



ICP & AAS Glassware & Consumables

Torches • Nebulizers • Spray Chambers • Cones • Pump Tubing
Guide 34 Certified Reference Standards and Materials



PerkinElmer • Agilent • Finnigan • Baird • ARL • JY • Thermo • Spectro • Varian



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- Guide 34 Single & Multi-element Standards
- ICP & AA Inorganic Standards & Modifiers
- IC Standards
- pH & Conductivity Standards
- Wet Chemistry
- Organic Standards & Reference Materials

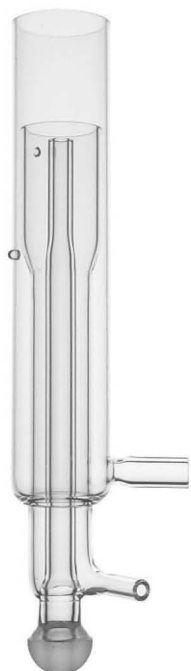
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ICP & ICP-MS
CONSUMABLES

Agilent (Hewlett Packard) 4500, 7500, 7700 & 8800

ICP & ICP-MS CONSUMABLES



900-01 - New Standard Torch, 2.5mm, 2 Projections, HMI Compatible



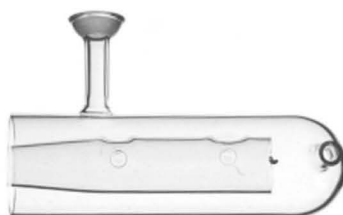
900-02 - Torch for PFA Inert Kit

PGB

OEM

Torches & Accessories

900-01	New Standard Torch, 2.5mm, 2 Projections, HMI Compatible	G3270-67002
900-02	Torch for PFA Inert Kit	G3285-80050
900-03	One Piece Torch, 1.0mm Injector (Agilent 7500)	G1833-65425
900-04	One Piece Torch, 1.5mm Injector (HP 4500)	G1820-65528
900-05	One Piece Torch, 2.5mm Injector (HP 4500)	G1820-65028
900-06	One Piece Torch, 2.5mm Injector (Agilent 7500)	G1833-65423
900-07	One Piece Torch, 1.5mm Injector (Agilent 7500)	G1833-65424
900-08	Demountable Torch, Inert (HP 4500)	G1820-65035
900-09	Demountable Torch, Inert (Agilent 7500)	G1833-65422
900-20	Alumina Injector	
900-24	Quartz Bonnet (HP 4500)	G1820-65026
900-25	Quartz Bonnet (Agilent 7500)	G1833-65421
900-30	PTFE Injector Holder	G1820-65015
900-10	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 180°	
900-11	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 90° (HP 4500, Agilent 7500)	G1820-65336
900-12	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 180°, Quartz	
900-13	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 90°, Quartz (HP 4500, Agilent 7500)	G1820-65337
900-14	Scott Spray Chamber, Inner Tube Extended, Drain & Exit 90°, Quartz	G1820-65339
900-16	Cyclonic Spray Chamber	
900-16Q	Cyclonic Spray Chamber, Quartz	
900-32	Quartz Socket Adapter	
900-36	Quartz Ball Adapter	
900-38	Ball & Socket Adapter, Quartz (HP4500)	G1820-80237
900-39	Ball & Socket Adapter, Quartz (Agilent 7500)	G1833-65426
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/mi	G1820-65030
500-77Q	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min, Quartz	G1820-61138
500-93	Crossflow Nebulizer, High-Solids	G1820-65033
500-94	Crossflow Nebulizer, High Flow	G1833-80301
520-30	PTFE End Cap for use with Open End Spray Chamber	
PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	G1820-65220
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	G1820-65215
PT-2160SI	White-White, 0.040" (1.02mm), Silicone, 6/pk	G1820-65217
PT-2220SA	Yellow-Blue, 0.06" (1.52mm), Santoprene, 12/pk	G1820-65216
PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	G1833-65571
PT-3160P	White-White, 0.040" (1.02mm), PVC, 12/pk	G1833-65569
PT-3220SA	Yellow-Blue, 0.06" (1.52mm), Santoprene, 12/pk	G1833-65570



900-13 - Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 90°, Quartz (HP 4500, Agilent 7500), G1820-65337



500-77Q - A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min, Quartz, G1820-61138

ARL 3500 Maxi

PGB Part #

OEM Part #

Torches & Accessories

100-05	Maxi Torch	139009-0003
100-05W	Maxi Torch, Wear Metals Outer Shield	
100-06	Maxi Torch, 20mm Outer Shield	
100-08	Torch, ICPQ	137000-0000
100-09	Torch, Nitrogen, 3" Port, 28/15 Ball Joint	173127-0000
120-40	Torch, HF/CR Resistant Body	173131-0000
120-44	PTFE Insert for HF Torch	
120-45	PTFE Insert, Adjustable for HF Torch	
100-21	Torch Extension	
100-22	Torch Extension with Optical Port	
100-25	Torch Bonnet	
100-27	Torch Bonnet, Induction Coil M/S	173251-0000
100-28	Argon Snout Tube	170631-0000
120-42	Alumina Injector	1200079
120-55	O-ring for Torch, PTFE Coated Viton	

