

1,000µg/mL	100mL	250mL	10,000µg/mL	100mL	250mL				
Aluminum (Al), 2% HNO ₃	S4400-100011	€22.00	4400-100011	€27.00	Aluminum (Al), 4% HNO ₃	S4400-10M11	€45.00	4400-10M11	€65.00
Antimony (Sb), 4% HNO ₃ +0.1% HF	S4400-100023	€22.00	4400-100023	€27.00	Antimony(Sb), 4% HNO ₃ +2%HF	S4400-10M23	€45.00	4400-10M23	€65.00
Antimony (Sb), 40% HCl	S4400-100022	€22.00	4400-100022	€27.00	Antimony (Sb), 50% HCl	S4400-10M22	€45.00	4400-10M22	€65.00
Arsenic (As), 2% HNO ₃	S4400-100031	€22.00	4400-100031	€27.00	Arsenic (As), 4% HNO ₃	S4400-10M31	€45.00	4400-10M31	€65.00
Arsenic (As), 2% HCl	S4400-100036	€22.00	4400-100036	€27.00	Barium (Ba), 4% HNO ₃	S4400-10M41	€45.00	4400-10M41	€65.00
Arsenic (As), 2% NaOH	S4400-100037	€22.00	4400-100037	€27.00	Beryllium (Be), 4% HNO ₃	S4400-10M51	€65.00	4400-10M51	€85.00
Barium (Ba), 2% HNO ₃	S4400-100041	€22.00	4400-100041	€27.00	Bismuth (Bi), 4% HNO ₃	S4400-10M61	€45.00	4400-10M61	€65.00
Beryllium (Be), 2% HNO ₃	S4400-100051	€22.00	4400-100051	€27.00	Boron (B), H ₂ O**	S4400-5M74	€27.00	4400-5M74	€48.00
Bismuth (Bi), 2% HNO ₃	S4400-100061	€22.00	4400-100061	€27.00	Cadmium (Cd), 4% HNO ₃	S4400-10M81	€45.00	4400-10M81	€65.00
Boron (B), H ₂ O	S4400-100074	€22.00	4400-100074	€27.00	Calcium (Ca), 4% HNO ₃	S4400-10M91	€45.00	4400-10M91	€65.00
Cadmium (Cd), 2% HNO ₃	S4400-100081	€22.00	4400-100081	€27.00	Cerium (Ce), 4% HNO ₃	S4400-10M101	€45.00	4400-10M101	€65.00
Calcium (Ca), 2% HNO ₃	S4400-100091	€22.00	4400-100091	€27.00	Cesium (Cs), 1% HNO ₃	S4400-10M111	€45.00	4400-10M111	€65.00
Cerium (Ce), 2% HNO ₃	S4400-1000101	€22.00	4400-1000101	€27.00	Chromium (Cr), 4% HNO ₃	S4400-10M121	€45.00	4400-10M121	€65.00
Cesium (Cs), 2% HNO ₃	S4400-1000111	€22.00	4400-1000111	€27.00	Cobalt (Co), 4% HNO ₃	S4400-10M131	€45.00	4400-10M131	€65.00
Chromium (Cr), 2% HNO ₃	S4400-1000121	€22.00	4400-1000121	€27.00	Copper (Cu), 4% HNO ₃	S4400-10M141	€45.00	4400-10M141	€65.00
Chromium (Cr+3), 2% HCl	S4400-1000126	€22.00	4400-1000126	€27.00	Dysprosium (Dy), 4% HNO ₃	S4400-10M151	€45.00	4400-10M151	€65.00
Chromium (Cr+6), H ₂ O	S4400-1000127	€22.00	4400-1000127	€27.00	Erbium (Er), 4% HNO ₃	S4400-10M161	€45.00	4400-10M161	€65.00
Cobalt (Co), 2% HNO ₃	S4400-1000131	€22.00	4400-1000131	€27.00	Europium (Eu), 4% HNO ₃	S4400-10M171	€45.00	4400-10M171	€65.00
Copper (Cu), 2% HNO ₃	S4400-1000141	€22.00	4400-1000141	€27.00	Gadolinium (Gd), 4% HNO ₃	S4400-10M181	€45.00	4400-10M181	€65.00
Dysprosium (Dy), 2% HNO ₃	S4400-1000151	€22.00	4400-1000151	€27.00	Gallium (Ga), 4% HNO ₃	S4400-10M191	€45.00	4400-10M191	€65.00
Erbium (Er), 2% HNO ₃	S4400-1000161	€22.00	4400-1000161	€27.00	Germanium (Ge), 4% HNO ₃	S4400-10M201	€52.00	4400-10M201	€75.00
Europium (Eu), 2% HNO ₃	S4400-1000171	€22.00	4400-1000171	€27.00	Gold (Au), 10% HCl	S4400-10M212	€148.00	4400-10M212	€385.00
Gadolinium (Gd), 2% HNO ₃	S4400-1000181	€22.00	4400-1000181	€27.00	Hafnium(Hf), 4% HNO ₃ +2%HF	S4400-10M223	€45.00	4400-10M223	€65.00
Gallium (Ga), 2% HNO ₃	S4400-1000191	€22.00	4400-1000191	€27.00	Holmium (Ho), 4% HNO ₃	S4400-10M231	€45.00	4400-10M231	€65.00
Germanium (Ge), 2% HNO ₃	S4400-1000201	€22.00	4400-1000201	€27.00	Indium (In), 4% HNO ₃	S4400-10M241	€45.00	4400-10M241	€65.00
Gold (Au), 2% HCl	S4400-1000212	€35.00	4400-1000212	€52.00	Iron (Fe), 4% HNO ₃	S4400-10M261	€45.00	4400-10M261	€65.00
Hafnium (Hf), 2% HNO ₃ +0.5%HF	S4400-1000223	€22.00	4400-1000223	€27.00	Lanthanum (La), 4% HNO ₃	S4400-10M271	€45.00	4400-10M271	€65.00
Holmium (Ho), 2% HNO ₃	S4400-1000231	€22.00	4400-1000231	€27.00	Lead (Pb), 4% HNO ₃	S4400-10M281	€45.00	4400-10M281	€65.00
Indium (In), 2% HNO ₃	S4400-1000241	€22.00	4400-1000241	€27.00	Lithium (Li), 1% HNO ₃	S4400-10M291	€45.00	4400-10M291	€65.00
Iridium (Ir), 10% HCl	S4400-1000252	€85.00	4400-1000252	€168.00	Lutetium (Lu), 4% HNO ₃	S4400-10M301	€54.00	4400-10M301	€74.00
Iron (Fe), 2% HNO ₃	S4400-1000261	€22.00	4400-1000261	€27.00	Magnesium (Mg), 4% HNO ₃	S4400-10M311	€45.00	4400-10M311	€65.00
Lanthanum (La), 2% HNO ₃	S4400-1000271	€22.00	4400-1000271	€27.00	Manganese (Mn), 4% HNO ₃	S4400-10M321	€45.00	4400-10M321	€65.00
Lead (Pb), 2% HNO ₃	S4400-1000281	€22.00	4400-1000281	€27.00	Mercury (Hg), 4% HNO ₃	S4400-10M331	€45.00	4400-10M331	€65.00
Lithium (Li), 1% HNO ₃	S4400-1000291	€22.00	4400-1000291	€27.00	Molybdenum(Mo), 4% HNO ₃ +2%HF	S4400-10M343	€45.00	4400-10M343	€65.00
Lutetium (Lu), 2% HNO ₃	S4400-1000301	€27.00	4400-1000301	€29.00	Molybdenum(Mo), 10% HCl	S4400-10M342	€45.00	4400-10M342	€65.00
Magnesium (Mg), 2% HNO ₃	S4400-1000311	€22.00	4400-1000311	€27.00	Neodymium (Nd), 4% HNO ₃	S4400-10M351	€45.00	4400-10M351	€65.00
Manganese (Mn), 2% HNO ₃	S4400-1000321	€22.00	4400-1000321	€27.00	Nickel (Ni), 4% HNO ₃	S4400-10M361	€45.00	4400-10M361	€65.00
