

Element	Matrix	Concentration	Volume	isoSPEC No.
Aluminum (Al)	2% HCl	1,000 mg/L	100 ml	13-01-2/100
	2% HCl	1,000 mg/L	250 ml	13-01-2/250
	2% HCl	1,000 mg/L	500 ml	13-01-2/500
Aluminum (Al)	2% HNO ₃	1,000 mg/L	100 ml	13-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	13-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	13-01-1/500
Aluminum (Al)	10% HCl	10,000 mg/L	100 ml	13-10-2/100
	10% HCl	10,000 mg/L	250 ml	13-10-2/250
	10% HCl	10,000 mg/L	500 ml	13-10-2/500
Aluminum (Al)	10% HNO ₃	10,000 mg/L	100 ml	13-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	13-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	13-10-1/500
Antimony (Sb)	20% HCl	1,000 mg/L	100 ml	51-01-2/100
	20% HCl	1,000 mg/L	250 ml	51-01-2/250
	20% HCl	1,000 mg/L	500 ml	51-01-2/500
Antimony (Sb)	5% HNO ₃ + 0.1% HF	1,000 mg/L	100 ml	51-01-3/100
	5% HNO ₃ + 0.1% HF	1,000 mg/L	250 ml	51-01-3/250
	5% HNO ₃ + 0.1% HF	1,000 mg/L	500 ml	51-01-3/500
Antimony (Sb)	50% HCl	10,000 mg/L	100 ml	51-10-2/100
	50% HCl	10,000 mg/L	250 ml	51-10-2/250
	50% HCl	10,000 mg/L	500 ml	51-10-2/500
Antimony (Sb)	10% HNO ₃ + 2% HF	10,000 mg/L	100 ml	51-10-3/100
	10% HNO ₃ + 2% HF	10,000 mg/L	250 ml	51-10-3/250
	10% HNO ₃ + 2% HF	10,000 mg/L	500 ml	51-10-3/500
Arsenic (As)	2% HCl	1,000 mg/L	100 ml	33-01-2/100
	2% HCl	1,000 mg/L	250 ml	33-01-2/250
	2% HCl	1,000 mg/L	500 ml	33-01-2/500
Arsenic (As)	2% HNO ₃	1,000 mg/L	100 ml	33-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	33-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	33-01-1/500
Arsenic (As)	15% HCl	10,000 mg/L	100 ml	33-10-2/100
	15% HCl	10,000 mg/L	250 ml	33-10-2/250
	15% HCl	10,000 mg/L	500 ml	33-10-2/500
Arsenic (As)	10% HNO ₃	10,000 mg/L	100 ml	33-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	33-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	33-10-1/500
Barium (Ba)	2% HCl	1,000 mg/L	100 ml	56-01-2/100
	2% HCl	1,000 mg/L	250 ml	56-01-2/250
	2% HCl	1,000 mg/L	500 ml	56-01-2/500
Barium (Ba)	2% HNO ₃	1,000 mg/L	100 ml	56-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	56-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	56-01-1/500

Solutions designed to meet your Standards ...
Standards designed to meet your Solutions