Spray Chambers & Accessories

100-12	Conical Spray Chamber for Concentric Nebulizer	173142-0000
100-14	Conical Spray Chamber for MDSN	
100-16	Conical Spray Chamber, Open End with Impact Bead	139008-0000
100-18	Conical Spray Chamber, Open End with Drain	
110-55	Cyclonic Spray Chamber, 10mm Drain	
110-55J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
120-30	ARL Maxi PTFE Spray Chamber	
120-51	PTFE Insert, allows 100-14 to use Concentric Nebulizer	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

Nebulizers

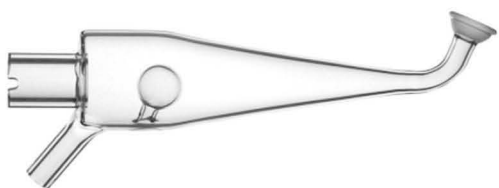
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	914319-000P/M
510-50	Babington MDSN, HF Resistant	173259-0000
510-10S	Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar	

ARL Type Pump Tubing

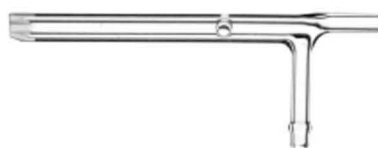
See our complete list of sizes and materials on pages 39-41



100-05 - Maxi Torch
139009-0003



100-14 - Conical Spray Chamber for MDSN



510-10S - Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar



100-25 - Torch Bonnet



510-50 - Babington MDSN, HF Resistant, 173259-0000

ARL 3400/3500 Accuris Mini

ICP & ICP-MS CONSUMABLES



110-30 - Mini Torch,
1.5mm Injector,
173463-0000



110-31 - Mini HF/CR
Torch Body,
173473-0000

PGB Part

OEM Part

Torches & Accessories

110-30	Mini Torch, 1.5mm Injector	173463-0000
110-30/1.0	Mini Torch, 1.0mm Injector	
110-31	Mini HF/CR Torch Body	173473-0000
110-32	Mini Nitrogen Torch	170692-0000
110-50	Mini High-Solids Torch	
110-35	Torch Bonnet	173252-0000
110-42	Torch Mount	144860
110-48	Injector Assembly	144857
110-54	Argon Snout, Nitrogen	170693-0000
120-55	O-ring for Torch, PTFE Coated Viton	

Spray Chambers & Accessories

110-33	Conical Spray Chamber, Mini for Concentric Nebulizer	173142-0002
110-33Q	Conical Spray Chamber, Mini for Concentric Neb., Quartz	
110-34	Conical Spray Chamber for Babington MDSN	173142-0003
110-36	Conical Spray Chamber, Water-Cooled for Concentric Neb.	173142-0004
110-55	Cyclonic Spray Chamber, 10mm Drain	
110-55J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
110-55QJ	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain, Quartz	
110-60	ARL Mini HF System	
120-51	PTFE Insert, allows 110-34 to use Concentric Nebulizer	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

Nebulizers

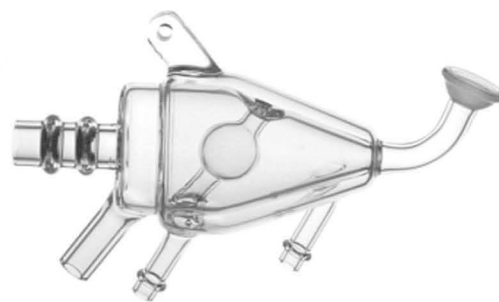
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	915375-000P/M
510-10	Noordermeer V-Groove MDSN Nebulizer	915817-0000
510-50	Babington MDSN, HF Resistant	173259-0000

ARL Type Pump Tubing

See our complete range of sizes and materials on pages 39-41



110-55J - Cyclonic Spray Chamber,
Water-Cooled, 10mm Drain



110-36 - Spray Chamber, Water-Cooled for
Concentric Nebulizer, 173142-0004

ARL Maxim 1 & 3

PGB Part #

OEM Part #

Torches & Accessories

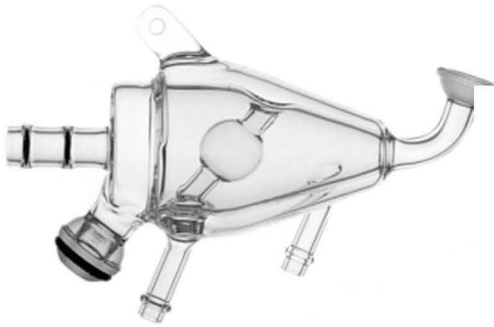
110-38	Maxim Torch	S111403
110-45	Maxim CR Torch	S213787
120-55	O-ring for Torch, PTFE Coated Viton	