Mercury (Hg), 2% HNO ₃	S4400-1000331	€22.00	4400-1000331	€27.00	Niobium (Nb), 4% HNO ₃ +1%HF	S4400-10M373	€45.00	4400-10M373	€65.00
Molybdenum (Mo), 2% HNO ₃ +0.1%HF	S4400-1000343	€22.00	4400-1000343	€27.00	Palladium(Pd), 10% HNO ₃	S4400-10M381	€117.00	4400-10M381	€257.00
Molybdenum (Mo), 2% HCl	S4400-1000342	€22.00	4400-1000342	€27.00	Phosphorus(P), 0.05% HNO ₃	S4400-10M391	€45.00	4400-10M391	€65.00
Neodymium (Nd), 2% HNO ₃	S4400-1000351	€22.00	4400-1000351	€27.00	Platinum (Pt), 10% HCl	S4400-10M402	€156.00	4400-10M402	€341.00
Nickel (Ni), 2% HNO ₃	S4400-1000361	€22.00	4400-1000361	€27.00	Potassium (K), 1% HNO ₃	S4400-10M411	€45.00	4400-10M411	€65.00
Niobium (Nb), 2% HNO ₃ +0.5%HF	S4400-1000373	€22.00	4400-1000373	€27.00	Praseodymium(Pr), 4% HNO ₃	S4400-10M421	€45.00	4400-10M421	€65.00
Osmium, 2% HCl	S4400-1000702	€85.00	4400-1000702	€138.00	Rhenium (Re), 4% HNO ₃	S4400-10M431	€45.00	4400-10M431	€85.00
Palladium (Pd), 4% HNO ₃	S4400-1000381	€45.00	4400-1000381	€55.00	Rubidium (Rb), 2% HNO ₃	S4400-10M451	€45.00	4400-10M451	€85.00
Phosphorus (P), 0.05% HNO ₃	S4400-1000391	€22.00	4400-1000391	€27.00	Samarium (Sm), 4% HNO ₃	S4400-10M471	€45.00	4400-10M471	€65.00
Platinum (Pt), 5HCl	S4400-1000402	€45.00	4400-1000402	€55.00	Scandium (Sc), 4% HNO ₃	S4400-10M481	€85.00	4400-10M481	€125.00
Potassium (K), 1% HNO ₃	S4400-1000411	€22.00	4400-1000411	€27.00	Selenium (Se), 4% HNO ₃	S4400-10M491	€45.00	4400-10M491	€65.00
Praseodymium (Pr), 2% HNO ₃	S4400-1000421	€22.00	4400-1000421	€27.00	Silicon (Si), H ₂ O	S4400-10M504F	€45.00	4400-10M504F	€65.00
Rhenium (Re), 2% HNO ₃	S4400-1000431	€22.00	4400-1000431	€27.00	Silver (Ag), 4% HNO ₃	S4400-10M511	€45.00	4400-10M511	€65.00
Rhodium (Rh), 10% HCl	S4400-1000442	€195.00	4400-1000442	€212.00	Sodium (Na), 1% HNO ₃	S4400-10M521	€45.00	4400-10M521	€65.00
Rubidium (Rb), 2% HNO ₃	S4400-1000451	€22.00	4400-1000451	€27.00	Strontium (Sr), 4% HNO ₃	S4400-10M531	€45.00	4400-10M531	€65.00
Ruthenium (Ru), 10% HCl	S4400-1000462	€63.00	4400-1000462	€128.00	Sulfur (S), H ₂ O	S4400-10M544	€45.00	4400-10M544	€65.00
Samarium (Sm), 2% HNO ₃	S4400-1000471	€22.00	4400-1000471	€27.00	Tantalum(Ta), 4% HNO ₃ +2%HF	S4400-10M553	€45.00	4400-10M553	€65.00
Scandium (Sc), 2% HNO ₃	S4400-1000481	€29.00	4400-1000481	€45.00	Tellurium(Te), 4% HNO ₃ +2%HF	S4400-10M563	€45.00	4400-10M563	€65.00
Selenium (Se), 2% HNO ₃	S4400-1000491	€22.00	4400-1000491	€27.00	Terbium (Tb), 4% HNO ₃	S4400-10M571	€45.00	4400-10M571	€65.00
Silicon (Si), H ₂ O	S4400-1000504F	€22.00	4400-1000504F	€27.00	Thallium (Tl), 4% HNO ₃	S4400-10M581	€45.00	4400-10M581	€65.00
Silver (Ag), 2% HNO ₃	S4400-1000511	€22.00	4400-1000511	€27.00	Thulium (Tm), 4% HNO ₃	S4400-10M601	€45.00	4400-10M601	€65.00
Sodium (Na), 1% HNO ₃	S4400-1000521	€22.00	4400-1000521	€27.00	Tin (Sn), 4% HNO ₃ +2%HF	S4400-10M613	€45.00	4400-10M613	€65.00
Strontium (Sr), 2% HNO ₃	S4400-1000531	€22.00	4400-1000531	€27.00	Tin (Sn), 60% HCl	S4400-10M612	€45.00	4400-10M612	€65.00
Sulfur (S), H ₂ O	S4400-1000544	€22.00	4400-1000544	€27.00	Titanium(Ti), 4% HNO ₃ +2%HF	S4400-10M623	€45.00	4400-10M623	€65.00
Tantalum (Ta), 2% HNO ₃ +0.5%HF	S4400-1000553	€22.00	4400-1000553	€27.00	Titanium (Ti), 40% HCl	S4400-10M622	€45.00	4400-10M622	€65.00
Tellurium (Te), 2% HNO ₃ +0.2%HF	S4400-1000563	€22.00	4400-1000563	€27.00	Tungsten (W), 4% HNO ₃ +2%HF	S4400-10M633	€45.00	4400-10M633	€65.00
Terbium (Tb), 2% HNO ₃	S4400-1000571	€22.00	4400-1000571	€27.00	Vanadium (V), 4% HNO ₃ **	S4400-5M651	€27.00	4400-5M651	€49.00
Thallium (Tl), 2% HNO ₃	S4400-1000581	€22.00	4400-1000581	€27.00	Ytterbium (Yb), 4% HNO ₃	S4400-10M661	€45.00	4400-10M661	€65.00
Thorium (Th), 2% HNO ₃	S4400-1000591	€22.00	4400-1000591	€27.00	Yttrium (Y), 4% HNO ₃	S4400-10M671	€45.00	4400-10M671	€65.00
Thulium (Tm), 2% HNO ₃	S4400-1000601	€22.00	4400-1000601	€27.00	Zinc (Zn), 4% HNO ₃	S4400-10M681	€45.00	4400-10M681	€65.00
Tin (Sn), 2% HNO ₃ +0.5%HF	S4400-1000613	€22.00	4400-1000613	€27.00	Zirconium (Zr), 4% HNO ₃	S4400-10M691	€65.00	4400-10M691	€92.00
Tin (Sn), 40% HCl	S4400-1000612	€22.00	4400-1000612	€27.00					
Titanium (Ti), 2% HNO ₃ +0.1%HF	S4400-1000623	€22.00	4400-1000623	€27.00					
Titanium (Ti), 20% HCl	S4400-1000622	€22.00	4400-1000622	€27.00					
Tungsten (W), 2% HNO ₃ +1%HF	S4400-1000633	€22.00	4400-1000633	€27.00					
Uranium (U), 2% HNO ₃	S4400-1000641	€45.00	4400-1000641	€54.00					
Vanadium (V), 2% HNO ₃	S4400-1000651	€22.00	4400-1000651	€27.00					
Ytterbium (Yb), 2% HNO ₃	S4400-1000661	€22.00	4400-1000661	€27.00					
Yttrium (Y), 2% HNO ₃	S4400-1000671	€22.00	4400-1000671	€27.00					
Zinc (Zn), 2% HNO ₃	S4400-1000681	€22.00	4400-1000681	€27.00					
Zirconium (Zr), 2% HNO ₃	S4400-1000691	€65.00	4400-1000691	€75.00					