Element	Matrix	Concentration	Volume	isoSPEC No.
Barium (Ba)	5% HCl	10,000 mg/L	100 ml	56-10-2/100
	5% HCl	10,000 mg/L	250 ml	56-10-2/250
	5% HCl	10,000 mg/L	500 ml	56-10-2/500
Barium (Ba)	4% HNO ₃	10,000 mg/L	100 ml	56-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	56-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	56-10-1/500
Beryllium (Be)	2% HCl	1,000 mg/L	100 ml	4-01-2/100
	2% HCl	1,000 mg/L	250 ml	4-01-2/250
	2% HCl	1,000 mg/L	500 ml	4-01-2/500
Beryllium (Be)	2% HNO ₃	1,000 mg/L	100 ml	4-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	4-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	4-01-1/500
Beryllium (Be)	10% HCl	10,000 mg/L	100 ml	4-10-2/100
	10% HCl	10,000 mg/L	250 ml	4-10-2/250
	10% HCl	10,000 mg/L	500 ml	4-10-2/500
Beryllium (Be)	4% HNO ₃	10,000 mg/L	100 ml	4-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	4-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	4-10-1/500
Bismuth (Bi)	2% HCl	1,000 mg/L	100 ml	83-01-2/100
	2% HCl	1,000 mg/L	250 ml	83-01-2/250
	2% HCl	1,000 mg/L	500 ml	83-01-2/500
Bismuth (Bi)	2% HNO ₃	1,000 mg/L	100 ml	83-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	83-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	83-01-1/500
Bismuth (Bi)	4% HNO ₃	10,000 mg/L	100 ml	83-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	83-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	83-10-1/500
Boron (B)	H ₂ O	1,000 mg/L	100 ml	5-01-4/100
	H ₂ O	1,000 mg/L	250 ml	5-01-4/250
	H ₂ O	1,000 mg/L	500 ml	5-01-4/500
Boron (B)	H ₂ O	5,000 mg/L	100 ml	5-05-4/100
	H ₂ O	5,000 mg/L	250 ml	5-05-4/250
	H ₂ O	5,000 mg/L	500 ml	5-05-4/500
Cadmium (Cd)	2% HCl	1,000 mg/L	100 ml	48-01-2/100
	2% HCl	1,000 mg/L	250 ml	48-01-2/250
	2% HCl	1,000 mg/L	500 ml	48-01-2/500
Cadmium (Cd)	2% HNO ₃	1,000 mg/L	100 ml	48-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	48-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	48-01-1/500
Cadmium (Cd)	10% HCl	10,000 mg/L	100 ml	48-10-2/100
	10% HCl	10,000 mg/L	250 ml	48-10-2/250
	10% HCl	10,000 mg/L	500 ml	48-10-2/500
Cadmium (Cd)	4% HNO ₃	10,000 mg/L	100 ml	48-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	48-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	48-10-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Calcium (Ca)	2% HCl	1,000 mg/L	100 ml	20-01-2/100
	2% HCl	1,000 mg/L	250 ml	20-01-2/250
	2% HCl	1,000 mg/L	500 ml	20-01-2/500
Calcium (Ca)	2% HNO ₃	1,000 mg/L	100 ml	20-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	20-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	20-01-1/500
Calcium (Ca)	5% HCl	10,000 mg/L	100 ml	20-10-2/100
	5% HCl	10,000 mg/L	250 ml	20-10-2/250
	5% HCl	10,000 mg/L	500 ml	20-10-2/500
Calcium (Ca)	4% HNO ₃	10,000 mg/L	100 ml	20-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	20-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	20-10-1/500
Cerium (Ce)	2% HCl	1,000 mg/L	100 ml	58-01-2/100
	2% HCl	1,000 mg/L	250 ml	58-01-2/250
	2% HCl	1,000 mg/L	500 ml	58-01-2/500
Cerium (Ce)	2% HNO ₃	1,000 mg/L	100 ml	58-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	58-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	58-01-1/500
Cerium (Ce)	10% HCl	10,000 mg/L	100 ml	58-10-2/100
	10% HCl	10,000 mg/L	250 ml	58-10-2/250
	10% HCl	10,000 mg/L	500 ml	58-10-2/500
Cerium (Ce)	4% HNO ₃	10,000 mg/L	100 ml	58-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	58-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	58-10-1/500
Cesium (Cs)	1% HCl	1,000 mg/L	100 ml	55-01-2/100
	1% HCl	1,000 mg/L	250 ml	55-01-2/250
	1% HCl	1,000 mg/L	500 ml	55-01-2/500
Cesium (Cs)	1% HNO ₃	1,000 mg/L	100 ml	55-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	55-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	55-01-1/500
Cesium (Cs)	1% HCl	10,000 mg/L	100 ml	55-10-2/100
	1% HCl	10,000 mg/L	250 ml	55-10-2/250
	1% HCl	10,000 mg/L	500 ml	55-10-2/500
Cesium (Cs)	1% HNO ₃	10,000 mg/L	100 ml	55-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	55-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	55-10-1/500
Chromium (Cr)	2% HCl	1,000 mg/L	100 ml	24-01-2/100
	2% HCl	1,000 mg/L	250 ml	24-01-2/250
	2% HCl	1,000 mg/L	500 ml	24-01-2/500
Chromium (Cr)	2% HNO ₃	1,000 mg/L	100 ml	24-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	24-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	24-01-1/500
Chromium (Cr)	10% HCl	10,000 mg/L	100 ml	24-10-2/100
	10% HCl	10,000 mg/L	250 ml	24-10-2/250
	10% HCl	10,000 mg/L	500 ml	24-10-2/500
Chromium (Cr)	10% HNO ₃	10,000 mg/L	100 ml	24-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	24-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	24-10-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Cobalt (Co)	2% HCl	1,000 mg/L	100 ml	27-01-2/100
	2% HCl	1,000 mg/L	250 ml	27-01-2/250
	2% HCl	1,000 mg/L	500 ml	27-01-2/500
Cobalt (Co)	2% HNO ₃	1,000 mg/L	100 ml	27-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	27-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	27-01-1/500
Cobalt (Co)	10% HCl	10,000 mg/L	100 ml	27-10-2/100
	10% HCl	10,000 mg/L	250 ml	27-10-2/250
	10% HCl	10,000 mg/L	500 ml	27-10-2/500
Cobalt (Co)	4% HNO ₃	10,000 mg/L	100 ml	27-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	27-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	27-10-1/500
Copper (Cu)	2% HCl	1,000 mg/L	100 ml	29-01-2/100
	2% HCl	1,000 mg/L	250 ml	29-01-2/250
	2% HCl	1,000 mg/L	500 ml	29-01-2/500
Copper (Cu)	2% HNO ₃	1,000 mg/L	100 ml	29-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	29-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	29-01-1/500
Copper (Cu)	10% HCl	10,000 mg/L	100 ml	29-10-2/100
	10% HCl	10,000 mg/L	250 ml	29-10-2/250
	10% HCl	10,000 mg/L	500 ml	29-10-2/500
Copper (Cu)	4% HNO ₃	10,000 mg/L	100 ml	29-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	29-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	29-10-1/500
Dysprosium (Dy)	2% HCl	1,000 mg/L	100 ml	66-01-2/100
	2% HCl	1,000 mg/L	250 ml	66-01-2/250
	2% HCl	1,000 mg/L	500 ml	66-01-2/500
Dysprosium (Dy)	2% HNO ₃	1,000 mg/L	100 ml	66-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	66-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	66-01-1/500
Dysprosium (Dy)	10% HCl	10,000 mg/L	100 ml	66-10-2/100
	10% HCl	10,000 mg/L	250 ml	66-10-2/250
	10% HCl	10,000 mg/L	500 ml	66-10-2/500
Dysprosium (Dy)	4% HNO ₃	10,000 mg/L	100 ml	66-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	66-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	66-10-1/500
Erbium (Er)	2% HCl	1,000 mg/L	100 ml	68-01-2/100
	2% HCl	1,000 mg/L	250 ml	68-01-2/250
	2% HCl	1,000 mg/L	500 ml	68-01-2/500
Erbium (Er)	2% HNO ₃	1,000 mg/L	100 ml	68-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	68-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	68-01-1/500
Erbium (Er)	10% HCl	10,000 mg/L	100 ml	68-10-2/100
	10% HCl	10,000 mg/L	250 ml	68-10-2/250
	10% HCl	10,000 mg/L	500 ml	68-10-2/500
Erbium (Er)	4% HNO ₃	10,000 mg/L	100 ml	68-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	68-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	68-10-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Europium (Eu)	2% HCl	1,000 mg/L	100 ml	63-01-2/100
	2% HCl	1,000 mg/L	250 ml	63-01-2/250
	2% HCl	1,000 mg/L	500 ml	63-01-2/500
Europium (Eu)	2% HNO ₃	1,000 mg/L	100 ml	63-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	63-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	63-01-1/500
Europium (Eu)	10% HCl	10,000 mg/L	100 ml	63-10-2/100
	10% HCl	10,000 mg/L	250 ml	63-10-2/250
	10% HCl	10,000 mg/L	500 ml	63-10-2/500
Europium (Eu)	4% HNO ₃	10,000 mg/L	100 ml	63-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	63-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	63-10-1/500
Gadolinium (Gd)	2% HCl	1,000 mg/L	100 ml	64-01-2/100
	2% HCl	1,000 mg/L	250 ml	64-01-2/250
	2% HCl	1,000 mg/L	500 ml	64-01-2/500
Gadolinium (Gd)	2% HNO ₃	1,000 mg/L	100 ml	64-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	64-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	64-01-1/500
Gadolinium (Gd)	10% HCl	10,000 mg/L	100 ml	64-10-2/100
	10% HCl	10,000 mg/L	250 ml	64-10-2/250
	10% HCl	10,000 mg/L	500 ml	64-10-2/500
Gadolinium (Gd)	4% HNO ₃	10,000 mg/L	100 ml	64-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	64-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	64-10-1/500
Gallium (Ga)	2% HCl	1,000 mg/L	100 ml	31-01-2/100
	2% HCl	1,000 mg/L	250 ml	31-01-2/250
	2% HCl	1,000 mg/L	500 ml	31-01-2/500
Gallium (Ga)	2% HNO ₃	1,000 mg/L	100 ml	31-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	31-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	31-01-1/500
Gallium (Ga)	10% HCl	10,000 mg/L	100 ml	31-10-2/100
	10% HCl	10,000 mg/L	250 ml	31-10-2/250
	10% HCl	10,000 mg/L	500 ml	31-10-2/500
Gallium (Ga)	4% HNO ₃	10,000 mg/L	100 ml	31-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	31-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	31-10-1/500
Germanium (Ge)	5% Oxalic Acid	1,000 mg/L	100 ml	32-01-8/100
	5% Oxalic Acid	1,000 mg/L	250 ml	32-01-8/250
	5% Oxalic Acid	1,000 mg/L	500 ml	32-01-8/500
Germanium (Ge)	1% HNO ₃	1,000 mg/L	100 ml	32-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	32-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	32-01-1/500
Germanium (Ge)	15% Oxalic Acid	10,000 mg/L	100 ml	32-10-8/100
	15% Oxalic Acid	10,000 mg/L	250 ml	32-10-8/250
	15% Oxalic Acid	10,000 mg/L	500 ml	32-10-8/500
Germanium (Ge)	1% HNO ₃	10,000 mg/L	100 ml	32-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	32-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	32-10-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Gold (Au)	2% HCl	1,000 mg/L	100 ml	79-01-2/100
	2% HCl	1,000 mg/L	250 ml	79-01-2/250
	2% HCl	1,000 mg/L	500 ml	79-01-2/500
Gold (Au)	10% HCl	10,000 mg/L	100 ml	79-10-2/100
	10% HCl	10,000 mg/L	250 ml	79-10-2/250
	10% HCl	10,000 mg/L	500 ml	79-10-2/500
Hafnium (Hf)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	72-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	72-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	72-01-3/500
Hafnium (Hf)	4% HNO ₃ + 2% HF	10,000 mg/L	100 ml	72-10-3/100
	4% HNO ₃ + 2% HF	10,000 mg/L	250 ml	72-10-3/250
	4% HNO ₃ + 2% HF	10,000 mg/L	500 ml	72-10-3/500
Holmium (Ho)	2% HCl	1,000 mg/L	100 ml	67-01-2/100
	2% HCl	1,000 mg/L	250 ml	67-01-2/250
	2% HCl	1,000 mg/L	500 ml	67-01-2/500
Holmium (Ho)	2% HNO ₃	1,000 mg/L	100 ml	67-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	67-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	67-01-1/500
Holmium (Ho)	10% HCl	10,000 mg/L	100 ml	67-10-2/100
	10% HCl	10,000 mg/L	250 ml	67-10-2/250
	10% HCl	10,000 mg/L	500 ml	67-10-2/500
Holmium (Ho)	4% HNO ₃	10,000 mg/L	100 ml	67-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	67-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	67-10-1/500
Indium (In)	2% HCl	1,000 mg/L	100 ml	49-01-2/100
	2% HCl	1,000 mg/L	250 ml	49-01-2/250
	2% HCl	1,000 mg/L	500 ml	49-01-2/500
Indium (In)	2% HNO ₃	1,000 mg/L	100 ml	49-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	49-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	49-01-1/500
Indium (In)	10% HCl	10,000 mg/L	100 ml	49-10-2/100
	10% HCl	10,000 mg/L	250 ml	49-10-2/250
	10% HCl	10,000 mg/L	500 ml	49-10-2/500
Indium (In)	4% HNO ₃	10,000 mg/L	100 ml	49-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	49-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	49-10-1/500