Spray Chambers & Accessories

110-39	Spray Chamber, Water-Cooled for Concentric Nebulizer	S702174
110-40	Drain Trap	S702232
110-41	Spray Chamber for Concentric Nebulizer	S702171
110-41Q	Spray Chamber for Concentric Nebulizer, Quartz	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

Nebulizers

510-10	Noordermeer V-Groove MDSN Nebulizer	915817-0000
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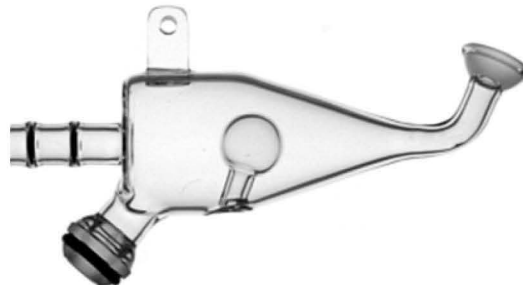
110-39 - Spray Chamber, Water-Cooled for Concentric Nebulizer, S702174



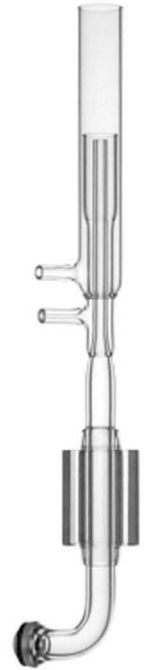
510-10 - Noordermeer V-Groove MDSN Nebulizer, 915817-0000



110-45 - Maxim CR torch



110-41 - Spray Chamber, for Concentric Nebulizer, S702171



110-38 - Maxim Torch S111403



110-40 - Drain Trap S702232

Baird 27 MHz

ICP & ICP-MS CONSUMABLES



200-05 - Torch, Plasma Standard, 025515

PGB Part

OEM Part

Torches & Accessories

200-05	Torch, Plasma Standard	025515
220-55	Demountable Torch Body	069987
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

Baird Type Pump Tubing

See our complete list of sizes and materials on pages 40 - 41

Baird 2000 & 2070

PGB Part

OEM Part

Torches & Accessories

200-06	Torch, Low-Flow	075542
200-10	Demountable Torch, Low-Flow	075145
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-36	Extension, Ball & Socket	062607
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

Spray Chambers & Accessories

200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min
500-92	Crossflow Nebulizer
510-10	Noordermeer V-Groove MDSN Nebulizer
510-50	Babington MDSN, HF Resistant

Baird Type Pump Tubing

See our complete list of sizes and materials on pages 40 - 41



200-06 - Torch, Low-Flow, 075542



500-92 - Crossflow Nebulizer



200-12 - Scott Spray Chamber, Open End, 025492

Baird PST

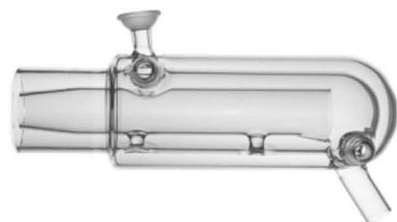
PGB Part #		OEM Part #
Torches & Accessories		
200-06	Torch, Low-Flow	075542
200-10	Demountable Torch, Low-Flow	075145
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-32	PST Purge Window	077200
200-36	Extension, Ball & Socket	062607
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	
Spray Chambers & Accessories		
200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	
Nebulizers		
500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	
500-92	Crossflow Nebulizer	
510-10	Noordermeer V-Groove MDSN Nebulizer	
510-50	Babington MDSN, HF Resistant	
Baird Type Pump Tubing		
See our complete list of sizes and materials on pages 40 - 41		



200-10 - Demountable Torch, Low-Flow, 075145



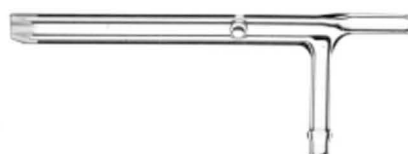
200-25 - Torch Bonnet, 025492



200-15 - Scott Spray Chamber, Water-Cooled



200-14 - Scott Spray Chamber for Concentric Nebulizer



510-10 - Noordermeer V-Groove MDSN Nebulizer



500-70 - C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min



200-30 - Window Tube, 077611

Baird PSQ and PSX

ICP & ICP-MS CONSUMABLES



200-06 - Torch,
Low-Flow, 075542

PGB Part

OEM Part

Torches & Accessories

200-06	Torch, Low-Flow (PSQ and New PSX)	075542
200-07	Plasma PSX Low-Flow Torch (Old PSX)	069972
200-08	Plasma Low-Flow Torch (Old PSX)	666011
200-09	PSX Labtest Low-Flow Torch	075128
200-10	Demountable Torch, Low-Flow (PSQ and New PSX)	075145
200-11	PSX Low-Flow HF/CR Torch	075129
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-33	Entrance Tube, Plasma Labtest	
200-36	Extension, Ball & Socket	062607
200-36Q	Quartz Extension, Ball & Socket	
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	075145
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

