain tank once every month. Change the standard drain tube once every month, or replace it with the optional product.
MIBK	C	C	B	X	B	C	B	
Butyl acetate	C	C	B	X	B	C	B	
Acetone	C	C	B	X	B	C	B	

**1: Acid concentration less than 0.5%**

**A: Applicable. Replacement required once every 3 years**

**B: Applicable. Replacement required once a year**

**C: Applicable. Replacement required once a month**

**X: Cannot be used**

## ASC-6100

Chemical Name	Measurement Method	Flame Continuous Method	
	Application	Sample	Rinse Liquid
Water*1		○	○
Ethanol		○	○
Hydrochloric acid		○	○
Nitric acid		○	○
Sulfuric acid		○	○
Hydrofluoric acid		○	×
Xylene		×	×
Perchloric acid		○*2	×
Methanol		○	○
Sodium hydroxide		○	×
Gasoline		×	×
Petroleum		×	×
Acetic acid		×	×
MIBK		×	×
Butyl acetate		×	×
Acetone		×	×
IPA		×	×
THF		×	×

○ : Can be used; for the replacement intervals of the parts, see "Maintenance Parts".

△ : Can be used; the replacement interval of a pump tube is 3 months. For the replacement intervals of other parts, see "Maintenance Parts".

× : Use prohibited

\*1 : Acid concentration of 0.5 % or lower

\*2 : For sample cups and reagent cups, use those made of glass (optional).

# Lamps

## Single Element Lamps

<u>Name</u>	<u>Symbol</u>	<u>Part Number</u>	<u>Name</u>	<u>Symbol</u>	<u>Part Number</u>
Aluminum	Al	200-38422-01	Nickel	Ni	200-38422-15
Antimony	Sb	200-38422-24	Niobium	Nb	200-38422-32
Arsenic	As	200-38422-42	Palladium	Pd	200-38422-41
Barium	Ba	200-38422-03	Platinum	Pt	200-38422-20
Beryllium	Be	200-38422-04	Potassium	K	200-38422-22
Bismuth	Bi	200-38422-43	Rhenium	Re	200-38422-44
Boron	B	200-38422-39	Rhodium	Rh	200-38422-49
Cadmium	Cd	200-38422-06	Rubidium	Rb	200-38422-33
Calcium	Ca	200-38422-05	Ruthenium	Ru	200-38422-45
Cerium	Ce	200-38422-26	Selenium	Se	200-38422-46
Cesium	Cs	200-38422-27	Silicon	Si	200-38422-16
Chromium	Cr	200-38422-07	Silver	Ag	200-38422-02
Cobalt	Co	200-38422-09	Sodium	Na	200-38422-14
Copper	Cu	200-38422-08	Strontium	Sr	200-38422-34
Dysprosium	Dy	200-38422-60	Tantalum	Ta	200-38422-35
Gallium	Ga	200-38422-40	Tellurium	Te	200-38422-47
Germanium	Ge	200-38422-11	Thallium	Tl	200-38422-74
Gold	Au	200-38422-25	Tin	Sn	200-38422-18
Iron	Fe	200-38422-10	Titanium	Ti	200-38422-17
Lanthanum	La	200-38422-29	Tungsten	W	200-38422-36
Lead	Pb	200-38422-21	Vanadium	V	200-38422-19
Lithium	Li	200-38422-30	Zinc	Zn	200-38422-23
Magnesium	Mg	200-38422-12	Zirconium	Zr	200-38422-37
Manganese	Mn	200-38422-13			
Mercury	Hg	200-38422-28			
Molybdenum	Mo	200-38422-31			