Iridium (Ir)	10% HCl	1,000 mg/L	100 ml	77-01-2/100
	10% HCl	1,000 mg/L	250 ml	77-01-2/250
	10% HCl	1,000 mg/L	500 ml	77-01-2/500
Iron (Fe)	2% HCl	1,000 mg/L	100 ml	26-01-2/100
	2% HCl	1,000 mg/L	250 ml	26-01-2/250
	2% HCl	1,000 mg/L	500 ml	26-01-2/500
Iron (Fe)	2% HNO ₃	1,000 mg/L	100 ml	26-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	26-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	26-01-1/500
Iron (Fe)	10% HCl	10,000 mg/L	100 ml	26-10-2/100
	10% HCl	10,000 mg/L	250 ml	26-10-2/250
	10% HCl	10,000 mg/L	500 ml	26-10-2/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Iron (Fe)	10% HNO ₃	10,000 mg/L	100 ml	26-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	26-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	26-10-1/500
Lanthanum (La)	2% HCl	1,000 mg/L	100 ml	57-01-2/100
	2% HCl	1,000 mg/L	250 ml	57-01-2/250
	2% HCl	1,000 mg/L	500 ml	57-01-2/500
Lanthanum (La)	2% HNO ₃	1,000 mg/L	100 ml	57-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	57-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	57-01-1/500
Lanthanum (La)	10% HCl	10,000 mg/L	100 ml	57-10-2/100
	10% HCl	10,000 mg/L	250 ml	57-10-2/250
	10% HCl	10,000 mg/L	500 ml	57-10-2/500
Lanthanum (La)	4% HNO ₃	10,000 mg/L	100 ml	57-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	57-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	57-10-1/500
Lead (Pb)	2% HCl	1,000 mg/L	100 ml	82-01-2/100
	2% HCl	1,000 mg/L	250 ml	82-01-2/250
	2% HCl	1,000 mg/L	500 ml	82-01-2/500
Lead (Pb)	2% HNO ₃	1,000 mg/L	100 ml	82-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	82-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	82-01-1/500
Lead (Pb)	4% HNO ₃	10,000 mg/L	100 ml	82-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	82-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	82-10-1/500
Lithium (Li)	1% HCl	1,000 mg/L	100 ml	3-01-2/100
	1% HCl	1,000 mg/L	250 ml	3-01-2/250
	1% HCl	1,000 mg/L	500 ml	3-01-2/500
Lithium (Li)	1% HNO ₃	1,000 mg/L	100 ml	3-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	3-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	3-01-1/500
Lithium (Li)	1% HCl	10,000 mg/L	100 ml	3-10-2/100
	1% HCl	10,000 mg/L	250 ml	3-10-2/250
	1% HCl	10,000 mg/L	500 ml	3-10-2/500
Lithium (Li)	1% HNO ₃	10,000 mg/L	100 ml	3-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	3-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	3-10-1/500
Lutetium (Lu)	2% HCl	1,000 mg/L	100 ml	71-01-2/100
	2% HCl	1,000 mg/L	250 ml	71-01-2/250
	2% HCl	1,000 mg/L	500 ml	71-01-2/500
Lutetium (Lu)	2% HNO ₃	1,000 mg/L	100 ml	71-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	71-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	71-01-1/500
Lutetium (Lu)	10% HCl	10,000 mg/L	100 ml	71-10-2/100
	10% HCl	10,000 mg/L	250 ml	71-10-2/250
	10% HCl	10,000 mg/L	500 ml	71-10-2/500
Lutetium (Lu)	4% HNO ₃	10,000 mg/L	100 ml	71-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	71-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	71-10-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Magnesium (Mg)	2% HCl	1,000 mg/L	100 ml	12-01-2/100
	2% HCl	1,000 mg/L	250 ml	12-01-2/250
	2% HCl	1,000 mg/L	500 ml	12-01-2/500
Magnesium (Mg)	2% HNO ₃	1,000 mg/L	100 ml	12-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	12-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	12-01-1/500
Magnesium (Mg)	10% HCl	10,000 mg/L	100 ml	12-10-2/100
	10% HCl	10,000 mg/L	250 ml	12-10-2/250
	10% HCl	10,000 mg/L	500 ml	12-10-2/500
Magnesium (Mg)	4% HNO ₃	10,000 mg/L	100 ml	12-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	12-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	12-10-1/500
Manganese (Mn)	2% HCl	1,000 mg/L	100 ml	25-01-2/100
	2% HCl	1,000 mg/L	250 ml	25-01-2/250
	2% HCl	1,000 mg/L	500 ml	25-01-2/500
Manganese (Mn)	2% HNO ₃	1,000 mg/L	100 ml	25-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	25-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	25-01-1/500
Manganese (Mn)	10% HCl	10,000 mg/L	100 ml	25-10-2/100
	10% HCl	10,000 mg/L	250 ml	25-10-2/250
	10% HCl	10,000 mg/L	500 ml	25-10-2/500
Manganese (Mn)	4% HNO ₃	10,000 mg/L	100 ml	25-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	25-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	25-10-1/500
Mercury (Hg)	2% HNO ₃	1,000 mg/L	100 ml	80-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	80-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	80-01-1/500
Mercury (Hg)	4% HNO ₃	10,000 mg/L	100 ml	80-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	80-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	80-10-1/500
Molybdenum (Mo)	2% HCl	1,000 mg/L	100 ml	42-01-2/100
	2% HCl	1,000 mg/L	250 ml	42-01-2/250
	2% HCl	1,000 mg/L	500 ml	42-01-2/500
Molybdenum (Mo)	2% HNO ₃ + 0.1% HF	1,000 mg/L	100 ml	42-01-3/100
	2% HNO ₃ + 0.1% HF	1,000 mg/L	250 ml	42-01-3/250
	2% HNO ₃ + 0.1% HF	1,000 mg/L	500 ml	42-01-3/500
Molybdenum (Mo)	Mo from (NH ₄) ₂ MoO ₄ , H ₂ O	1,000 mg/L	100 ml	42-01-10/100
	Mo from (NH ₄) ₂ MoO ₄ , H ₂ O	1,000 mg/L	250 ml	42-01-10/250
	Mo from (NH ₄) ₂ MoO ₄ , H ₂ O	1,000 mg/L	500 ml	42-01-10/500
Molybdenum (Mo)	10% HCl	10,000 mg/L	100 ml	42-10-2/100
	10% HCl	10,000 mg/L	250 ml	42-10-2/250
	10% HCl	10,000 mg/L	500 ml	42-10-2/500
Molybdenum (Mo)	5% HNO ₃ + 2% HF	10,000 mg/L	100 ml	42-10-3/100
	5% HNO ₃ + 2% HF	10,000 mg/L	250 ml	42-10-3/250
	5% HNO ₃ + 2% HF	10,000 mg/L	500 ml	42-10-3/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Neodymium (Nd)	2% HCl	1,000 mg/L	100 ml	60-01-2/100
	2% HCl	1,000 mg/L	250 ml	60-01-2/250
	2% HCl	1,000 mg/L	500 ml	60-01-2/500
Neodymium (Nd)	2% HNO ₃	1,000 mg/L	100 ml	60-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	60-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	60-01-1/500
Neodymium (Nd)	10% HCl	10,000 mg/L	100 ml	60-10-2/100
	10% HCl	10,000 mg/L	250 ml	60-10-2/250
	10% HCl	10,000 mg/L	500 ml	60-10-2/500
Neodymium (Nd)	4% HNO ₃	10,000 mg/L	100 ml	60-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	60-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	60-10-1/500
Nickel (Ni)	2% HCl	1,000 mg/L	100 ml	28-01-2/100
	2% HCl	1,000 mg/L	250 ml	28-01-2/250
	2% HCl	1,000 mg/L	500 ml	28-01-2/500
Nickel (Ni)	2% HNO ₃	1,000 mg/L	100 ml	28-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	28-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	28-01-1/500
Nickel (Ni)	10% HCl	10,000 mg/L	100 ml	28-10-2/100
	10% HCl	10,000 mg/L	250 ml	28-10-2/250
	10% HCl	10,000 mg/L	500 ml	28-10-2/500
Nickel (Ni)	4% HNO ₃	10,000 mg/L	100 ml	28-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	28-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	28-10-1/500
Niobium (Nb)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	41-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	41-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	41-01-3/500
Niobium (Nb)	4% HNO ₃ + 2% HF	10,000 mg/L	100 ml	41-10-3/100
	4% HNO ₃ + 2% HF	10,000 mg/L	250 ml	41-10-3/250
	4% HNO ₃ + 2% HF	10,000 mg/L	500 ml	41-10-3/500
Osmium (Os)	10% HCl	1,000 mg/L	100 ml	76-01-2/100
	10% HCl	1,000 mg/L	250 ml	76-01-2/250
	10% HCl	1,000 mg/L	500 ml	76-01-2/500
Palladium (Pd)	5% HCl	1,000 mg/L	100 ml	46-01-2/100
	5% HCl	1,000 mg/L	250 ml	46-01-2/250
	5% HCl	1,000 mg/L	500 ml	46-01-2/500
Palladium (Pd)	10% HNO ₃	1,000 mg/L	100 ml	46-01-1/100
	10% HNO ₃	1,000 mg/L	250 ml	46-01-1/250
	10% HNO ₃	1,000 mg/L	500 ml	46-01-1/500
Palladium (Pd)	10% HCl	10,000 mg/L	100 ml	46-10-2/100
	10% HCl	10,000 mg/L	250 ml	46-10-2/250
	10% HCl	10,000 mg/L	500 ml	46-10-2/500
Palladium (Pd)	10% HNO ₃	10,000 mg/L	100 ml	46-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	46-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	46-10-1/500
Phosphorus (P)	0.05% HNO ₃	1,000 mg/L	100 ml	15-01-1/100
	0.05% HNO ₃	1,000 mg/L	250 ml	15-01-1/250
	0.05% HNO ₃	1,000 mg/L	500 ml	15-01-1/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Phosphorus (P)	0.05% HNO ₃	10,000 mg/L	100 ml	15-10-1/100
	0.05% HNO ₃	10,000 mg/L	250 ml	15-10-1/250
	0.05% HNO ₃	10,000 mg/L	500 ml	15-10-1/500
Platinum (Pt)	5% HCl	1,000 mg/L	100 ml	78-01-2/100
	5% HCl	1,000 mg/L	250 ml	78-01-2/250
	5% HCl	1,000 mg/L	500 ml	78-01-2/500
Platinum (Pt)	10% HCl	10,000 mg/L	100 ml	78-10-2/100
	10% HCl	10,000 mg/L	250 ml	78-10-2/250
	10% HCl	10,000 mg/L	500 ml	78-10-2/500
Potassium (K)	1% HCl	1,000 mg/L	100 ml	19-01-2/100
	1% HCl	1,000 mg/L	250 ml	19-01-2/250
	1% HCl	1,000 mg/L	500 ml	19-01-2/500
Potassium (K)	1% HNO ₃	1,000 mg/L	100 ml	19-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	19-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	19-01-1/500
Potassium (K)	1% HCl	10,000 mg/L	100 ml	19-10-2/100
	1% HCl	10,000 mg/L	250 ml	19-10-2/250
	1% HCl	10,000 mg/L	500 ml	19-10-2/500
Potassium (K)	1% HNO ₃	10,000 mg/L	100 ml	19-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	19-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	19-10-1/500
Praseodymium (Pr)	2% HCl	1,000 mg/L	100 ml	59-01-2/100
	2% HCl	1,000 mg/L	250 ml	59-01-2/250
	2% HCl	1,000 mg/L	500 ml	59-01-2/500
Praseodymium (Pr)	2% HNO ₃	1,000 mg/L	100 ml	59-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	59-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	59-01-1/500
Praseodymium (Pr)	10% HCl	10,000 mg/L	100 ml	59-10-2/100
	10% HCl	10,000 mg/L	250 ml	59-10-2/250
	10% HCl	10,000 mg/L	500 ml	59-10-2/500
Praseodymium (Pr)	4% HNO ₃	10,000 mg/L	100 ml	59-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	59-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	29-10-1/500
Rhenium (Re)	2% HCl	1,000 mg/L	100 ml	75-01-2/100
	2% HCl	1,000 mg/L	250 ml	75-01-2/250
	2% HCl	1,000 mg/L	500 ml	75-01-2/500
Rhenium (Re)	2% HNO ₃	1,000 mg/L	100 ml	75-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	75-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	75-01-1/500
Rhenium (Re)	4% HNO ₃	10,000 mg/L	100 ml	75-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	75-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	75-10-1/500
Rhodium (Rh)	2% HCl	1,000 mg/L	100 ml	45-01-2/100
	2% HCl	1,000 mg/L	250 ml	45-01-2/250
	2% HCl	1,000 mg/L	500 ml	25-01-2/500
Rubidium (Rb)	1% HCl	1,000 mg/L	100 ml	37-01-2/100
	1% HCl	1,000 mg/L	250 ml	37-01-2/250
	1% HCl	1,000 mg/L	500 ml	37-01-2/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Rubidium (Rb)	1% HNO ₃	1,000 mg/L	100 ml	37-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	37-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	37-01-1/500
Rubidium (Rb)	1% HCl	10,000 mg/L	100 ml	37-10-2/100
	1% HCl	10,000 mg/L	250 ml	37-10-2/250
	1% HCl	10,000 mg/L	500 ml	37-10-2/500
Rubidium (Rb)	1% HNO ₃	10,000 mg/L	100 ml	37-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	37-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	37-10-1/500
Ruthenium (Ru)	2% HCl	1,000 mg/L	100 ml	44-01-2/100
	2% HCl	1,000 mg/L	250 ml	44-01-2/250
	2% HCl	1,000 mg/L	500 ml	44-01-2/500
Ruthenium (Ru)	10% HCl	10,000 mg/L	100 ml	44-10-2/100
	10% HCl	10,000 mg/L	250 ml	44-10-2/250
	10% HCl	10,000 mg/L	500 ml	44-10-2/500
Samarium (Sm)	2% HCl	1,000 mg/L	100 ml	62-01-2/100
	2% HCl	1,000 mg/L	250 ml	62-01-2/250
	2% HCl	1,000 mg/L	500 ml	62-01-2/500
Samarium (Sm)	2% HNO ₃	1,000 mg/L	100 ml	62-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	62-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	62-01-1/500