Spray Chambers & Accessories

200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	
500-92	Crossflow Nebulizer	
510-10	Noordermeer V-Groove MDSN Nebulizer	
510-50	Babington MDSN, HF Resistant	

Baird Type Pump Tubing

See our complete list of sizes and materials on pages 40 - 41

Baird AFS-2000

PGB Part

OEM Part

Torches & Accessories

210-10	AFS/ICP Torch & Tip	676458
210-11	AFS/ICP Tip Replacements	676459

Baird Type Pump Tubing

See our complete list of sizes and materials on pages 40 - 41



210-10 - AFS/ICP
Torch & Tip, 676458



510-50 - Babington
MDSN, HF Resistant



510-10 - Noordermeer V-
Groove MDSN Nebulizer

Finnigan Element TS/Sola

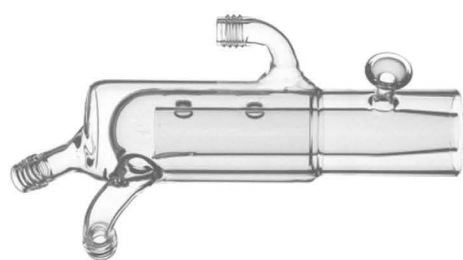
PGB Part #		OEM Part #
Torches & Accessories		
850-05	Standard Torch, TS Sola	
850-08	Demountable Torch, TS Sola	
850-09	Quartz Injector, TS Sola	
850-10	Torch & Injector, TS Sola	
850-11	Alumina Injector, TS Sola	
850-06	Standard Torch, Element	
850-12	Demountable Torch, Element	1091250
850-25	Quartz Bonnet for Demountable Torch, Element	
850-26	Quartz Bonnet for Demountable Torch, Element, Long	
852-10	Quartz Injector, Element	1122800
Spray Chambers & Accessories		
850-15	Scott Spray Chamber, Pyrex, Water-Cooled, TS Sola	
850-16	Scott Spray Chamber, Quartz, Water-Cooled, TS Sola	
850-17	Scott Spray Chamber, Pyrex, Water-Cooled, Element	
850-18	Scott Spray Chamber, Quartz, Water-Cooled, Element	
850-19	Finnigan Neptune Spray Chamber	1127121
850-31	Ball & Socket Elbow, Pyrex	
850-32	Ball & Socket Elbow, Quartz	
Finnigan Type 2-Stop Pump Tubing		
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	
PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk	



850-10 - Torch & Injector, TS Sola



850-12 - Demountable Torch, Element, 1091250



850-18 - Scott Spray Chamber, Quartz, Water-Cooled, Element



850-32 - Ball & Socket Elbow, Quartz



852-10 - Quartz Injector, Element, 1122800

ICP & ICP-MS
CONSUMABLES



150-05 - Torch, One Piece with Ball Joint, 49.010.100



150-15 - Cyclonic Spray Chamber, 4mm Drain, 31.030.809



160-63 - Sheath Gas, Glass, 21.356.040

PGB Part #

OEM Part #

Torches & Accessories

150-05	Torch, One Piece with Ball Joint	49.010.100
160-40	Demountable Torch Assembly, Complete	21.356.110
160-45	Demountable Torch, Body Only	
160-50	Outer Quartz Tube, 71mm, Radial	31.023.722
160-51	Outer Quartz Tube, 82.5mm, Radial	
160-70	Outer Quartz Tube, Axial	31.031.099
160-52	Inner Quartz Tube	31.023.723
160-46	O-ring Kit for Torch Body	
160-53	PTFE Centering Ring	31.023.724
160-55	PTFE Insert	31.021.730
160-58	Alumina Injector	31.021.589
160-59	Quartz Injector	
160-60	Quartz Injector, 3.0mm	
160-61	Alumina Injector and Teflon Insert	21.356.130
160-63	Sheath Gas, Glass	21.356.040
160-63S	Sheath Gas, 12/5 Socket	
160-64	Sheath Gas, PEEK	20.925.160