## Multi-Element-Special Order Items

Base Element	Amalgam Metal/s	P/N	Base Element	Amalgam Metal/s	P/N	
Aluminium	Ca	80014625	Chromium	Co+Fe+Mn+Ni	80018218	
	Ca + Fe + Mg	80018135		Cu	80014710	
	Ca + Mg	80014866		Cu + Co	80018205	
	Ca+Cu+Fe+Mg+Si+Zn	80018133		Cu + Fe	80018224	
	Mg	80014627		Cu + Fe + Mn	80018225	
	Si	80014630		Cu + Fe + Ni	80018227	
	Si + Ti	80014869		Cu + Mn	80018229	
	Ti	80014660		Cu + Mn + Ni	80018230	
Antimony	As + Bi	80014872		Cu + Ni	80018233	
Arsenic	Se + Te	80014874		Cu + Ni + Ag	80018234	
Barium	Ca + Mg + Sr	80018161		Cu+Fe+Mn+Ni	80018226	
	Sr	80014663		Cu+Fe+Ni+Ag	80018228	
Cadmium	Zn	80014666		Fe	80014713	
Calcium	Ba	80014669		Fe + Mn	80018236	
	Ba + Sr	80014876		Fe + Mn + Ni	80018237	
	Mg	80014672		Fe + Ni	80018239	
	Mg + Si	80014879		Mn	80014716	
	Mg + Zn	80014882		Mn + Ni	80018241	
	Si	80014676		Mo	80014719	
	Sr	80014680		Ni	80014722	
	Zn	80014683		Cobalt	Cu	80014725
Chromium	Co	80014688			Cu + Fe	80018177
	Co + Cu + Fe	80018206			Cu + Fe + Mn	80018178
	Co + Cu + Mn	80018213			Cu + Fe + Ni	80018183
	Co + Cu + Ni	80018215			Cu + Mn	80018185
	Co + Fe	80018216			Cu + Mn + Ni	80018187
	Co + Fe + Mn	80018217			Cu+Fe+Mn+Mo	80018179
	Co + Fe + Ni	80018219			Cu+Fe+Mn+Ni	80018180
	Co + Mn	80018220	Fe		80014728	
	Co + Mn + Ni	80018221	Fe + Mn + Ni		80018193	
	Co + Ni	80018223	Mn		80014731	
	Co+Cu+Fe+Mn	80018207	Mn + Ni		80018199	
	Co+Cu+Fe+Mn+Mo	80018208	Mo		80014734	
	Co+Cu+Fe+Mn+Ni	80018209	Ni		80014737	
	Co+Cu+Fe+Ni	80018212				
	Co+Cu+Mn+Ni	80018214				

## Multi-Element – Special Order Items

<b>Base Element</b>	<b>Amalgam Metal/s</b>	<b>P/N</b>	<b>Base Element</b>	<b>Amalgam Metal/s</b>	<b>P/N</b>
<b>Copper</b>	Fe	80014740	<b>Molybdenum</b>	Co + Cu	80018189
	Fe + Mn	80018245		Co + Cu + Fe	80018182
	Fe + Mn + Ni	80018247		Co + Cu + Mn	80018186
	Fe + Mn + Zn	80018249		Co + Fe	80018196
	Fe + Mo	80018251		Co + Fe + Mn	80018192
	Fe + Ni	80018252		Co + Mn	80018198
	Fe + Ni + Ag	80018253		Cr + Co	80018222
	Fe + Zn	80018254		Cr + Cu	80018232
	Mn	80014743		Cr + Fe	80018238
	Mn + Ni	80018258		Cr + Mn	80018240
	Mn + Zn	80018260		Cu + Fe	80018251
	Mo	80014746		Cu + Fe + Mn	80018246
	Ni	80014748		Cu + Mn	80018257
	Zn	80014751		Fe + Mn	80018265
<b>Gold</b>	Ag	80014810	<b>Platinum</b>	Ag	80014849
	Cu	80014755	<b>Silicon</b>	Ti	80014852
	Cu + Ni	80018152	<b>Silver</b>	Cr	80014855
	Ni	80014758		Cr + Cu	80018128
	Pt	80014761		Cu	80014858
	Pt + Ag	80018155		Cu + Ni	80018130
<b>Iron</b>	Mn	80014814	<b>Sodium</b>	K	80014861
	Mn + Ni	80018266			
	Mn + Zn	80018268			
	Mo	80014817			
	Ni	80014819			
	Zn	80014822			
<b>Magnesium</b>	Si	80014825			
	Zn	80018278			
<b>Manganese</b>	Mo	80014828			
	Ni	80014840			
	Zn	80014844			

# Single Element Standards

1000 mg/L, (ppm)