NOW AVAILABLE!

26 Element QC Standards

*Combined QC7 plus QC19
100mL 4400-012
500mL 4400-013*

These standards are used for the determination of metals by ICP as described in US EPA Method 200.7

ICP Multi-Element Standards

US EPA Method 200.7

Tuning and Plasma Solutions

Tuning Solution				Plasma Solution			
CPI P/N	Volume			CPI P/N	Volume		
4400-010114	100mL €50			4400-010116	100mL €73		
4400-010115	500mL €106			4400-010117	500mL		
µg/mL in 5% HNO ₃				µg/mL in 5% HNO ₃			
Cu	10	Pb	10	As	10	Se	10
				Pb	10	Tl	10

Quality Control Standards

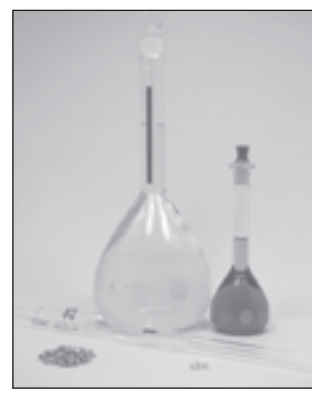
7 Elements				7 Elements – Modified				19 Elements			
CPI P/N	Volume			CPI P/N	Volume			CPI P/N	Volume		
4400-002	100mL €77			4400-010105	100mL €77			4400-005	100mL €155		
4400-001	500mL €144			4400-010106	500mL €144			4400-004	500mL €314		
µg/mL in 5% HNO ₃				µg/mL in 5% HNO ₃				µg/mL in 5% HNO ₃ + tr HF			
Al	100	Si	50	Al	100	Si	100	Sb	100	Mg	100
Ba	100	Ag	100	Ba	100	Ag	50	As	100	Mn	100
B	100	Na	100	B	100	Na	100	Be	100	Mo	100
K	1000			K	1000			Cd	100	Ni	100
								Ca	100	Se	100
								Cr	100	Tl	100
								Co	100	Ti	100
								Cu	100	V	100
								Fe	100	Zn	100
								Pb	100		