Spray Chambers & Accessories

150-12	Scott Spray Chamber, 12mm Drain	
150-12Q	Scott Spray Chamber, 12mm Drain, Quartz	
150-13	Cyclonic Spray Chamber, Axial	
150-14	Scott Spray Chamber, Ground Joint Drain	31.026.996
150-14Q	Scott Spray Chamber, Ground Joint Drain, Quartz	
150-15	Cyclonic Spray Chamber, 4mm Drain	31.031.279
150-15B	Cyclonic Spray Chamber, 4mm Drain, Baffled	31.030.809
150-16	Scott Spray Chamber, 12mm Drain for Concentric Nebulizer	
150-17	Cyclonic Spray Chamber, 12mm Drain	
150-21	Torch Extension	
150-25	Torch Bonnet	49.010.101
160-65	U-Drain Trap	31.026.997

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	47.929.006
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 1mL/min	47.929.001
500-71	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 2mL/min	47.929.002
500-72	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	47.929.003
500-73P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 0.5mL/min	47.929.004
500-92	Crossflow Nebulizer	47.929.008

JY Type 2-Stop Pump Tubing

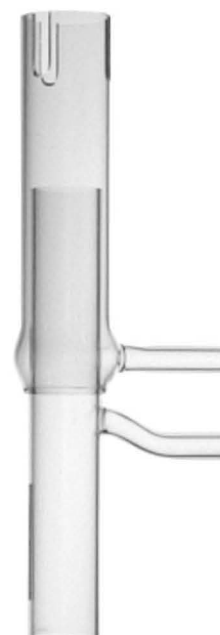
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	46.791.022
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	46.791.024
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	46.791.018
PT-2250P	Green-Green, 0.073" (1.85mm), PVC, 12/pk	46.791.016
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	46.791.010
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	46.791.012
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	LK1160497080



150-12 - Scott Spray Chamber, 12mm Drain

PerkinElmer Plasma 1000, 2000

PGB Part #		OEM Part #
Torches & Accessories		
310-03	Torch Tube, Type II	N058-0528
310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-24	Quartz Bonnet	N058-2235
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-66	Purge Extension Window	N058-1497
Spray Chambers and Accessories		
300-16	Scott Spray Chamber	
300-19	Cyclonic Spray Chamber	
300-19J	Cyclonic Spray Chamber, Water-Cooled	
Nebulizers		
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
PerkinElmer® Type 2-Stop Pump Tubing		
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



310-03 - Torch Tube, Type II, N058-0528

PerkinElmer Plasma II

PGB Part #		OEM Part #
Torches & Accessories		
310-03	Torch Tube, Type II	N058-0528
310-09	Torch Tube, Type I, Slotted	N058-0376
310-24	Quartz Bonnet	N058-2235
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-30	Quartz Injector, 1.2mm, Type I	
320-31	Quartz Injector, 1.6mm, Type I	N058-0449
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-66	Purge Extension Window	N058-1497
Spray Chambers & Accessories		
300-16	Scott Spray Chamber	
300-19	Cyclonic Spray Chamber	
300-19J	Cyclonic Spray Chamber, Water-Cooled	
Nebulizers		
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
PerkinElmer® Type 2-Stop Pump Tubing		
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



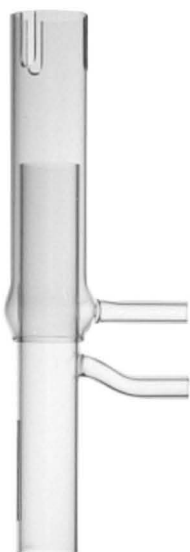
300-19 - Cyclonic Spray Chamber



310-35 - Injector Support Adapter with O-rings, N058-2248

PerkinElmer Plasma 40 & 400

ICP & ICP-MS CONSUMABLES



310-03 - Torch Tube,
Type II, N058-0528

PGB Part

OEM Part

Torches & Accessories

310-03	Torch Tube, Type II	N058-0528
310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-09	Torch Tube, Type I, Slotted	N058-0376
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-60	Purge Extension	N068-1234

Spray Chambers & Accessories

300-16	Scott Spray Chamber
300-19	Cyclonic Spray Chamber
300-19J	Cyclonic Spray Chamber, Water-Cooled
300-19Q	Cyclonic Spray Chamber, Quartz

Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376

PerkinElmer ICP 5000, 5500, 5500B, 6000 & 6500

PGB Part

OEM Part

Torches & Accessories

300-05	Torch, One Piece with Ball Joint	0047-2048
310-07	Torch Tube, Type I	N058-0233
310-03	Torch Tube, Type II	N058-0528
300-21	Torch Extension	0047-3052
300-22	Torch Extension with Optical Port	
300-23	Torch Extension, Slotted	0047-3560
300-25	Torch Bonnet	0047-2033
320-30	Quartz Injector, 1.2mm, Type I	
320-31	Quartz Injector, 1.6mm, Type I	N058-0449
320-32	Quartz Injector, 2.0mm, Type I	
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-62	Purge Tube	0047-3187
320-64	Purge Tube for Slotted Extension	0047-3561