Samarium (Sm)	10% HCl	10,000 mg/L	100 ml	62-10-2/100
	10% HCl	10,000 mg/L	250 ml	62-10-2/250
	10% HCl	10,000 mg/L	500 ml	62-10-2/500
Samarium (Sm)	4% HNO ₃	10,000 mg/L	100 ml	62-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	62-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	62-10-1/500
Scandium (Sc)	2% HCl	1,000 mg/L	100 ml	21-01-2/100
	2% HCl	1,000 mg/L	250 ml	21-01-2/250
	2% HCl	1,000 mg/L	500 ml	21-01-2/500
Scandium (Sc)	2% HNO ₃	1,000 mg/L	100 ml	21-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	21-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	21-01-1/500
Scandium (Sc)	10% HCl	10,000 mg/L	100 ml	21-10-2/100
	10% HCl	10,000 mg/L	250 ml	21-10-2/250
	10% HCl	10,000 mg/L	500 ml	21-10-2/500
Scandium (Sc)	4% HNO ₃	10,000 mg/L	100 ml	21-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	21-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	21-10-1/500
Selenium (Se)	2% HCl	1,000 mg/L	100 ml	34-01-2/100
	2% HCl	1,000 mg/L	250 ml	34-01-2/250
	2% HCl	1,000 mg/L	500 ml	34-01-2/500
Selenium (Se)	2% HNO ₃	1,000 mg/L	100 ml	34-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	34-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	34-01-1/500
Selenium (Se)	10% HCl	10,000 mg/L	100 ml	34-10-2/100
	10% HCl	10,000 mg/L	250 ml	34-10-2/250
	10% HCl	10,000 mg/L	500 ml	34-10-2/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Selenium (Se)	10% HNO ₃	10,000 mg/L	100 ml	34-10-1/100
	10% HNO ₃	10,000 mg/L	250 ml	34-10-1/250
	10% HNO ₃	10,000 mg/L	500 ml	34-10-1/500
Silicon (Si)	Si from Na ₂ SiO ₃ , H ₂ O	1,000 mg/L	100 ml	14-01-10/100
	Si from Na ₂ SiO ₃ , H ₂ O	1,000 mg/L	250 ml	14-01-10/250
	Si from Na ₂ SiO ₃ , H ₂ O	1,000 mg/L	500 ml	14-01-10/500
Silicon (Si)	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	1,000 mg/L	100 ml	14-01-11/100
	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	1,000 mg/L	250 ml	14-01-11/250
	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	1,000 mg/L	500 ml	14-01-11/500
Silicon (Si)	Si from Na ₂ SiO ₃ , H ₂ O	10,000 mg/L	100 ml	14-10-10/100
	Si from Na ₂ SiO ₃ , H ₂ O	10,000 mg/L	250 ml	14-10-10/250
	Si from Na ₂ SiO ₃ , H ₂ O	10,000 mg/L	500 ml	14-10-10/500
Silicon (Si)	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	10,000 mg/L	100 ml	14-10-11/100
	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	10,000 mg/L	250 ml	14-10-11/250
	Si from (NH ₄) ₂ SiF ₆ , H ₂ O	10,000 mg/L	500 ml	14-10-11/500
Silver (Ag)	2% HNO ₃	1,000 mg/L	100 ml	47-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	47-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	47-01-1/500
Silver (Ag)	4% HNO ₃	10,000 mg/L	100 ml	47-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	47-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	47-10-1/500
Sodium (Na)	1% HCl	1,000 mg/L	100 ml	11-01-2/100
	1% HCl	1,000 mg/L	250 ml	11-01-2/250
	1% HCl	1,000 mg/L	500 ml	11-01-2/500
Sodium (Na)	1% HNO ₃	1,000 mg/L	100 ml	11-01-1/100
	1% HNO ₃	1,000 mg/L	250 ml	11-01-1/250
	1% HNO ₃	1,000 mg/L	500 ml	11-01-1/500
Sodium (Na)	1% HCl	10,000 mg/L	100 ml	11-10-2/100
	1% HCl	10,000 mg/L	250 ml	11-10-2/250
	1% HCl	10,000 mg/L	500 ml	11-10-2/500
Sodium (Na)	1% HNO ₃	10,000 mg/L	100 ml	11-10-1/100
	1% HNO ₃	10,000 mg/L	250 ml	11-10-1/250
	1% HNO ₃	10,000 mg/L	500 ml	11-10-1/500
Strontium (Sr)	2% HCl	1,000 mg/L	100 ml	38-01-2/100
	2% HCl	1,000 mg/L	250 ml	38-01-2/250
	2% HCl	1,000 mg/L	500 ml	38-01-2/500
Strontium (Sr)	2% HNO ₃	1,000 mg/L	100 ml	38-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	38-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	38-01-1/500
Strontium (Sr)	10% HCl	10,000 mg/L	100 ml	38-10-2/100
	10% HCl	10,000 mg/L	250 ml	38-10-2/250
	10% HCl	10,000 mg/L	500 ml	38-10-2/500
Strontium (Sr)	4% HNO ₃	10,000 mg/L	100 ml	38-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	38-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	38-10-1/500
Sulfur (S)	H ₂ O	1,000 mg/L	100 ml	16-01-4/100
	H ₂ O	1,000 mg/L	250 ml	16-01-4/250
	H ₂ O	1,000 mg/L	500 ml	16-01-4/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Sulfur (S)	H ₂ O	10,000 mg/L	100 ml	16-10-4/100
	H ₂ O	10,000 mg/L	250 ml	16-10-4/250
	H ₂ O	10,000 mg/L	500 ml	16-10-4/500
Tantalum (Ta)	2% HNO ₃ + 2% HF	1,000 mg/L	100 ml	73-01-3/100
	2% HNO ₃ + 2% HF	1,000 mg/L	250 ml	73-01-3/250
	2% HNO ₃ + 2% HF	1,000 mg/L	500 ml	73-01-3/500
Tantalum (Ta)	5% HNO ₃ + 2% HF	10,000 mg/L	100 ml	73-10-3/100
	5% HNO ₃ + 2% HF	10,000 mg/L	250 ml	73-10-3/250
	5% HNO ₃ + 2% HF	10,000 mg/L	500 ml	73-10-3/500
Tellurium (Te)	20% HCl	1,000 mg/L	100 ml	52-01-2/100
	20% HCl	1,000 mg/L	250 ml	52-01-2/250
	20% HCl	1,000 mg/L	500 ml	52-01-2/500
Tellurium (Te)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	52-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	52-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	52-01-3/500
Tellurium (Te)	40% HCl	10,000 mg/L	100 ml	52-10-2/100
	40% HCl	10,000 mg/L	250 ml	52-10-2/250
	40% HCl	10,000 mg/L	500 ml	52-10-2/500
Terbium (Tb)	2% HCl	1,000 mg/L	100 ml	65-01-2/100
	2% HCl	1,000 mg/L	250 ml	65-01-2/250
	2% HCl	1,000 mg/L	500 ml	65-01-2/500
Terbium (Tb)	2% HNO ₃	1,000 mg/L	100 ml	65-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	65-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	65-01-1/500
Terbium (Tb)	10% HCl	10,000 mg/L	100 ml	65-10-2/100
	10% HCl	10,000 mg/L	250 ml	65-10-2/250
	10% HCl	10,000 mg/L	500 ml	65-10-2/500
Terbium (Tb)	4% HNO ₃	10,000 mg/L	100 ml	65-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	65-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	65-10-1/500
Thallium (Tl)	2% HNO ₃	1,000 mg/L	100 ml	81-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	81-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	81-01-1/500
Thallium (Tl)	4% HNO ₃	10,000 mg/L	100 ml	81-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	81-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	81-10-1/500
Thorium (Th)	2% HCl	1,000 mg/L	100 ml	90-01-2/100
	2% HCl	1,000 mg/L	250 ml	90-01-2/250
	2% HCl	1,000 mg/L	500 ml	90-01-2/500
Thorium (Th)	2% HNO ₃	1,000 mg/L	100 ml	90-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	90-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	90-01-1/500
Thorium (Th)	4% HNO ₃	10,000 mg/L	100 ml	90-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	90-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	90-10-1/500
Thulium (Tm)	2% HCl	1,000 mg/L	100 ml	69-01-2/100
	2% HCl	1,000 mg/L	250 ml	69-01-2/250
	2% HCl	1,000 mg/L	500 ml	69-01-2/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Thulium (Tm)	2% HNO ₃	1,000 mg/L	100 ml	69-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	69-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	69-01-1/500
Thulium (Tm)	10% HCl	10,000 mg/L	100 ml	69-10-2/100
	10% HCl	10,000 mg/L	250 ml	69-10-2/250
	10% HCl	10,000 mg/L	500 ml	69-10-2/500
Thulium (Tm)	4% HNO ₃	10,000 mg/L	100 ml	69-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	69-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	69-10-1/500
Tin (Sn)	20% HCl	1,000 mg/L	100 ml	50-01-2/100
	20% HCl	1,000 mg/L	250 ml	50-01-2/250
	20% HCl	1,000 mg/L	500 ml	50-01-2/500
Tin (Sn)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	50-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	50-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	50-01-3/500
Tin (Sn)	60% HCl	10,000 mg/L	100 ml	50-10-2/100
	60% HCl	10,000 mg/L	250 ml	50-10-2/250
	60% HCl	10,000 mg/L	500 ml	50-10-2/500
Tin (Sn)	5% HNO ₃ + 2% HF	10,000 mg/L	100 ml	50-10-3/100
	5% HNO ₃ + 2% HF	10,000 mg/L	250 ml	50-10-3/250
	5% HNO ₃ + 2% HF	10,000 mg/L	500 ml	50-10-3/500
Titanium (Ti)	20% HCl	1,000 mg/L	100 ml	22-01-2/100
	20% HCl	1,000 mg/L	250 ml	22-01-2/250
	20% HCl	1,000 mg/L	500 ml	22-01-2/500
Titanium (Ti)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	22-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	22-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	22-01-3/500
Titanium (Ti)	40% HCl	10,000 mg/L	100 ml	22-10-2/100
	40% HCl	10,000 mg/L	250 ml	22-10-2/250
	40% HCl	10,000 mg/L	500 ml	22-10-2/500
Titanium (Ti)	5% HNO ₃ + 2% HF	10,000 mg/L	100 ml	22-10-3/100
	5% HNO ₃ + 2% HF	10,000 mg/L	250 ml	22-10-3/250
	5% HNO ₃ + 2% HF	10,000 mg/L	500 ml	22-10-3/500
Tungsten (W)	2% HNO ₃ + 1% HF	1,000 mg/L	100 ml	74-01-3/100
	2% HNO ₃ + 1% HF	1,000 mg/L	250 ml	74-01-3/250
	2% HNO ₃ + 1% HF	1,000 mg/L	500 ml	74-01-3/500
Tungsten (W)	5% HNO ₃ + 2% HF	10,000 mg/L	100 ml	74-10-3/100
	5% HNO ₃ + 2% HF	10,000 mg/L	250 ml	74-10-3/250
	5% HNO ₃ + 2% HF	10,000 mg/L	500 ml	74-10-3/500
Uranium (U)	2% HNO ₃	1,000 mg/L	100 ml	92-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	92-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	92-01-1/500
Uranium (U)	4% HNO ₃	10,000 mg/L	100 ml	92-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	92-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	92-10-1/500
Vanadium (V)	2% HCl	1,000 mg/L	100 ml	23-01-2/100
	2% HCl	1,000 mg/L	250 ml	23-01-2/250
	2% HCl	1,000 mg/L	500 ml	23-01-2/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Vanadium (V)	2% HNO ₃	1,000 mg/L	100 ml	23-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	23-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	23-01-1/500
Vanadium (V)	5% HNO ₃	5,000 mg/L	100 ml	23-05-1/100
	5% HNO ₃	5,000 mg/L	250 ml	23-05-1/250
	5% HNO ₃	5,000 mg/L	500 ml	23-05-1/500
Ytterbium (Yb)	2% HCl	1,000 mg/L	100 ml	70-01-2/100
	2% HCl	1,000 mg/L	250 ml	70-01-2/250
	2% HCl	1,000 mg/L	500 ml	70-01-2/500
Ytterbium (Yb)	2% HNO ₃	1,000 mg/L	100 ml	70-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	70-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	70-01-1/500
Ytterbium (Yb)	10% HCl	10,000 mg/L	100 ml	70-10-2/100
	10% HCl	10,000 mg/L	250 ml	70-10-2/250
	10% HCl	10,000 mg/L	500 ml	70-10-2/500
Ytterbium (Yb)	4% HNO ₃	10,000 mg/L	100 ml	70-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	70-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	70-10-1/500
Yttrium (Y)	2% HCl	1,000 mg/L	100 ml	39-01-2/100
	2% HCl	1,000 mg/L	250 ml	39-01-2/250
	2% HCl	1,000 mg/L	500 ml	39-01-2/500
Yttrium (Y)	2% HNO ₃	1,000 mg/L	100 ml	39-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	39-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	39-01-1/500
Yttrium (Y)	10% HCl	10,000 mg/L	100 ml	39-10-2/100
	10% HCl	10,000 mg/L	250 ml	39-10-2/250
	10% HCl	10,000 mg/L	500 ml	39-10-2/500
Yttrium (Y)	4% HNO ₃	10,000 mg/L	100 ml	39-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	39-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	39-10-1/500
Zinc (Zn)	2% HCl	1,000 mg/L	100 ml	30-01-2/100
	2% HCl	1,000 mg/L	250 ml	30-01-2/250
	2% HCl	1,000 mg/L	500 ml	30-01-2/500
Zinc (Zn)	2% HNO ₃	1,000 mg/L	100 ml	30-01-1/100
	2% HNO ₃	1,000 mg/L	250 ml	30-01-1/250
	2% HNO ₃	1,000 mg/L	500 ml	30-01-1/500
Zinc (Zn)	10% HCl	10,000 mg/L	100 ml	30-10-2/100
	10% HCl	10,000 mg/L	250 ml	30-10-2/250
	10% HCl	10,000 mg/L	500 ml	30-10-2/500
Zinc (Zn)	4% HNO ₃	10,000 mg/L	100 ml	30-10-1/100
	4% HNO ₃	10,000 mg/L	250 ml	30-10-1/250
	4% HNO ₃	10,000 mg/L	500 ml	30-10-1/500
Zirconium (Zr)	2% HNO ₃ + 0.5% HF	1,000 mg/L	100 ml	40-01-3/100
	2% HNO ₃ + 0.5% HF	1,000 mg/L	250 ml	40-01-3/250
	2% HNO ₃ + 0.5% HF	1,000 mg/L	500 ml	40-01-3/500
Zirconium (Zr)	4% HNO ₃ + 2% HF	10,000 mg/L	100 ml	40-10-3/100
	4% HNO ₃ + 2% HF	10,000 mg/L	250 ml	40-10-3/250
	4% HNO ₃ + 2% HF	10,000 mg/L	500 ml	40-10-3/500