21 Elements					
CPI P/N	Volume		CPI P/N	Volume	
4400-010	100mL €184		4400-011	500mL €367	
µg/mL in 5% HNO ₃ + tr HF					
Sb	100	Cr	100	Pb	100
As	100	Co	100	Mg	100
Be	100	Cu	100	Mn	100
Cd	100	Fe	100	Mo	100
Ca	100	Li	100	Ni	100
				V	100
				Zn	100

QC Standard Set	
CPI P/N 4400-009	2 bottles €206
4400-005	4400-002

Laboratory Fortifying Solution

Laboratory Fortifying Solution					
CPI P/N	Volume		CPI P/N	Volume	
4400-010118	100mL €273		4400-010119	500mL €517	
µg/mL in 5% HNO ₃ + tr HF					
Ag	2.5	Co	10	Mn	25
Al	25	Cr	25	Ni	25
As	25	Cu	25	P	50
B	25	Fe	25	Pb	25
Ba	25	Hg*	5	Sb	25
Be	5	Li	25	Se	25
Cd	10	Mo	10	Si	25
					*Shipped Separately



ICP Multi-Element Standards

US EPA Method 200.7

Calibration Standards

Standard I			Standard II			Standard III					
CPI P/N	Volume		CPI P/N	Volume		CPI P/N	Volume				
4400-MXSTD1-100	100mL €83		4400-MXSTD2-100	100mL €73		4400-MXSTD3-100	100mL €56				
4400-MXSTD1-500	500mL €162		4400-MXSTD2-500	500mL €195		4400-MXSTD3-500	500mL €112				
µg/mL in 2% HNO ₃			µg/mL in 2% HNO ₃			µg/mL in 2% HNO ₃ + tr HF					
Be	50	Se	200	Ba	100	V	100	As	500	Mo	100
Mn	100	Pb	500	Fe	10,000	Cu	100	Si	100		
Cd	150	Zn	150	Co	100						

Standard IV			Standard V			Calibration Standards Set	
CPI P/N	Volume		CPI P/N	Volume		CPI P/N	Volume
4400-MXSTD4-100	100mL €83		4400-MXSTD5-100	100mL €73		4400-MXSTD-SET	5 Bottles €316
4400-MXSTD4-500	500mL €162		4400-MXSTD5-500	500mL €161		4400-MXSTD1-100	100mL
µg/mL in 2% HNO ₃			µg/mL in 2% HNO ₃ + tr HF			4400-MXSTD2-100	100mL
Al	200	K	400	Sb	200	Tl	200
Ni	20	Cr	20	Ag	50	Mg	1000
Ca	1000	Na	200	B	100		
						4400-MXSTD3-100	100mL
						4400-MXSTD4-100	100mL
						4400-MXSTD5-100	100mL

Interference Check Standards

Standard 1		Standard 3		Standard 5	
CPI P/N	Volume	CPI P/N	Volume	CPI P/N	Volume
4400-INTR1-100	100mL €32	4400-INTR3-100	100mL €83	4400-INTR5-100	100mL €112
4400-INTR1-500	500mL €88	4400-INTR3-500	500mL €162	4400-INTR5-500	500mL €239
µg/mL in 2% HNO ₃ + 0.1% HF		µg/mL in 2% HNO ₃ + 0.5% HF		µg/mL in 5% HNO ₃	
Sb	1000	B	500	Mo	300
		Si	230	Ti	1000
				Al	1200
				Mg	3000
				Ca	6000
				Na	1000
				Fe	5000

Standard 18

CPI P/N	Volume		CPI P/N	Volume	
4400-INTR18-100	100mL €216		4400-INTR18-500	500mL €428	
µg/mL in 2% HNO ₃					
As	1000	K	20,000	Co	300
Hg	50	Cd	300	Tl	1000
Ba	300	Se	500	Mn	200
Ni	300	Cr	300	Cu	300
Be	100	Ag*	300	V	300
				Pb	1000

Calibration Standards Set

CPI P/N	Volume
4400-INTR-SET	4 Bottles €373
4400-INTR18-100	
4400-INTR3-100	
4400-INTR1-100	
4400-INTR5-100	

US EPA Method 1310

Drinking Water Pollutant Standards

Primary Drinking Water Metals			Secondary Drinking Water Metals			Drinking Water Set	
CPI P/N	Volume		CPI P/N	Volume		CPI P/N	Volume
4400-EP8-100	100mL €83		4400-EP4-100	100mL €62		4400-DW-SET	2 Bottles €120
4400-EP8-500	500mL €162		4400-EP4-500	500mL €123		4400-EP8-100	
µg/mL in 2% HNO ₃			µg/mL in 2% HNO ₃			4400-EP4-100	
As	10	Pb	10	Cu	100	Mn	5
Ba	100	Se	5	Fe	30	Zn	500
Cd	5	Ag	10				
Cr	10	Hg	10				

Drinking Water Standards

These mixes are for the determination of drinking water contamination levels as described in US EPA SW-846, Method 1310 and US National Primary Drinking Water Regulations 40 CFR Part 141.



Groundwater & Wastewater

These check standards are prepared for the determination of metals in water as detailed in US EPA methods manual 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes"; Trace metals 21I, 21II and 21III methods.

Contract Lab Program

These standards are prepared to conform to US EPA SOW.ILM04.0 inorganic target analyte list (TAL), analytical methods and QC/QA requirements.