Spray Chambers & Accessories

300-12	Scott Spray Chamber	0041-2047
300-14	Scott Spray Chamber for Concentric Nebulizer	
510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	
510-26J	Cyclonic Spray Chamber, Water-Cooled	

Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550



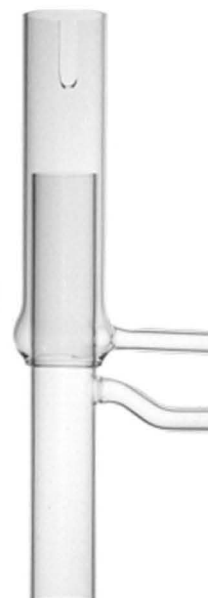
310-35 - Injector
Support Adapter with
O-rings, N058-2248



510-26 - Cyclonic
Spray Chamber, 12/5
Socket Top, 4mm
Drain

PerkinElmer Optima 3000 Series Radial

PGB Part #		OEM Part #
Torches & Accessories		
310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-04	Torch Body, Optima, Radial	N069-0568
310-04W	Torch Body, Optima, Radial, Wear Metals	
310-05	Torch Bonnet, Flat Edge (Optima pre-9/94)	N069-5295
310-13	Torch Bonnet, Flat Edge (Optima post 9/94)	N069-5456
320-33	Quartz Injector, 1.2mm	N068-1631
320-43	Quartz Injector, 1.6mm	N069-5448
320-40	Quartz Injector, 2.0mm	N069-5441
320-51	Alumina Injector, 0.85mm	N058-2186
320-52	Alumina Injector, 1.5mm	N058-2185
320-53	Alumina Injector, 2.0mm	N058-2184
320-66	Purge Extension Window	N058-1497
Spray Chambers & Accessories		
300-15	Scott Spray Chamber, Type II, Angled Top	
300-16	Scott Spray Chamber, Type II	
300-19	Cyclonic Spray Chamber, Optima	
Nebulizers		
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
PerkinElmer® Type 2-Stop Pump Tubing		
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



310-04 - Torch Body, Optima, Radial, N069-0568

PerkinElmer Optima 3000 Series XL & SC(X)

PGB Part #		OEM Part #
Torches & Accessories		
310-11	Torch Body, Optima XL	N069-5379
310-11W	Torch Body, Optima XL, Wear Metals	
310-15	Torch Bonnet	N069-1664
310-37	Injector Support Adapter with O-rings for Optima XL/DV	N069-5400
310-39	Injector Support Adapter with O-rings for Optima XL/DV	N069-0780
320-46	Quartz Injector, 1.2mm	N069-5460
320-44	Quartz Injector, 1.6mm	N069-5449
320-41	Quartz Injector, 2.0mm	N069-5442
320-50	Alumina Injector, 2.0mm	N069-5362
320-65	Purge Viewing Window for Optima XL	0999-2731
Spray Chambers & Accessories		
300-18DV	Cyclonic Spray Chamber	N812-2188
310-38	O-ring Kit - Optima XL/DV	N069-0769
Nebulizers		
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
PerkinElmer® Type 2-Stop Pump Tubing		
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375



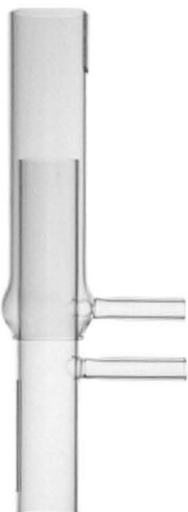
300-18DV - Cyclonic Spray Chamber, N812-2188



310-15 - Torch Bonnet, N069-1664

PerkinElmer 3000 Series DV

ICP & ICP-MS CONSUMABLES



310-14 - Torch Body,
Optima DV, 1 Slot,
N069-1662



310-15 - Torch Bonnet,
N069-1664



310-12 - Torch Body,
Optima DV, 2 Slot

PGB Part

OEM Part

Torches & Accessories

310-14	Torch Body, Optima DV, 1 Slot	N069-1662
310-14W	Torch Body, Optima DV, 1 Slot, Wear Metals	
310-14/3SL	Torch Body, Optima DV, 3 Slot	
310-12	Torch Body, Optima DV, 2 Slot	
310-12W	Torch Body, Optima DV, 2 Slot, Wear Metals	
310-15	Torch Bonnet	N069-1664
310-37	Injector Support Adapter with O-rings for Optima XL/DV	N069-5400
310-39	Injector Support Adapter with O-rings for Optima XL/DV	N069-0780
320-48	Quartz Injector, 0.8mm	N069-5461
320-46	Quartz Injector, 1.2mm	N069-5460
320-44	Quartz Injector, 1.6mm	N069-5449
320-41	Quartz Injector, 2.0mm	N069-5442
320-50	Alumina Injector, 2.0mm	N069-5362
320-67	Axial Purge Window	B006-6549
320-68	Purge Tube Window, Axial	N069-1678
320-69	Purge Tube Window, Radial	N069-1689
320-73	Purge Tube Window, Radial, Short	N069-0672