ICP & ICP-MS Single Element Standards



Single-Element ICP-MS Kit A (38 Elements)

Kit Contains Individual 100 ml Bottles of Each Listed Element

Elements	Concentration	Elements	Concentration	Elements	Concentration
Aluminum (Al)	10 mg/L	Germanium (Ge)	10 mg/L	Selenium (Se)	10 mg/L
Arsenic (As)	10 mg/L	Indium (In)	10 mg/L	Silicon (Si)	10 mg/L
Barium (Ba)	10 mg/L	Iron (Fe)	10 mg/L	Silver (Ag)	10 mg/L
Beryllium (Be)	10 mg/L	Lead (Pb)	10 mg/L	Sodium (Na)	10 mg/L
Bismuth (Bi)	10 mg/L	Lithium (Li)	10 mg/L	Strontium (Sr)	10 mg/L
Boron (B)	10 mg/L	Magnesium (Mg)	10 mg/L	Sulfur (S)	10 mg/L
Cadmium (Cd)	10 mg/L	Manganese (Mn)	10 mg/L	Thallium (Tl)	10 mg/L
Calcium (Ca)	10 mg/L	Mercury (Hg)	10 mg/L	Thorium (Th)	10 mg/L
Cesium (Cs)	10 mg/L	Nickel (Ni)	10 mg/L	Titanium (Ti)	10 mg/L
Chromium (Cr)	10 mg/L	Phosphorus (P)	10 mg/L	Uranium (U)	10 mg/L
Cobalt (Co)	10 mg/L	Potassium (K)	10 mg/L	Vanadium (V)	10 mg/L
Copper (Cu)	10 mg/L	Rhenium (Re)	10 mg/L	Zinc (Zn)	10 mg/L
Gallium (Ga)	10 mg/L	Rubidium (Rb)	10 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	ICP-MS-KIT-A

Single-Element ICP-MS Kit B (9 Elements)

Kit Contains Individual 100 ml Bottles of Each Listed Element

Elements	Concentration	Elements	Concentration	Elements	Concentration
Antimony (Sb)	10 mg/L	Niobium (Nb)	10 mg/L	Tin (Sn)	10 mg/L
Hafnium (Hf)	10 mg/L	Tantalum (Ta)	10 mg/L	Tungsten (W)	10 mg/L
Molybdenum (Mo)	10 mg/L	Tellurium (Te)	10 mg/L	Zirconium (Zr)	10 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃ + Tr HF	100 ml	ICP-MS-KIT-B

Single-Element ICP-MS Kit C (7 Elements)

Kit Contains Individual 100 ml Bottles of Each Listed Element

Elements	Concentration	Elements	Concentration	Elements	Concentration
Gold (Au)	10 mg/L	Palladium (Pd)	10 mg/L	Ruthenium (Ru)	10 mg/L
Iridium (Ir)	10 mg/L	Platinum (Pt)	10 mg/L		
Osmium (Os)	10 mg/L	Rhodium (Rh)	10 mg/L		

Matrix	Volume	isoSPEC No.
2% HCl	100 ml	ICP-MS-KIT-C

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Single-Element ICP-MS Kit D (16 Elements)

Kit Contains Individual 100 ml Bottles of Each Listed Element

Elements	Concentration	Elements	Concentration	Elements	Concentration
Cerium (Ce)	10 mg/L	Lanthanum (La)	10 mg/L	Terbium (Tb)	10 mg/L
Dysprosium (Dy)	10 mg/L	Lutetium (Lu)	10 mg/L	Thulium (Tm)	10 mg/L
Erbium (Er)	10 mg/L	Neodymium (Nd)	10 mg/L	Ytterbium (Yb)	10 mg/L
Europium (Eu)	10 mg/L	Praseodymium (Pr)	10 mg/L	Yttrium (Y)	10 mg/L
Gadolinium (Gd)	10 mg/L	Samarium (Sm)	10 mg/L		
Holmium (Ho)	10 mg/L	Scandium (Sc)	10 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	ICP-MS-KIT-D

Single-Element ICP-MS Kit E (4 Elements)

Kit Contains Individual 100 ml Bottles of Each Listed Element

Elements	Concentration	Elements	Concentration
Bromide	10 mg/L	Fluoride	10 mg/L
Chloride	10 mg/L	Iodide	10 mg/L

Matrix	Volume	isoSPEC No.
H ₂ O	100 ml	ICP-MS-KIT-E

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Single Element IC Standards



Element	Matrix	Concentration	Volume	isoSPEC No.
Acetate	H ₂ O	100 mg/L	100 ml	IC01-001-4/100
	H ₂ O	100 mg/L	250 ml	IC01-001-4/250
	H ₂ O	100 mg/L	500 ml	IC01-001-4/500
Acetate	H ₂ O	1,000 mg/L	100 ml	IC01-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC01-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC01-01-4/500
Ammonia	H ₂ O	100 mg/L	100 ml	IC02-001-4/100
	H ₂ O	100 mg/L	250 ml	IC02-001-4/250
	H ₂ O	100 mg/L	500 ml	IC02-001-4/500
Ammonia	H ₂ O	1,000 mg/L	100 ml	IC02-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC02-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC02-01-4/500
Ammonia as N	H ₂ O	100 mg/L	100 ml	IC03-001-4/100
	H ₂ O	100 mg/L	250 ml	IC03-001-4/250
	H ₂ O	100 mg/L	500 ml	IC03-001-4/500
Ammonia as N	H ₂ O	1,000 mg/L	100 ml	IC03-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC03-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC03-01-4/500
Barium	H ₂ O	100 mg/L	100 ml	56-001-4/100
	H ₂ O	100 mg/L	250 ml	56-001-4/250
	H ₂ O	100 mg/L	500 ml	56-001-4/500
Barium	H ₂ O	1,000 mg/L	100 ml	56-01-4/100
	H ₂ O	1,000 mg/L	250 ml	56-01-4/250
	H ₂ O	1,000 mg/L	500 ml	56-01-4/500
Bromate	H ₂ O	100 mg/L	100 ml	IC04-001-4/100
	H ₂ O	100 mg/L	250 ml	IC04-001-4/250
	H ₂ O	100 mg/L	500 ml	IC04-001-4/500
Bromate	H ₂ O	1,000 mg/L	100 ml	IC04-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC04-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC04-01-4/500
Bromide	H ₂ O	100 mg/L	100 ml	IC05-001-4/100
	H ₂ O	100 mg/L	250 ml	IC05-001-4/250
	H ₂ O	100 mg/L	500 ml	IC05-001-4/500
Bromide	H ₂ O	1,000 mg/L	100 ml	IC05-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC05-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC05-01-4/500
Calcium	H ₂ O	100 mg/L	100 ml	20-001-4/100
	H ₂ O	100 mg/L	250 ml	20-001-4/250
	H ₂ O	100 mg/L	500 ml	20-001-4/500
Calcium	H ₂ O	1,000 mg/L	100 ml	20-01-4/100
	H ₂ O	1,000 mg/L	250 ml	20-01-4/250
	H ₂ O	1,000 mg/L	500 ml	20-01-4/500
Chlorate	H ₂ O	100 mg/L	100 ml	IC06-001-4/100
	H ₂ O	100 mg/L	250 ml	IC06-001-4/250
	H ₂ O	100 mg/L	500 ml	IC06-001-4/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Chlorate	H ₂ O	1,000 mg/L	100 ml	IC06-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC06-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC06-01-4/500
Chloride	H ₂ O	100 mg/L	100 ml	IC07-001-4/100
	H ₂ O	100 mg/L	250 ml	IC07-001-4/250
	H ₂ O	100 mg/L	500 ml	IC07-001-4/500
Chloride	H ₂ O	1,000 mg/L	100 ml	IC07-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC07-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC07-01-4/500
Chlorite	H ₂ O	100 mg/L	100 ml	IC08-001-4/100
	H ₂ O	100 mg/L	250 ml	IC08-001-4/250
	H ₂ O	100 mg/L	500 ml	IC08-001-4/500
Chlorite	H ₂ O	1,000 mg/L	100 ml	IC08-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC08-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC08-01-4/500
Fluoride	H ₂ O	100 mg/L	100 ml	IC09-001-4/100
	H ₂ O	100 mg/L	250 ml	IC09-001-4/250
	H ₂ O	100 mg/L	500 ml	IC09-001-4/500
Fluoride	H ₂ O	1,000 mg/L	100 ml	IC09-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC09-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC09-01-4/500
Formate	H ₂ O	100 mg/L	100 ml	IC10-001-4/100
	H ₂ O	100 mg/L	250 ml	IC10-001-4/250
	H ₂ O	100 mg/L	500 ml	IC10-001-4/500
Formate	H ₂ O	1,000 mg/L	100 ml	IC10-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC10-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC10-01-4/500
Iodide	H ₂ O	100 mg/L	100 ml	IC11-001-4/100
	H ₂ O	100 mg/L	250 ml	IC11-001-4/250
	H ₂ O	100 mg/L	500 ml	IC11-001-4/500
Iodide	H ₂ O	1,000 mg/L	100 ml	IC11-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC11-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC11-01-4/500
Lithium	H ₂ O	100 mg/L	100 ml	3-001-4/100
	H ₂ O	100 mg/L	250 ml	3-001-4/250
	H ₂ O	100 mg/L	500 ml	3-001-4/500
Lithium	H ₂ O	1,000 mg/L	100 ml	3-01-4/100
	H ₂ O	1,000 mg/L	250 ml	3-01-4/250
	H ₂ O	1,000 mg/L	500 ml	3-01-4/500
Magnesium	H ₂ O	100 mg/L	100 ml	12-001-4/100
	H ₂ O	100 mg/L	250 ml	12-001-4/250
	H ₂ O	100 mg/L	500 ml	12-001-4/500
Magnesium	H ₂ O	1,000 mg/L	100 ml	12-01-4/100
	H ₂ O	1,000 mg/L	250 ml	12-01-4/250
	H ₂ O	1,000 mg/L	500 ml	12-01-4/500

Single Element IC Standards



Element	Matrix	Concentration	Volume	isoSPEC No.
Nitrate	H ₂ O	100 mg/L	100 ml	IC12-001-4/100
	H ₂ O	100 mg/L	250 ml	IC12-001-4/250
	H ₂ O	100 mg/L	500 ml	IC12-001-4/500
Nitrate	H ₂ O	1,000 mg/L	100 ml	IC12-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC12-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC12-01-4/500
Nitrate as N	H ₂ O	100 mg/L	100 ml	IC13-001-4/100
	H ₂ O	100 mg/L	250 ml	IC13-001-4/250
	H ₂ O	100 mg/L	500 ml	IC13-001-4/500
Nitrate as N	H ₂ O	1,000 mg/L	100 ml	IC13-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC13-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC13-01-4/500
Nitrite	H ₂ O	100 mg/L	100 ml	IC14-001-4/100
	H ₂ O	100 mg/L	250 ml	IC14-001-4/250
	H ₂ O	100 mg/L	500 ml	IC14-001-4/500
Nitrite	H ₂ O	1,000 mg/L	100 ml	IC14-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC14-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC14-01-4/500
Nitrite as N	H ₂ O	100 mg/L	100 ml	IC15-001-4/100
	H ₂ O	100 mg/L	250 ml	IC15-001-4/250
	H ₂ O	100 mg/L	500 ml	IC15-001-4/500
Nitrite as N	H ₂ O	1,000 mg/L	100 ml	IC15-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC15-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC15-01-4/500
Oxalate	H ₂ O	100 mg/L	100 ml	IC16-001-4/100
	H ₂ O	100 mg/L	250 ml	IC16-001-4/250
	H ₂ O	100 mg/L	500 ml	IC16-001-4/500
Oxalate	H ₂ O	1,000 mg/L	100 ml	IC16-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC16-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC16-01-4/500
Ortho Phosphate	H ₂ O	100 mg/L	100 ml	IC17-001-4/100
	H ₂ O	100 mg/L	250 ml	IC17-001-4/250
	H ₂ O	100 mg/L	500 ml	IC17-001-4/500
Ortho Phosphate	H ₂ O	1,000 mg/L	100 ml	IC17-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC17-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC17-01-4/500
Ortho Phosphate as P	H ₂ O	100 mg/L	100 ml	IC18-001-4/100
	H ₂ O	100 mg/L	250 ml	IC18-001-4/250
	H ₂ O	100 mg/L	500 ml	IC18-001-4/500
Ortho Phosphate as P	H ₂ O	1,000 mg/L	100 ml	IC18-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC18-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC18-01-4/500
Potassium	H ₂ O	100 mg/L	100 ml	19-001-4/100
	H ₂ O	100 mg/L	250 ml	19-001-4/250
	H ₂ O	100 mg/L	500 ml	19-001-4/500