ICP Multi-Element Standards

US EPA Methods 600/4-79-020

Groundwater and Wastewater Control Check Standards

Trace Metals I				Trace Metals II				Trace Metals III			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-WP15-100		100mL €131		4400-WP3-100		100mL €50		4400-MN6-100		100mL €83	
4400-WP15-500		500mL €265		4400-WP3-500		500mL €100		4400-MN6-500		500mL €162	
µg/mL in 5% HNO ₃				µg/mL in 2% HNO ₃ + tr HF				µg/mL in 2% HNO ₃ + tr HF			
Al	500	Pb	100	Sb	20	Tl	20	Ba	500	Mo	500
As	100	Mn	100	Ag	10			Ca	500	K	100
Be	100	Hg	5	Trace Metals Set CPI P/N 4400-TM-SET 3 bottles €223 4400-WP15-100 4400-WP3-100 4400-MN6-100				Mg	100	Na	500
Cd	25	Ni	100								
Cr	100	Se	25								
Co	100	V	250								
Cu	100	Zn	100								
Fe	100										

Alternate Metals Standard II

CPI P/N		Volume	
4400-010122		100mL €78	
µg/mL in 2% HNO ₃			
Ca	500	Mg	100
K	100	Na	500

Contract Laboratory Program (CLP)

Standard I				Standard II				Standard III			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-ICAL1-100		100mL €106		4400-ICAL2-100		100mL €73		4400-ICAL3-100		100mL €94	
µg/mL in 5% HNO ₃				µg/mL in 5% HNO ₃				µg/mL in 5% HNO ₃			
Ca	5000	K	5000	Ag	100	Ni	400	Al	2000	Cu	250
Mg	5000	Na	5000	Cr	100	Zn	200	Ba	2000	Fe	1000
				Mn	150			Be	50	V	500
								Co	500		
Standard IV				Standard VI							
CPI P/N		Volume		CPI P/N		Volume					
4400-ICAL4-100		100mL €65		4400-ICAL6-100		100mL €62					
µg/mL in 5% HNO ₃				µg/mL in 2% HNO ₃							
As	100	Se	50	Hg	100						
Cd	50	Tl	100								
Pb	50										

ICP Multi-Element Standards

CLP Sample Spike Solutions

Sample Spike				Verification Standard				Soil Spike			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-SPIKE1-100		100mL €162		4400-ICV1		500mL €524		4400-010088		100mL €199	
4400-SPIKE1-250		250mL €210		µg/mL in 5% HNO₃ + tr HF				µg/mL in 2% HNO₃ + tr HF			
Al	200	Fe	100	Al	200	Pb	5	Sb	100	Mn	100
Sb	50	Pb	50	Sb	60	Mg	5,000	As	400	Ni	100
As	200	Mn	50	As	10	Mn	15	Ba	400	Pb	100
Ba	200	Ni	50	Ba	200	Ni	40	Be	10	Se	400
Be	5	Se	200	Be	5	K	5,000	Cd	10	Ag	10
Cd	5	Ag	5	Cd	5	Se	5	Cr	40	Tl	400
Cr	20	Tl	200	Ca	5,000	Ag	10	Co	100	V	100
Co	50	V	50	Cr	10	Na	5,000	Cu	50	Zn	100
Cu	25	Zn	50	Co	50	Tl	10				
				Cu	25	V	50				
				Fe	100	Zn	20				

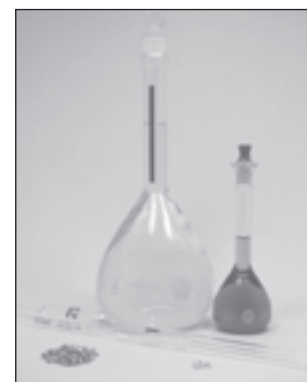
Interference Check Standards

Interferents A				Analytes B				CRDL Standard			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-INTA1-500		500mL €217		4400-INTB1-100		100mL €106		4400-CRDL1-100		100mL €128	
µg/mL in 5% HNO₃				µg/mL in 5% HNO₃				µg/mL in 5% HNO₃ + tr HF			
Al	5000	Fe	2000	Ag	100	Cu	50	Sb	120	Mn	30
Ca	5000	Mg	5000	Ba	50	Mn	50	As	20	Ni	80
Alternate Interferents A				Alternate Analytes B							
CPI P/N		Volume		CPI P/N		Volume					
4400-INTA2-500		500mL €184		4400-INTB2-100		100mL €112					
µg/mL in 5% HNO₃ + tr HF				µg/mL in 5% HNO₃ + tr HF							
Cr	1000	Ni	1000	Al	100	Mg	10				
Cu	1000	Ti	1000	Sb	100	Mo	100				
Mn	1000	V	1000	As	100	Se	100				
				B	100	Si	10				
				Ca	10	Na	100				
				Fe	10	Tl	100				

CLP 13 Standard Set

CLP Set	
CPI P/N	13 Bottles €1100
4400-ICAL1-100	4400-SPIKE1-100
4400-ICAL2-100	4400-CRDL1-100
4400-ICAL3-100	4400-INTA1-500
4400-ICAL4-100	4400-INTB1-100
4400-ICAL5-100	4400-INTA2-500
4400-ICAL6-100	4400-INTB2-100
4400-ICV1	

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CERTIFIED REFERENCE MATERIALS



CLP Interference Check Standards
Used to determine the interferences due to inter-element and background correction factors before and after the analysis.

Convenience, Corrosion Resistance, Complete Control!



Get it all in the ModBlock!



Convenience, Corrosion Resistance, Complete Control!



Get it all in the ModBlock!

Wavecal

These standards are used to center the analyte peak in the instrument window prior to analysis.

NEW!

Specialized mixes for PerkinElmer® Optima® 3000 ICPs.