<u>Element Name</u>	<u>Element Symbol &amp; Matrix</u>	<u>Part number</u>	<u>Element Name</u>	<u>Element Symbol &amp; Matrix</u>	<u>Part number</u>
Aluminum	Al in 2% HNO <sub>3</sub>	220-95366-02	Neodymium	Nd in 2% HNO <sub>3</sub>	220-95366-29
Antimony	Sb in 5% HNO <sub>3</sub> + 0.1% HF	220-95366-14	Nickel	Ni in 2% HNO <sub>3</sub>	220-95366-30
Antimony	Sb in 5% Tartaric Acid + 2% HNO <sub>3</sub>	220-95366-15	Niobium	Nb in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-31
Arsenic	As in 2% HNO <sub>3</sub>	220-95366-24	Palladium	Pd in 10% HNO <sub>3</sub> + TrHF	220-95366-32
Barium	Ba in 2% HNO <sub>3</sub>	220-95366-36	Phosphorus	P from KH <sub>2</sub> PO <sub>4</sub> in 0.05% HNO <sub>3</sub>	220-95366-34
Beryllium	Be in 2% HNO <sub>3</sub>	220-95366-44	Phosphorus	P in 0.05% HNO <sub>3</sub>	220-95366-33
Bismuth	Bi in 2% HNO <sub>3</sub>	220-95366-54	Potassium	K in 1% HNO <sub>3</sub>	220-95366-35
Cadmium	Cd in 2% HNO <sub>3</sub>	220-95366-64	Praseodymium	Pr in 2% HNO <sub>3</sub>	220-95366-37
Calcium	Ca in 2% HNO <sub>3</sub>	220-95366-65	Rhenium	Re in 2% HNO <sub>3</sub>	220-95366-38
Cerium	Ce in 2% HNO <sub>3</sub>	220-95366-01	Rubidium	Rb in 1% HNO <sub>3</sub>	220-95366-39
Cesium	Cs in 1% HNO <sub>3</sub>	220-95366-03	Samarium	Sm in 2% HNO <sub>3</sub>	220-95366-40
Chromium	Cr in 2% HNO <sub>3</sub>	220-95366-04	Scandium	Sc in 2% HNO <sub>3</sub>	220-95366-41
Cobalt	Co in 2% HNO <sub>3</sub>	220-95366-05	Selenium	Se in 2% HNO <sub>3</sub>	220-95366-42
Copper	Cu in 2% HNO <sub>3</sub>	220-95366-06	Silver	Ag in 2% HNO <sub>3</sub>	220-95366-43
Dysprosium	Dy in 2% HNO <sub>3</sub>	220-95366-07	Sodium	Na in 1% HNO <sub>3</sub>	220-95366-45
Erbium	Er in 2% HNO <sub>3</sub>	220-95366-08	Strontium	Sr in 1% HNO <sub>3</sub>	220-95366-46
Europium	Eu in 2% HNO <sub>3</sub>	220-95366-09	Tantalum	Ta in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-47
Gadolinium	Gd in 2% HNO <sub>3</sub>	220-95366-10	Tellurium	Te in 2% HNO <sub>3</sub> + 0.2% HF	220-95366-48
Gallium	Ga in 2% HNO <sub>3</sub>	220-95366-11	Terbium	Tb in 2% HNO <sub>3</sub>	220-95366-49
Germanium	Ge (NH <sub>4</sub> ) <sub>2</sub> GeF <sub>5</sub> in 1% HNO <sub>3</sub>	220-95366-12	Thallium	Tl in 2% HNO <sub>3</sub>	220-95366-50
Germanium	Ge in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-13	Thorium	Th in 2% HNO <sub>3</sub>	220-95366-51
Hafnium	Hf in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-16	Thulium	Tm in 2% HNO <sub>3</sub>	220-95366-52
Holmium	Ho in 2% HNO <sub>3</sub>	220-95366-17	Tin	Sn in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-53
Indium	In in 2% HNO <sub>3</sub>	220-95366-18	Titanium	Ti in 2% HNO <sub>3</sub> + 0.1% HF	220-95366-55
Iron	Fe in 2% HNO <sub>3</sub>	220-95366-19	Tungsten	W in 2% HNO <sub>3</sub> + 1% HF	220-95366-56
Lanthanum	La in 2% HNO <sub>3</sub>	220-95366-20	Uranium	U in 2% HNO <sub>3</sub>	220-95366-57
Lead	Pb in 2% HNO <sub>3</sub>	220-95366-21	Vanadium	V in 2% HNO <sub>3</sub>	220-95366-58
Lithium	Li in 1% HNO <sub>3</sub>	220-95366-22	Ytterbium	Yb in 2% HNO <sub>3</sub>	220-95366-59
Lutetium	Lu in 2% HNO <sub>3</sub>	220-95366-23	Yttrium	Y in 2% HNO <sub>3</sub>	220-95366-60
Magnesium	Mg in 2% HNO <sub>3</sub>	220-95366-25	Zinc	Zn in 2% HNO <sub>3</sub>	220-95366-61
Manganese	Mn in 2% HNO <sub>3</sub>	220-95366-26	Zirconium	Zr from ZrO(NO <sub>3</sub> ) <sub>2</sub> in 0.5% HNO <sub>3</sub>	220-95366-62
Mercury	Hg in 2% HNO <sub>3</sub>	220-95366-27	Zirconium	Zr in 2% HNO <sub>3</sub> + 0.5% HF	220-95366-63
Molybdenum	Mo in 2% HNO <sub>3</sub> + 0.1% HF	220-95366-28			



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