Element	Matrix	Concentration	Volume	isoSPEC No.
Potassium	H ₂ O	1,000 mg/L	100 ml	19-01-4/100
	H ₂ O	1,000 mg/L	250 ml	19-01-4/250
	H ₂ O	1,000 mg/L	500 ml	19-01-4/500
Sodium	H ₂ O	100 mg/L	100 ml	11-001-4/100
	H ₂ O	100 mg/L	250 ml	11-001-4/250
	H ₂ O	100 mg/L	500 ml	11-001-4/500
Sodium	H ₂ O	1,000 mg/L	100 ml	11-01-4/100
	H ₂ O	1,000 mg/L	250 ml	11-01-4/250
	H ₂ O	1,000 mg/L	500 ml	11-01-4/500
Sulfate	H ₂ O	100 mg/L	100 ml	IC19-001-4/100
	H ₂ O	100 mg/L	250 ml	IC19-001-4/250
	H ₂ O	100 mg/L	500 ml	IC19-001-4/500
Sulfate	H ₂ O	1,000 mg/L	100 ml	IC19-01-4/100
	H ₂ O	1,000 mg/L	250 ml	IC19-01-4/250
	H ₂ O	1,000 mg/L	500 ml	IC19-01-4/500
Sulfur	H ₂ O	100 mg/L	100 ml	16-001-4/100
	H ₂ O	100 mg/L	250 ml	16-001-4/250
	H ₂ O	100 mg/L	500 ml	16-001-4/500
Sulfur	H ₂ O	1,000 mg/L	100 ml	16-01-4/100
	H ₂ O	1,000 mg/L	250 ml	16-01-4/250
	H ₂ O	1,000 mg/L	500 ml	16-01-4/500

Chemical Oxygen Demand

Elements	Concentration
Potassium Acid Phthalate	10,000 mg/L

Matrix	Volume	isoSPEC No.
H ₂ O	100 ml	IC20-10-4/100
H ₂ O	250 ml	IC20-10-4/250
H ₂ O	500 ml	IC20-10-4/500

Single-Element Metallo-Organic Standards



Single-element metallo-organic standards are for the determination of wear metals in oils and lubricants. Also available in matrices of Parafin, 20 Base Oil, and Xylene.

Element	Matrix	Concentration	Volume	isoSPEC No.
Aluminum (Al)	Mineral Oil	1,000 µg/g	100 g	M13-01-9/100
Antimony (Sb)	Mineral Oil	1,000 µg/g	100 g	M51-01-9/100
Arsenic (As)	Mineral Oil	50 µg/g	100 g	M33-0005-9/100
Barium (Ba)	Mineral Oil	1,000 µg/g	100 g	M56-01-9/100
Beryllium (Be)	Mineral Oil	1,000 µg/g	100 g	M4-01-9/100
Bismuth (Bi)	Mineral Oil	1,000 µg/g	100 g	M83-01-9/100
Boron (B)	Mineral Oil	1,000 µg/g	100 g	M5-01-9/100
Cadmium (Cd)	Mineral Oil	1,000 µg/g	100 g	M48-01-9/100
Calcium (Ca)	Mineral Oil	1,000 µg/g	100 g	M20-01-9/100
Cerium (Ce)	Mineral Oil	1,000 µg/g	100 g	M58-01-9/100
Chromium (Cr)	Mineral Oil	1,000 µg/g	100 g	M24-01-9/100
Cobalt (Co)	Mineral Oil	1,000 µg/g	100 g	M27-01-9/100
Copper (Cu)	Mineral Oil	1,000 µg/g	100 g	M29-01-9/100
Indium (In)	Mineral Oil	1,000 µg/g	100 g	M49-01-9/100
Iron (Fe)	Mineral Oil	1,000 µg/g	100 g	M26-01-9/100
Lead (Pb)	Mineral Oil	1,000 µg/g	100 g	M82-01-9/100
Lithium (Li)	Mineral Oil	1,000 µg/g	100 g	M3-01-9/100
Magnesium (Mg)	Mineral Oil	1,000 µg/g	100 g	M12-01-9/100
Manganese (Mn)	Mineral Oil	1,000 µg/g	100 g	M25-01-9/100
Mercury (Hg)	Mineral Oil	50 µg/g	100 g	M80-0005-9/100
Molybdenum (Mo)	Mineral Oil	1,000 µg/g	100 g	M42-01-9/100
Nickel (Ni)	Mineral Oil	1,000 µg/g	100 g	M28-01-9/100
Phosphorus (P)	Mineral Oil	1,000 µg/g	100 g	M15-01-9/100
Potassium (K)	Mineral Oil	1,000 µg/g	100 g	M19-01-9/100
Selenium (Se)	Mineral Oil	50 µg/g	100 g	M34-0005-9/100
Silicon (Si)	Mineral Oil	1,000 µg/g	100 g	M14-01-9/100
Silver (Ag)	Mineral Oil	1,000 µg/g	100 g	M47-01-9/100
Sodium (Na)	Mineral Oil	1,000 µg/g	100 g	M11-01-9/100
Tin (Sn)	Mineral Oil	1,000 µg/g	100 g	M50-01-9/100
Titanium (Ti)	Mineral Oil	1,000 µg/g	100 g	M22-01-9/100
Tungsten (W)	Mineral Oil	1,000 µg/g	100 g	M74-01-9/100
Vanadium (V)	Mineral Oil	1,000 µg/g	100 g	M23-01-9/100
Zinc (Zn)	Mineral Oil	1,000 µg/g	100 g	M30-01-9/100

Metallo-Organic Mix

12 (12 Elements)

Elements	Elements
Aluminum (Al)	Nickel (Ni)
Chromium (Cr)	Silicon (Si)
Copper (Cu)	Silver (Ag)
Iron (Fe)	Sodium (Na)
Lead (Pb)	Tin (Sn)
Magnesium (Mg)	Titanium (Ti)

Matrix	Weight	Concentration	isoSPEC No.
Mineral Oil	100 g	100 µg/g	M-OM12-001-9/100
Mineral Oil	200 g	100 µg/g	M-OM12-001-9/200
Mineral Oil	100 g	200 µg/g	M-OM12-002-9/100
Mineral Oil	200 g	200 µg/g	M-OM12-002-9/200

Metallo-Organic Mix 21

(21 Elements)

Elements	Elements
Aluminum (Al)	Molybdenum (Mo)
Boron (B)	Nickel (Ni)
Barium (Ba)	Phosphorus (P)
Calcium (Ca)	Silicon (Si)
Cadmium (Cd)	Silver (Ag)
Chromium (Cr)	Sodium (Na)
Copper (Cu)	Tin (Sn)
Iron (Fe)	Titanium (Ti)
Lead (Pb)	Vanadium (V)
Magnesium (Mg)	Zinc (Zn)
Manganese (Mn)	

Matrix	Weight	Concentration	isoSPEC No.
Mineral Oil	100 g	100 µg/g	M-OM21-001-9/100
Mineral Oil	200 g	100 µg/g	M-OM21-001-9/200
Mineral Oil	100 g	200 µg/g	M-OM21-002-9/100
Mineral Oil	200 g	200 µg/g	M-OM21-002-9/200

Interference Check Standard Solutions

Interference Check Standard Solution A (4 Elements)

Elements	Concentration	Elements	Concentration
Aluminum (Al)	5,000 mg/L	Magnesium (Mg)	5,000 mg/L
Calcium (Ca)	5,000 mg/L	Iron (Fe)	2,000 mg/L

Matrix	Volume	isoSPEC No.
5% HNO ₃	100 ml	ICSS-A-1/100
5% HNO ₃	250 ml	ICSS-A-1/250
5% HNO ₃	500 ml	ICSS-A-1/500

Interference Check Standard Solution B (16 Elements)

Elements	Concentration	Elements	Concentration
Cadmium (Cd)	100 mg/L	Copper (Cu)	50 mg/L
Nickel (Ni)	100 mg/L	Manganese (Mn)	50 mg/L
Zinc (Zn)	100 mg/L	Vanadium (V)	50 mg/L
Antimony (Sb)	60 mg/L	Silver (Ag)	20 mg/L
Barium (Ba)	50 mg/L	Arsenic (As)	10 mg/L
Beryllium (Be)	50 mg/L	Thallium (Tl)	10 mg/L
Chromium (Cr)	50 mg/L	Lead (Pb)	5 mg/L
Cobalt (Co)	50 mg/L	Selenium (Se)	5 mg/L

Matrix	Volume	isoSPEC No.
5% HNO ₃ + Tr HF	100 ml	ICSS-B-3/100
5% HNO ₃ + Tr HF	250 ml	ICSS-B-3/250
5% HNO ₃ + Tr HF	500 ml	ICSS-B-3/500

Alternate Analytes Standard (12 Elements)

Elements	Concentration	Elements	Concentration
Aluminum (Al)	100 mg/L	Sodium (Na)	100 mg/L
Antimony (Sb)	100 mg/L	Thallium (Tl)	100 mg/L
Arsenic (As)	100 mg/L	Cadmium (Cd)	10 mg/L
Boron (B)	100 mg/L	Iron (Fe)	10 mg/L
Molybdenum (Mo)	100 mg/L	Magnesium (Mg)	10 mg/L
Selenium (Se)	100 mg/L	Silicon (Si)	10 mg/L

Matrix	Volume	isoSPEC No.
5% HNO ₃ + Tr HF	100 ml	ALTAS-3/100
5% HNO ₃ + Tr HF	250 ml	ALTAS-3/250
5% HNO ₃ + Tr HF	500 ml	ALTAS-3/500

Primary Analytes Standard (12 Elements)

Elements	Concentration	Elements	Concentration
Cadmium (Cd)	100 mg/L	Beryllium (Be)	50 mg/L
Lead (Pb)	100 mg/L	Chromium (Cr)	50 mg/L
Nickel (Ni)	100 mg/L	Cobalt (Co)	50 mg/L
Silver (Ag)	100 mg/L	Copper (Cu)	50 mg/L
Zinc (Zn)	100 mg/L	Manganese (Mn)	50 mg/L
Barium (Ba)	50 mg/L	Vanadium (V)	50 mg/L

Matrix	Volume	isoSPEC No.
5% HNO ₃	100 ml	PRAS-3/100
5% HNO ₃	250 ml	PRAS-3/250
5% HNO ₃	500 ml	PRAS-3/500

Method 6010A Mixed Standard Solution #1 (6 Elements)

Elements	Concentration	Elements	Concentration
Lead (Pb)	500 mg/L	Zinc (Zn)	150 mg/L
Selenium (Se)	200 mg/L	Manganese (Mn)	100 mg/L
Cadmium (Cd)	150 mg/L	Beryllium (Be)	50 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	6010A-1-1/100
2% HNO ₃	250 ml	6010A-1-1/250
2% HNO ₃	500 ml	6010A-1-1/500

Method 6010A Mixed Standard Solution #2 (5 Elements)

Elements	Concentration	Elements	Concentration
Iron (Fe)	10,000 mg/L	Copper (Cu)	100 mg/L
Barium (Ba)	100 mg/L	Vanadium (V)	100 mg/L
Cobalt (Co)	100 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	6010A-2-1/100
2% HNO ₃	250 ml	6010A-2-1/250
2% HNO ₃	500 ml	6010A-2-1/500