ICP Multi-Element Standards

Instrument Check Standards

Standard I			
CPI P/N	Volume		
4400-CALMX1-100	100mL	€89	
µg/mL in 2% HNO ₃			
Al	10	Ni	10
Ba	1	P	100
Be	1	Sc	1
B	10	Zn	10
Ca	1		

Standard II			
CPI P/N	Volume		
4400-CALMX2-100	100mL	€78	
µg/mL in 2% HNO ₃			
Ba	50	Ni	20
Be	20	Sc	20
La	20	Zn	20
Mn	20		

Standard III			
CPI P/N	Volume		
4400-CALMX3-100	100mL	€100	
µg/mL in 2% HNO ₃ + tr HF			
As	20	P	100
La	20	K	100
Li	20	Sc	20
Mn	20	Na	20
Mo	20	S	100
Ni	20		

Standard IV			
CPI P/N	Volume		
4400-CALMX4-100	100mL	€112	
µg/mL in 2% HNO ₃			
Al	10	Ni	10
As	10	P	10
Ba	1	K	50
Cu	10	Sc	10
Pb	10	Na	10
Mn	10	Zn	10

Standard VII			
CPI P/N	Volume		
4400-CALMX7-100	100mL	€134	
µg/mL in 2% HNO ₃			
Al	100	Mg	100
As	100	Mn	100
Cd	100	Ni	100
Cr	100	K	100
Co	100	Na	100
Cu	100	Zn	100
Fe	100	Y	600
Pb	100		

Standard VIII			
CPI P/N	Volume		
4400-CALMX8-100	100mL	€84	
µg/mL in 2% HNO ₃			
Al	50	Pb	50
As	50	P	50
Cr	50	K	50
Co	50	Na	50
Cu	50		

Wavelength Calibration Standard

Wavecal 1 for PE® 40, 400, 1000, 2000				
CPI P/N	Volume			
4400-010130	100mL	€128		
µg/mL in 2% HCl				
As	20	Mn	20	P
K	100	Mo	20	S
La	20	Na	20	Sc
Li	20	Ni	20	

Wavecal 2 for PE® 6000, 6500 (XR)				
CPI P/N	Volume			
4400-010128	100mL			
µg/mL in 2% HCl				
Ba	50	Mn	20	Sc
Be	20	Ni	20	Zn
La	20			

Wavecal 3 for Optima 3000® VIS				
CPI P/N	Volume			
4400-010124	100mL	€95		
µg/mL in 2% HNO ₃				
Ba	1	La	10	Mn
Ca	1	Li	10	Na
K	50			Sr

Wavecal 4 for Optima 3000® UV				
CPI P/N	Volume			
4400-010126	100mL	€128		
µg/mL in 2% HCl				
As	20	Mn	20	P
K	100	Mo	20	S
La	20	Na	20	Sc
Li	20	Ni	20	

Optima 3000® Multi-element Standard				
CPI P/N	Volume			
4400-010200	100mL	€100		
µg/mL in 2% HNO ₃				
As	50	Mg	1	K
Ba	1	Mn	10	Zn
La	10	Ni	10	Sr

Optima 3000® Low UV Standard				
CPI P/N	Volume			
4400-010202	100mL	€90		
µg/mL in 2% HNO ₃				
Al	10	P	10	S
				10



ICP Multi-Element Standards

Initial Calibration Verification Standards

Standard 1			
CPI P/N	Volume		
4400-010094	500mL €345		
µg/mL in 2% HNO ₃ + tr HF			
Al 100	Cu 100	Se 200	
As 100	Fe 100	Si* 100	
Ba 50	Pb 100	Na* 162	
Be 50	Li 100	S* 200	
Bi 100	Mg 100	Sr 100	
B 100	Mn 50	Tl 100	
Cd 50	Mo 100	V 50	
Ca 100	Ni 100	Zn 50	
Cr 50	P 200		
Co 50	K 200		*Shipped Separately

Standard 2		
CPI P/N	Volume	
4400-010095	100mL €27	
4400-010096	500mL €56	
µg/mL in 15% HCl		
Sb 100	Sn 100	Ti 100

Standard 3	
CPI P/N	Volume
4400-010097	100mL €28
µg/mL in 5% HCl	
Au 50	Pd 50 Pt 50

Continuing Calibration Verification Standards

Standard 1			
CPI P/N	Volume		
4400-010099	100mL €178		
4400-010100	500mL €356		
µg/mL in 2% HNO ₃ + tr HF			
Al 200	Cu 200	Se 200	
As 200	Fe 200	Si* 500	
Ba 100	Pb 200	Na* 810	
Be 100	Li 200	S* 500	
Bi 200	Mg 200	Sr 200	
B 200	Mn 100	Tl 200	
Cd 100	Mo 200	V 100	
Ca 200	Ni 200	Zn 100	
Cr 50	P 500		
Co 100	K 500		*Shipped Separately

Standard 2		
CPI P/N	Volume	
4400-010101	100mL €34	
4400-010102	500mL €60	
µg/mL in 15% HCl		
Sb 200	Sn 200	Ti 200

Standard 3	
CPI P/N	Volume
4400-010103	100mL €34
µg/mL in 5% HCl	
Au 100	Pd 100 Pt 100

ICP Kit A	
CPI P/N	Volume
4400-010082	100mL €778
µg/mL in HNO ₃ / HNO ₃ + tr HF	
Al 1000	Mn 1000
As 1000	Hg 1000
Ba 1000	Ni 1000
Be 1000	P 1000
Bi 1000	K 1000
B 1000	Re 1000
Cd 1000	Rb 1000
Ca 1000	Se 1000
Cs 1000	Si 1000
Cr 1000	Ag 1000
Co 1000	Na 1000
Cu 1000	Sr 1000
Ga 1000	S 1000
Ge 1000	Tl 1000
In 1000	Th 1000
Fe 1000	Ti 1000
Pb 1000	U 1000
Li 1000	V 1000
Mg 1000	Zn 1000

Kit B	
CPI P/N	Volume
4400-010083	100mL €195
µg/mL in HNO ₃ / HNO ₃ + tr HF	
Sb 1000	Sn 1000
Hf 1000	Te 1000
Mo 1000	W 1000
Nb 1000	Zr 1000
Ta 1000	

Kit C	
CPI P/N	Volume
4400-010084	100mL €560
µg/mL in HCl	
Au 1000	Pt 1000
Ir 1000	Rh 1000
Os 1000	Ru 1000
Pd 1000	

Kit A-E	
CPI P/N	Volume
4400-010087	100mL €1,900

Kit D		
CPI P/N	Volume	
4400-010085	100mL €328	
µg/mL in HNO ₃		
Ce 1000	Nd 1000	
Dy 1000	Pr 1000	
Er 1000	Sm 1000	
Eu 1000	Sc 1000	
Gd 1000	Tb 1000	
Ho 1000	Tm 1000	
La 1000	Yb 1000	
Lu 1000	Y 1000	

Kit E		
CPI P/N	Volume	
4400-010086	100mL €117	
µg/mL in H ₂ O		
Bromide 1000	Fluoride 1000	
Chloride 1000	Iodide 1000	

Initial Calibration Verification (ICV)

These standards are used prior to the actual analysis to test the instrumental calibration curves at each wavelength to be used in the following analysis.