Spray Chambers & Accessories

300-18DV	Cyclonic Spray Chamber	N812-2188
300-18DVJ	Cyclonic Spray Chamber, Water-Cooled	
300-18DVQ	Cyclonic Spray Chamber, Quartz	
310-38	O-ring Kit - Optima XL/DV	N069-0769

Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



300-18DV - Cyclonic
Spray Chamber,
N812-2188



310-39 - Injector Support Adapter
with O-rings for Optima XL/DV
N069-0780

PerkinElmer NexION

PGB Part #

OEM Part #

Torches & Accessories

400-10	Torch Body, Elan	N812-2006
400-10HE	Torch Body, High Efficiency	W100-8384
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-35	Quartz Injector, 2.0mm	N812-5029
320-51	Alumina Injector, 0.85mm	N812-6039
320-52	Alumina Injector, 1.5mm	N812-6040
320-53	Alumina Injector, 2.0mm	N812-6041
400-31	Quartz Injector, 6100DRC & DRC II, 0.85mm	WE02-7030
400-32	Quartz Injector, 6100DRC & DRC II, 1.5mm	WE02-7005
400-30	Quartz Injector, 6100DRC & DRC II, 2.0mm	WE02-3948

Spray Chambers & Accessories

400-21	Cyclonic Spray Chamber, O-Ring Free, NexION	N814-5014
400-21Q	Qtz Cyclonic Spray Chamber, O-Ring Free, NexION	N814-5013

Nebulizers

500-75MPQ	A-Type Concentric Nebulizer, Quartz	N814-5011
500-70MP	C-Type Concentric Nebulizer, Microflow	N814-5012

Pump Tubing

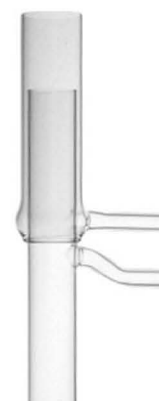
PT-2200SA	2-stop Santoprene Grey-Grey Pump Tubing
PT-2080PF	Flared 2-Stop PVC Orange-Green Pump Tubing

NexION Cones

SC6000	Insertion / Removal Tool
SC4011-Ni	NexION 300 Nickel Sampler Cone
SC4012-Ni	NexION 300 Nickel Skimmer Cone
SC4013-Pt	NexION 300 Platinum Sampler Cone
SC4014-Pt	NexION 300 Platinum Skimmer Cone
SC6011	NexION Aluminum Gaskets
SC4020-Al	NexION Aluminum Hyper-Skimmer

NexION RF Coils

70-900-2006T	PE Elan 6000,9000, NexION Installation Tool
70-900-2006C	PE Elan 6000,9000, NexION RF Coil - Copper



400-10, Torch body, Elan, N812-2006



400-32, Quartz Injector, 6100DRC & DRC II, 1.5mm - WE02-7005



PerkinElmer/SCIEX ELAN 250 & 500

ICP & ICP-MS
CONSUMABLES

PGB Part #

OEM Part #

Torches & Accessories

400-05	Short Form Torch (135mm overall length)	N810-2001
400-07	Long Form Torch (151mm overall length)	N810-2006
400-09	Long Form Torch (150mm overall length)	
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-35	Quartz Injector, 2.0mm	N812-5029
400-25	Torch Bonnet	

PerkinElmer/SCIEX ELAN 5000/6X00/9000/DRC II

PGB Part #

OEM Part #

Torches & Accessories

400-10	Torch Body, Elan	N812-2006
400-10HE	Torch Body, High Efficiency	W100-8384
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-35	Quartz Injector, 2.0mm	N812-5029
320-51	Alumina Injector, 0.85mm	N812-6039
320-52	Alumina Injector, 1.5mm	N812-6040
320-53	Alumina Injector, 2.0mm	N812-6041
400-31	Quartz Injector, 0.85mm, DRC	WE02-7030
400-32	Quartz Injector, 1.5mm, DRC	WE02-7005
400-30	Quartz Injector, 2.0mm, DRC	WE02-3948
400-35	Injector Support/Torch Base	N812-0116
400-37	Injector Support/Torch Base, DRC	WE02-3951