Trace Metals Standard #1 (15 Elements)

Elements	Concentration	Elements	Concentration
Aluminum (Al)	500 mg/L	Lead (Pb)	100 mg/L
Vanadium (V)	250 mg/L	Manganese (Mn)	100 mg/L
Arsenic (As)	100 mg/L	Nickel (Ni)	100 mg/L
Beryllium (Be)	100 mg/L	Zinc (Zn)	100 mg/L
Chromium (Cr)	100 mg/L	Cadmium (Cd)	25 mg/L
Cobalt (Co)	100 mg/L	Selenium (Se)	25 mg/L
Copper (Cu)	100 mg/L	Mercury (Hg)	5 mg/L
Iron (Fe)	100 mg/L		

Matrix	Volume	isoSPEC No.
5% HNO ₃	100 ml	TMS-1-1/100
5% HNO ₃	250 ml	TMS-1-1/250
5% HNO ₃	500 ml	TMS-1-1/500

Trace Metals Standard #2 (3 Elements)

Elements	Concentration	Elements	Concentration
Antimony (Sb)	20 mg/L	Silver (Ag)	10 mg/L
Thallium (Tl)	20 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃ + Tr HF	100 ml	TMS-2-3/100
2% HNO ₃ + Tr HF	250 ml	TMS-2-3/250
2% HNO ₃ + Tr HF	500 ml	TMS-2-3/500

Trace Metals Standard #3 (6 Elements)

Elements	Concentration	Elements	Concentration
Barium (Ba)	500 mg/L	Sodium (Na)	500 mg/L
Calcium (Ca)	500 mg/L	Magnesium (Mg)	100 mg/L
Molybdenum (Mo)	500 mg/L	Potassium (K)	100 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃ + Tr HF	100 ml	TMS-3-3/100
2% HNO ₃ + Tr HF	250 ml	TMS-3-3/250
2% HNO ₃ + Tr HF	500 ml	TMS-3-3/500

ICP Standards



Primary Drinking Water Metals Solution (8 Elements)

Elements	Concentration	Elements	Concentration
Arsenic (As)	100 mg/L	Cadmium (Cd)	50 mg/L
Chromium (Cr)	100 mg/L	Selenium (Se)	50 mg/L
Lead (Pb)	100 mg/L	Mercury (Hg)*	20 mg/L
Barium (Ba)	50 mg/L	Silver (Ag)	10 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	PDWM-1/100
2% HNO ₃	250 ml	PDWM-1/250
2% HNO ₃	500 ml	PDWM-1/500

*Mercury shipped in separate bottle.

TCLP Metal Spike Solution (8 Elements)

Elements	Concentration	Elements	Concentration
Arsenic (As)	100 mg/L	Cadmium (Cd)	50 mg/L
Chromium (Cr)	100 mg/L	Selenium (Se)	50 mg/L
Lead (Pb)	100 mg/L	*Mercury (Hg)	20 mg/L
Barium (Ba)	50 mg/L	Silver (Ag)	10 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	TCLP-1/100
2% HNO ₃	250 ml	TCLP-1/250
2% HNO ₃	500 ml	TCLP-1/500

*Mercury shipped in separate bottle.

Instrument Calibration Standard 200.7-3 (6 Elements)

Elements	Concentration	Elements	Concentration
Arsenic (As)	1,000 mg/L	Cadmium (Cd)	500 mg/L
Lead (Pb)	1,000 mg/L	Selenium (Se)	500 mg/L
Thallium (Tl)	1,000 mg/L	Boron (B)	200 mg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	ICS7-3-1/100
2% HNO ₃	250 ml	ICS7-3-1/250
2% HNO ₃	500 ml	ICS7-3-1/500

Instrument Calibration Standard 200.7-4 (3 Elements)

Elements	Concentration	Elements	Concentration
Antimony (Sb)	1,000 mg/L	Titanium (Ti)	1,000 mg/L
Molybdenum (Mo)	1,000 mg/L		

Matrix	Volume	isoSPEC No.
4% HNO ₃ + Tr HF	100 ml	ICS7-4-3/100
4% HNO ₃ + Tr HF	250 ml	ICS7-4-3/250
4% HNO ₃ + Tr HF	500 ml	ICS7-4-3/500

Quality Control Standards

Quality Control Standard Solution #7 (7 Elements)

Elements	Concentration	Elements	Concentration
Potassium (K)	1,000 mg/L	Silver (Ag)	100 mg/L
Aluminum (Al)	100 mg/L	Sodium (Na)	100 mg/L
Barium (Ba)	100 mg/L	Silicon (Si)	50 mg/L
Boron (B)	100 mg/L		

Matrix	Volume	isoSPEC No.
5% HNO ₃	100 ml	QCSS7-1/100
5% HNO ₃	250 ml	QCSS7-1/250
5% HNO ₃	500 ml	QCSS7-1/500

Quality Control Standard Solution #19 (19 Elements)

Elements	Concentration	Elements	Concentration
Antimony (Sb)	100 mg/L	Magnesium (Mg)	100 mg/L
Arsenic (As)	100 mg/L	Manganese (Mn)	100 mg/L
Beryllium (Be)	100 mg/L	Molybdenum (Mo)	100 mg/L
Cadmium (Cd)	100 mg/L	Nickel (Ni)	100 mg/L
Calcium (Ca)	100 mg/L	Selenium (Se)	100 mg/L
Chromium (Cr)	100 mg/L	Thallium (Tl)	100 mg/L
Cobalt (Co)	100 mg/L	Titanium (Ti)	100 mg/L
Copper (Cu)	100 mg/L	Vanadium (V)	100 mg/L
Iron (Fe)	100 mg/L	Zinc (Zn)	100 mg/L
Lead (Pb)	100 mg/L		

Matrix	Volume	isoSPEC No.
5% HNO ₃ + Tr HF	100 ml	QCSS19-3/100
5% HNO ₃ + Tr HF	250 ml	QCSS19-3/250
5% HNO ₃ + Tr HF	500 ml	QCSS19-3/500

Quality Control Standard Solution #23 (23 Elements)

Elements	Concentration	Elements	Concentration
Antimony (Sb)	100 mg/L	Manganese (Mn)	100 mg/L
Arsenic (As)	100 mg/L	Molybdenum (Mo)	100 mg/L
Beryllium (Be)	100 mg/L	Nickel (Ni)	100 mg/L
Cadmium (Cd)	100 mg/L	Phosphorus (P)	100 mg/L
Calcium (Ca)	100 mg/L	Selenium (Se)	100 mg/L
Chromium (Cr)	100 mg/L	Strontium (Sr)	100 mg/L
Cobalt (Co)	100 mg/L	Thallium (Tl)	100 mg/L
Copper (Cu)	100 mg/L	Tin (Sn)	100 mg/L
Iron (Fe)	100 mg/L	Titanium (Ti)	100 mg/L
Lead (Pb)	100 mg/L	Vanadium (V)	100 mg/L
Lithium (Li)	100 mg/L	Zinc (Zn)	100 mg/L
Magnesium (Mg)	100 mg/L		

Matrix	Volume	isoSPEC No.
5% HNO ₃ + Tr HF	100 ml	QCSS23-3/100
5% HNO ₃ + Tr HF	250 ml	QCSS23-3/250
5% HNO ₃ + Tr HF	500 ml	QCSS23-3/500

Quality Control Standard Solution #26 (26 Elements)

Elements	Concentration	Elements	Concentration
Potassium (K)	1,000 mg/L	Lead (Pb)	100 mg/L
Aluminum (Al)	100 mg/L	Magnesium (Mg)	100 mg/L
Antimony (Sb)	100 mg/L	Manganese (Mn)	100 mg/L
Arsenic (As)	100 mg/L	Molybdenum (Mo)	100 mg/L
Barium (Ba)	100 mg/L	Nickel (Ni)	100 mg/L
Beryllium (Be)	100 mg/L	Selenium (Se)	100 mg/L
Boron (B)	100 mg/L	Silver (Ag)	100 mg/L
Cadmium (Cd)	100 mg/L	Sodium (Na)	100 mg/L
Calcium (Ca)	100 mg/L	Thallium (Tl)	100 mg/L
Chromium (Cr)	100 mg/L	Titanium (Ti)	100 mg/L
Cobalt (Co)	100 mg/L	Vanadium (V)	100 mg/L
Copper (Cu)	100 mg/L	Zinc (Zn)	100 mg/L
Iron (Fe)	100 mg/L	Silicon (Si)	50 mg/L

Matrix	Volume	isoSPEC No.
5% HNO ₃ + Tr HF	100 ml	QCSS26-3/100
5% HNO ₃ + Tr HF	250 ml	QCSS26-3/250
5% HNO ₃ + Tr HF	500 ml	QCSS26-3/500

ICP-MS Internal Standard Solution #1 (7 Elements)

Elements	Concentration	Elements	Concentration
Bismuth (Bi)	10 mg/L	Scandium (Sc)	10 mg/L
Holmium (Ho)	10 mg/L	Terbium (Tb)	10 mg/L
Indium (In)	10 mg/L	Yttrium (Y)	10 mg/L
Lithium ⁶ (Li ⁶)	10 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃	100 ml	ISS-1-1/100
2% HNO ₃	250 ml	ISS-1-1/250
2% HNO ₃	500 ml	ISS-1-1/500

ICP-MS Internal Standard Solution #2 (7 Elements)

Elements	Concentration	Elements	Concentration
Germanium (Ge)	100 mg/L	Scandium (Sc)	100 mg/L
Indium (In)	100 mg/L	Tantalum (Ta)	100 mg/L
Lutetium (Lu)	100 mg/L	Yttrium (Y)	100 mg/L
Rhodium (Rh)	100 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃ + Tr HF	100 ml	ISS-2-3/100
2% HNO ₃ + Tr HF	250 ml	ISS-2-3/250
2% HNO ₃ + Tr HF	500 ml	ISS-2-3/500

ICP-MS Internal Standard Solution #3 (5 Elements)

Elements	Concentration	Elements	Concentration
Germanium (Ge)	100 mg/L	Lutetium (Lu)	10 mg/L
Scandium (Sc)	100 mg/L	Tantalum (Ta)	10 mg/L
Indium (In)	10 mg/L		

Matrix	Volume	isoSPEC No.
2% HNO ₃ + Tr HF	100 ml	ISS-3-3/100
2% HNO ₃ + Tr HF	250 ml	ISS-3-3/250
2% HNO ₃ + Tr HF	500 ml	ISS-3-3/500

ICP-MS Internal Standard Solution #4 (5 Elements)

Elements	Concentration	Elements	Concentration
Bismuth (Bi)	10 mg/L	Terbium (Tb)	10 mg/L
Indium (In)	10 mg/L	Yttrium (Y)	10 mg/L
Scandium (Sc)	10 mg/L		

Matrix	Volume	isoSPEC No.
0.5% HNO ₃	100 ml	ISS-4-1/100
0.5% HNO ₃	250 ml	ISS-4-1/250
0.5% HNO ₃	500 ml	ISS-4-1/500

Wavelength Calibration Standards

Holmium Oxide Ho₂O₃

Holmium Oxide is used to verify the wavelength scale for ultraviolet and visible absorption spectrometers. The standard is certified for wavelengths of 14 bands from 240 to 650 nanometers. Each certificate of analysis includes a list of the observed maximums and a spectrum.