Continuing Calibration Verification (CCV)

These standards are used to monitor drifting of the calibration curve during the analysis; usually administered between samples and at the end of the analysis.

ICP Kits

These kits are prepared to provide the analyst with a supply of single element spectrometric solutions. All standards are bottled in Passport IP2 bottles and ship with a comprehensive Certificate of Analysis and Material Safety Data Sheet.



200.8

These standards are used for the determination of metals in US EPA Method 200.8, "Methods for the Determination of Metals in Environmental Samples Supplement 1." All standards are bottled in Passport IP2 bottles and ship with a comprehensive Certificate of Analysis and Material Safety Data Sheet.

CPI also offers a complete selection of ICP-MS torches, nebulizers and corrosion (HF) resistant sample introduction components

ICP-MS Multi-Element Standards

US EPA Method 200.8

Standard A - rev. 5.4				Standard A - rev. 4.4				Standard B			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-010036		100mL €212		4400-010037		100mL €212		4400-010038		100mL €65	
µg/mL in 1% HNO ₃ + tr HF				µg/mL in 1% HNO ₃ + tr HF				µg/mL in 1% HNO ₃			
Al	10	Ni	10	Al	10	Ni	10	Ag	10	Ba	10
As	10	Pb	10	As	10	Pb	10				
Be	10	Sb	10	Be	10	Sb	10				
Cd	10	Se	50	Cd	10	Se	10				
Co	10	Th	10	Co	10	Th	10				
Cr	10	Tl	10	Cr	10	Tl	10				
Cu	10	U	10	Cu	10	U	10				
Mn	10	V	10	Mn	10	V	10				
Mo	10	Zn	10	Mo	10	Zn	10				

Internal Standard				Tuning Solution			
CPI P/N		Volume		CPI P/N		Volume	
4400-010039		100mL €103		4400-010040		100mL €91	
µg/mL in 1% HNO ₃				µg/mL in 1% HNO ₃			
⁴⁵ Sc	10	¹⁵⁹ Tb	10	Be	10	Mg	10
⁸⁹ Y	10			Co	10	Pb	10
²⁰⁹ Bi	10			In	10		
¹¹⁵ In	10						

US EPA Method 6020

Soil Spike				QC/ICV Solution				Water Spike			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-010044		100mL €184		4400-010045		100mL €185		4400-010043		100mL €203	
µg/mL in 2% HNO ₃ + tr HF				µg/mL in 2% HNO ₃ + tr HF				µg/mL in 2% HNO ₃ + tr HF			
Ag	10	Ni	25	Ag	10	Cu	10	Ag	5	Mn	20
Ba	50	Pb	20	Al	10	Mn	10	As	10	Ni	20
Be	5	Sb	20	As	10	Ni	10	Ba	50	Pb	10
Cd	10	Se	5	Ba	10	Pb	10	Be	5	Sb	20
Co	20	Tl	5	Be	10	Sb	10	Cd	5	Se	5
Cr	50	V	30	Cd	10	Tl	10	Co	20	Tl	5
Cu	50	Zn	50	Co	10	Zn	10	Cr	20	V	20
As	10			Cr	10			Cu	20	Zn	50
								Fe	100		

Internal Standard				Tuning Solution			
CPI P/N		Volume		CPI P/N		Volume	
4400-010041		100mL €125		4400-010042		100mL €83	
µg/mL in 2% HNO ₃				µg/mL in 2% HNO ₃			
⁶ Li	10	¹⁵⁹ Tb	10	Co	10	In	10
⁴⁵ Sc	10	¹⁶⁵ Ho	10	Li	10	Tl	10
²⁰⁹ Bi	10	⁸⁹ Y	10				
¹¹⁵ In	10						

ICP-MS Multi-Element Standards

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ICP-MS Calibration Standard			
CPI P/N	Volume		
4400-ICP-MSCS	250mL	€212	
µg/mL in 5% HNO ₃ + tr HF			
Al	10	Mn	10
As	10	Mo	10
Ag	10	Na	10
Ba	10	Ni	10
Be	10	Pb	10
B	10	Sb	10
Ca	10	Sc	10
Co	10	Se	10
Cd	10	Sr	10
Cr	10	Th	10
Cu	10	Tl	10
Eu	10	U	10
Ho	10	V	10
La	10	Yb	10
Li	10	Zn	10
Mg	10		

ICP-MS Interference Check Solutions					
CPI P/N	Volume				
4400-ICP-MS-ICS	100mL	€279			
µg/mL in 2% HNO ₃ + tr HF					
Solution A			Solution B		
Al	500.0	Ag	0.10	Mg	500.00
C	1000.0	Al	500.00	Mo	10.00
Ca	500.0	As	0.10	Mn	0.10
Cl	3600.0	C	1000.00	Na	500.00
Fe	500.0	Ca	500.00	Ni	0.20
K	500.0	Cd	0.05	P	500.00
Mg	500.0	Cl	3600.00	Se	0.10
Mo	10.0	Co	0.20	S	500.00
Na	500.0	Cr	0.10	Ti	10.00
P	500.0	Cu	0.10	V	0.20
S	500.0	Fe	500.00	Zn	0.10
Ti	10.0	K	500.00		

Calibration Standard			
CPI P/N	Volume		
4400-ICPMS-250	250mL	€65	
µg/mL in 2% HNO ₃ + tr HF			
Be	10	Pb	10
Bi	10	Mg	10
Ce	10	Ni	10
Co	10	U	10
In	10		

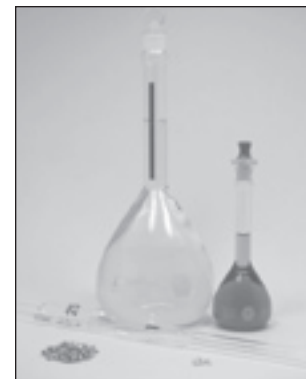
Standard I			
CPI P/N	Volume		
4400-ICPMS1	250mL	€123	
µg/mL in 5% HNO ₃			
Ce	10	Pr	10
Dy	10	Sm	10
Er	10	Sc	10
Eu	10	Tb	10
Gd	10	Th	10
Ho	10	Tm	10
La	10	Yb	10
Lu	10	Y	10
Nd	10		

Standard III			
CPI P/N	Volume		
4400-ICPMS3	250mL	€84	
µg/mL in 10% HCl			
Au	10	Rh	10
Hf	10	Ru	10
Ir	10	Sb	10
Pd	10	Sn	10
Pt	10	Te	10

Standard IV			
CPI P/N	Volume		
4400-010027	250mL	€94	
µg/mL in 5% HNO ₃ + tr HF			
B	10	S	10
Ge	10	Si	10
Mo	10	Ta	10
Nb	10	Ti	10
P	10	W	10
Re	10	Zr	10

Internal Standard			
CPI P/N	Volume		
4400-010034	100mL	€102	
µg/mL in 1% HNO ₃			
⁶ Li	100	⁸⁹ Y	100
⁴⁵ Sc	100	¹¹⁵ In	100
¹⁵⁹ Tb	100	²⁰⁹ Bi	100

Tuning Solution for HP 4500®			
CPI P/N	Volume		
4400-010035	100mL	€67	
µg/mL in 5% HNO ₃			
Ce	10	Tl	10
Li	10	Y	10



**Convenience, Corrosion
Resistance, Complete Control!**



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ICP-MS Kits

These kits are prepared to provide the analyst with a supply of single element spectrometric solutions. All standards are bottled in Passport IP2 bottles and ship with a comprehensive Certificate of Analysis and Material Safety Data Sheet.

ICP-MS Single-Element Kits

ICP-MS Kits

Kit A				Kit B				Kit C			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-010028		100mL €500		4400-010029		100mL €139		4400-010030		100mL €100	
µg/mL in HNO ₃ / HNO ₃ + HF				µg/mL in HNO ₃ / HNO ₃ + HF				µg/mL in HCl			
Al	10	Mn	10	Sb	10	Sn	10	Au	10	Pt	10
As	10	Hg	10	Hf	10	Te	10	Ir	10	Rh	10
Ba	10	Ni	10	Mo	10	W	10	Os	10	Ru	10
Be	10	P	10	Nb	10	Zr	10	Pd	10		
Bi	10	K	10	Ta	10						
B	10	Re	10								
Cd	10	Rb	10								
Ca	10	Se	10								
Cs	10	Si	10								
Cr	10	Ag	10								
Co	10	Na	10								
Cu	10	Sr	10								
Ga	10	S	10								
Ge	10	Tl	10								
In	10	Th	10								
Fe	10	Ti	10								
Pb	10	U	10								
Li	10	V	10								
Mg	10	Zn	10								

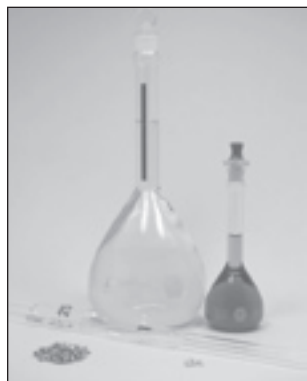
Kit D		Kit E					
CPI P/N		Volume		CPI P/N		Volume	
4400-010031		100mL €473		4400-010032		100mL €53	
µg/mL in HNO ₃				µg/mL in H ₂ O			
Ce	10	Nd	10	Bromide	10	Fluoride	10
Dy	10	Pr	10	Chloride-	10	Iodide	10
Er	10	Sm	10				
Eu	10	Sc	10				
Gd	10	Tb	10				
Ho	10	Tm	10				
La	10	Yb	10				
Lu	10	Y	10				

Kit A-E			
CPI P/N		Volume	
4400-010033		100mL €800	

Graphite Furnace Atomic Absorption (GFAA)

TCLP Standard				TCLP - 3 Analytes				TCLP - 4 Analytes			
CPI P/N		Volume		CPI P/N		Volume		CPI P/N		Volume	
4400-TCLP-100		100mL €95		4400-010091		100mL €45		4400-010089		100mL	
4400-TCLP-500		500mL €195						4400-010090		500mL	
µg/mL in 2% HNO ₃				µg/mL in 2% HNO ₃				µg/mL in 2% HNO ₃			
As	25	Pb	25	As	25	Se	5	Ba	500	Cr	25
Ba	500	Se	5	Pb	25			Cd	5	Ag	25
Cd	5	Ag	25								
Cr	25	Hg*	20								

*Shipped Separately



Calibration Standard				Initial Calibration Verification			
CPI P/N		Volume		CPI P/N		Volume	
4400-010107		100mL €55		4400-010109		100mL €55	
µg/mL in 2% HNO ₃ + tr HF				µg/mL in 2% HNO ₃ + tr HF			
As	20	Pb	10	As	10	Pb	5
Cd	15	Sb	50	Cd	10	Sb	25
		Se	15			Se	10
		Tl	20			Tl	10

Spike Standard				Mercury Standard			
CPI P/N		Volume		CPI P/N		Volume	
4400-010111		100mL €55		4400-010113		100mL €45	
µg/mL in 2% HNO ₃ + tr HF				µg/mL in 2% HNO ₃			
As	40	Pb	20	Hg	100		
Cd	5	Sb	100				
		Se	10				
		Tl	50				