Elements	Matrix	Concentration	isoSPEC No.
Holmium Oxide	10% HClO ₄	40,000 mg/L	WCS-1-40-10/30

Volume 30 ml

Erbium Perchlorate Er(ClO₄)₃

Erbium Perchlorate is used to verify the wavelength accuracy of your UV-VIS spectrometer. The certificate of analysis comes with a spectrum.

Elements	Matrix	Concentration	isoSPEC No.
Erbium Perchlorate	H ₂ O	10,000 mg/L	WCS-2-10-4/100

Volume 100 ml

Absorbency Linearity Solutions

Elements	Matrix	Concentration	isoSPEC No.
Potassium Dichromate	0.001 N HClO ₄	24.28 mg/L	WCS-3-0002428
Potassium Dichromate	0.001 N HClO ₄	39.09 mg/L	WCS-3-0003909
Potassium Dichromate	0.001 N HClO ₄	60.32 mg/L	WCS-3-0006032
Potassium Dichromate	0.001 N HClO ₄	79.91 mg/L	WCS-3-0007991
Potassium Dichromate	0.001 N HClO ₄	97.02 mg/L	WCS-3-0009702
Potassium Dichromate	0.001 N HClO ₄	119.3 mg/L	WCS-3-001193
Potassium Dichromate	0.001 N HClO ₄	138.0 mg/L	WCS-3-001380

Volume 25 ml

Stray Light Solution

Elements	Matrix	Concentration	isoSPEC No.
Potassium Iodide	H ₂ O	10,000 mg/L	WCS-4-10-4/25

Volume 25 ml

Absorbency Linearity/Accuracy Calibration, and Stray Light Kit

Kit contains one 25 ml bottle of the following solutions: 160104-02, 160223-02-01, 160223-03-01, 160223-04-01, 160223-05-01, 160223-06-01, 160223-07-01, 160223-08-01, 160224-01-01

isoSPEC No.
WCS-5

EPA Method 1631 (Low-level Mercury) Products



EPA Method 1631 is a performance-based method to detect Mercury at sub-part per trillion levels. All of our Method 1631 Low level Mercury products are certified to have less than 0.5 parts per trillion (ppt) of Mercury. We offer a complete line of reagents, standards, and field sampling supplies. All Method 1631 Products come with a Certificate of Analysis.

Reagents

Sub Boiled Distilled Hydrochloric Acid (HCl)

Matrix	Volume	isoSPEC No.
Concentrated HCl	1 Liter (Teflon® Bottle)	EPA-01-2/1000*
Concentrated HCl	1 Liter (Borocilicate Glass)	EPA-02-2/1000

Hydroxylamine/Hydrochloride (NH₂OH•HCl)

Matrix	Volume	isoSPEC No.
NH ₂ OH HCl	2 x 6 g	EPA-03-6
NH ₂ OH HCl	2 x 15 g	EPA-03-15

1N Bromide/1N Bromate (Br/BrO₃) In DI H₂O

Matrix	Volume	isoSPEC No.
H ₂ O	2 x 10 ml	EPA-06-4/2
H ₂ O	10 x 10 ml	EPA-06-4/10

*Teflon bottles for catalogue number EPA-01-2/1000 may be cleaned and/or refilled with sub boiled HCl.

Please inquire for pricing.

Bromide Monochloride Solution

Matrix	Volume	isoSPEC No.
HCl	1 x 2.5 ml	EPA-04-2/1
HCl	20 x 2.5 ml	EPA-04-2/20

Stannous Chloride (SnCl₂)

Matrix	Volume	isoSPEC No.
SnCl ₂	8 x 20 g	EPA-05-8-20
SnCl ₂	2 x 40 g	EPA-05-2-40
SnCl ₂	4 x 40 g	EPA-05-4-40
SnCl ₂	8 x 40 g	EPA-05-8-40



Method 1631 Reagents Kit

The Method 1631 Reagents Kit is designed to provide a laboratory all the reagents necessary to run Method 1631. The kit includes: 1 Liter of Hydrochloric Acid, 2 x 6 gram bottles of Hydroxylamine Hydrochloride, 8 x 40 gram bottles of Stannous Chloride, and 4 x 10 milliliter 1 Normal Bromate/Bromide Oxidizing Reagent in Teflon® tubes. Each product contained in this kit is certified to have less than 0.5 parts per trillion (ppt) Mercury.

	Volume	isoSPEC No.
Distilled HCl	1 Liter	190007-11
SnCl ₂	8 x 40 g	
NH ₂ OH HCl	2 X 6 g	
Br/BrO ₃	4 X 10 ml	

Mercury Standard Solutions

Elements	Concentration
Mercury (Hg)	500 µg/L

Matrix	Volume	isoSPEC No.
2% HNO ₃	250 ml	060080-07-02
2% HNO ₃	250 ml	060080-06-02 (Second Source)

50 mL Digestion Tube for EPA Method 1631

Digestion Tubes are certified to contain less than 0.5 parts per trillion (ppt) of Mercury and are packaged with a certificate of analysis.

Volume	isoSPEC No.
100 x 50 ml	190007-12-01
500 x 50 ml	190007-12



EPA Method 1631 (Low-level Mercury) Products



EPA Method 1631 Field Sampling Supplies

Sample Kits, Trip Blanks, & Equipment/Field Blanks for Method 1631

	Volume	isoSPEC No.
Sample Kit <i>(Contains one empty bottle, double bagged with gloves and a certificate of analysis)</i>	500 ml	190007-01
Trip Blank <i>(Contains one bottle filled with mercury-free water, double bagged and a certificate of analysis)</i>	500 ml	190007-02
Equipment/Field Blank <i>(Contains one bottle filled with mercury-free water and one empty bottle, double bagged with gloves and a certificate of analysis)</i>	2 x 500 ml	190007-03
Certified Clean 250 ml Amber Glass Boston Round <i>(Contains 12 empty bottles incased, bagged and a certificate of analysis)</i>	12 x 250 ml	190007-21
Certified Clean 500 ml Amber Glass Boston Round <i>(Contains 12 empty bottles incased, bagged and a certificate of analysis)</i>	12 x 500 ml	190007-18
Certified Clean 500 ml Clear Glass Boston Round <i>(Contains 12 empty bottles incased, bagged and a certificate of analysis)</i>	12 x 500 ml	190007-19
Certified Clean 2.5 Liter Amber Glass Boston Round <i>(Contains 6 empty bottles incased, bagged and a certificate of analysis)</i>	6 x 2.5 Liter	190007-20

Cleaned FEP Lined Poly Tubing with Certificate of Analysis

Each piece of FEP lined tubing comes with 12 inches of silicon tubing to attach to the sampling pump.

	Volume	isoSPEC No.
0.170 ID X 0.250 OD	1/ft.	190007-07-02
0.250 ID X 0.375 OD	1/ft.	190007-07

Cleaned Silicon Pump Tubing with Certificate of Analysis

	Volume	isoSPEC No.
0.250 ID X 0.375 OD	1/ft.	190007-07-03
0.375 ID X 0.625 OD	1/ft.	190007-07-04

Sampling Gloves with Certificate of Analysis

	Volume	isoSPEC No.
Extra Large	100/ea.	190007-17

Method 1631 Mercury-Free Reagent Water for Cleaning with Certificate of Analysis

Matrix	Volume	isoSPEC No.
Mercury-Free H ₂ O	500 ml	190007-15
Mercury-Free H ₂ O	4 Liters	190007-16

Pre-Measured Field Sampling Preservation Solutions

Volatile Organic Compound Preservation

isoSPEC No.	Container	Volatile Organic Compound Preservation
190008-02-07	1/4 oz Clear Glass Vial with PTFE-Lined Septa Caps	0.25 ml of 1:1HCl Preservation (100 x 4 ml Borosilicate Glass Conainers Per Case)
190008-02-06	1/4 oz Clear Glass Vial with PTFE-Lined Septa Caps	0.5 ml of 1:1 HCl Preservation (100 x 4 ml Borosilicate Glass Conainers Per Case)
190008-02-08	1/4 oz Clear Glass Vial with PTFE-Lined Septa Caps	2 ml of 1:1 of HCl Preservation (100 x 4 ml Borosilicate Glass Conainers Per Case)
190008-02-05	1/4 oz Clear Glass Vial with PTFE-Lined Septa Caps	3 ml of 1:1 of HCl Preservation (100 x 4 ml Borosilicate Glass Conainers Per Case)
190008-02-09	0.25" ID PFA Tube	HCl Preservative in Teflon Tube, 25% HCl (Packaged 100 x 0.4 ml Teflon® Tubes Per Bag)

Drinking Water Preservation

isoSPEC No.	Container	Drinking Water Preservation
190008-07-03	2 ml Amber Glass Vial with PTFE-Lined Septa Caps	MCAA Buffer Solution, 100 x 1.2 ml in Amber Glass

Hexavalent Chromium Preservation*

isoSPEC No.	Container	Hexavalent Chromium Preservation
190008-06-02	1/4 oz Nalgene Narrow Mouth HDPE	Cr+6 Preservation Buffer for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-06-03	1/4 oz Nalgene Narrow Mouth HDPE	Cr+6 Preservation Buffer for a 500 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)

Oil & Grease and Various General Chemistry Preservation*

isoSPEC No.	Container	Oil & Grease and Various General Chemistry Preservation
190008-03-01	1/4 oz Nalgene Narrow Mouth HDPE	H2SO4 Preservation for a 125 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-03-02	1/4 oz Nalgene Narrow Mouth HDPE	H2SO4 Preservation for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-03-03	1/4 oz Nalgene Narrow Mouth HDPE	H2SO4 Preservation for a 500 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-03-04	1/4 oz Nalgene Narrow Mouth HDPE	H2SO4 Preservation for a 1,000 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-02-01	1/4 oz Nalgene Narrow Mouth HDPE	HCl Preservation for a 125 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-02-02	1/4 oz Nalgene Narrow Mouth HDPE	HCl Preservation for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-02-03	1/4 oz Nalgene Narrow Mouth HDPE	HCl Preservation for a 500 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-02-04	1/4 oz Nalgene Narrow Mouth HDPE	HCl Preservation for a 1,000 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)

Pre-Measured Field Sampling Preservation Solutions

Metals Preservation*

isoSPEC No.	Container	Metals Preservation
190008-01-07	1/4 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 60 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-01-01	1/4 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 125 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-01-02	1/4 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-01-03	1/4 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 500 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-01-04	1/4 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 1,000 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-01-05	1/2 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 2,000 ml Container (Packaged 25 x 15 ml Nalgene Bottles Per Bag)
190008-01-06	1/2 oz Nalgene Narrow Mouth HDPE	HNO3 Preservation for a 1 Gallon Container (Packaged 25 x 15 ml Nalgene Bottles Per Bag)

Cyanide Preservation*

isoSPEC No.	Container	Cyanide Preservation
190008-04-01	1/4 oz Nalgene Narrow Mouth HDPE	NaOH Preservation for a 125 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-04-02	1/4 oz Nalgene Narrow Mouth HDPE	NaOH Preservation for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-04-03	1/4 oz Nalgene Narrow Mouth HDPE	NaOH Preservation for a 500 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)
190008-04-04	1/2 oz Nalgene Narrow Mouth HDPE	NaOH Preservation for a 1,000 ml Container (Packaged 25 x 15 ml Nalgene Bottles Per Bag)

Sulfide Preservation*

isoSPEC No.	Container	Cyanide Preservation
190008-05-02	4 ml Nalgene Narrow Mouth HDPE	ZnAcetate Preservation for a 250 ml Container (Packaged 25 x 4 ml Nalgene Bottles Per Bag)

*Preservatives meet DOT Dangerous Goods In Excepted Quantities Shipping Criteria and EPA Sample Preservation Requirements.

*Solutions designed to meet your Standards ...
Standards designed to meet your Solutions*