Spray Chambers & Accessories

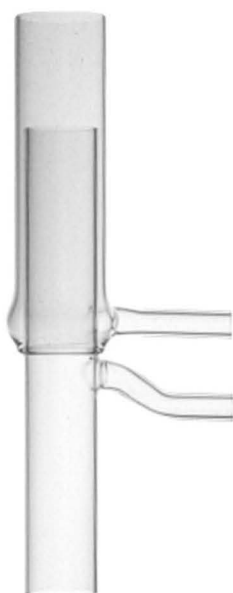
300-19MS	Cyclonic Spray Chamber	N812-0150
300-19MSJ	Cyclonic Spray Chamber, Water-Cooled	
300-19MSQ	Cyclonic Spray Chamber, Quartz	
300-19MSQJ	Cyclonic Spray Chamber, Quartz, Water-Cooled	
300-19MSQB	Cyclonic Spray Chamber, Quartz, Baffled	
400-20	Cyclonic Spray Chamber, Quartz, DRC	WE02-5221
400-20J	Cyclonic Spray Chamber, Quartz, DRC, Water-Cooled	
400-36	Sciex O-ring Adapter Kit	N812-0100
400-38	Sciex O-ring Adapter Kit, DRC	
400-12	Scott Spray Chamber	
400-13	Scott Spray Chamber, Quartz	
400-14	Scott Spray Chamber, Water-Cooled	WE01-3829
400-16	Scott Spray Chamber, Water-Cooled, Quartz	

Nebulizers

500-70M	C-Type Concentric Nebulizer, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min)	N810-2012
500-72	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	N810-2011
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
500-77Q	A-Type Concentric Nebulizer, 1 lpm, 30psi, 3mL/min, Quartz	WE02-4371
500-70QQDAC	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min, Quartz, Quick Disconnect, Argon Connect	

PerkinElmer® Sciex Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2290SA	Violet-White, 0.110" (2.79mm), Santoprene, 12/pk	N812-2252



400-10 - Torch Body, Elan,
N812-2006



400-30 - Injector, 6100DRC,
2.0mm, WE02-3948 and
400-37 Injector Support/Torch
Base, DRC, WE02-3951

PerkinElmer Optima 2000/4000/5000/7000DV Series & 4300V/5300V

PGB Part #

OEM Part #

Torches & Accessories

310-16	Torch Body, Optima 2000/4000/5000/7000DV, 1 Slot	N077-0338
310-16W	Torch Body, Optima 2000/4000/5000/7000DV, Wear Metals	
310-17	Torch Body, Optima 4300V/5300V	N077-1500
310-18	Torch Body, Optima 2000/4000/5000/7000DV, Short Version	N077-0344
310-19	Torch Body, Optima 2000/4000/5000/7000DV, No Slot	N077-0343
310-20	Copper Foil for Torch Body Optima 2000/4000/5000/7000DV	N077-5297
310-25	Torch Bonnet	N077-5289
310-43	O-ring Kit for Optima 2000/4000/5000/7000DV Torch	N077-0437
320-78	Quartz Injector, 0.8mm	N077-5225
320-77	Quartz Injector, 1.2mm	N077-5226
320-76	Quartz Injector, 1.6mm	N077-5223
320-74	Quartz Injector, 2.0mm	N077-5014
320-75	Quartz Injector, 3.0mm	N077-5224
310-40	Alumina Injector, 0.8mm	N077-5227
310-41	Alumina Injector, 1.2mm	N077-5228
310-42	Alumina Injector, 2.0mm	N077-5177
320-54	Alumina Injector, 1.2mm, Optima 4300V/5300V	N077-1531
320-66	Purge Extension Window, Optima 4300V/5300V	N058-1497
320-65	Axial Purge Window, Optima 2000DV	0999-2731
320-67	Axial Purge Window, Optima 4000/5000/7000DV	N077-1116
320-73	Purge Tube Window, Radial, Short, Optima 2000DV	N069-0672
320-80	Radial Purge Window, Optima 4000/5000/7000DV	N077-0322
320-81	Radial Purge Tube, Frosted, Optima 4000/5000/7000DV	N077-0944

Spray Chambers & Accessories

300-28	Nebulizer Adapter for Cyclonic Spray Chamber	
300-29	Cyclonic Spray Chamber, no Baffle with Nebulizer Adapter	N077-6052
300-30	Cyclonic Spray Chamber, Baffled with Nebulizer Adapter	N077-6053
300-30Q	Cyclonic Spray Chamber, Baffled, Quartz with Nebulizer Adapter	
300-31	Cyclonic Spray Chamber, 4mm Baffle with Nebulizer Adapter	N077-6090
300-32	Cyclonic Spray Chamber, Baffled, Optima 4300V	N077-1501

Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



300-29 - Cyclonic Spray Chamber, no Baffle with Nebulizer Adapter, N077-6052



300-32 - Cyclonic Spray Chamber, Baffled, Optima 4300V, N077-1501



310-16 - Torch Body, Optima 2000/4000/5000 DV, 1 Slot, N077-0338



310-17 - Torch Body, Optima 4300V, N077-1500

Thermo Scientific - TJA 2000-2400 Series

ICP & ICP-MS CONSUMABLES



250-08 - Torch



250-25 - Torch Bonnet,
190400-75



500-92 - Crossflow Nebulizer,
126989-00



285-01 - Rinse Station
1 Port, 12mm



285-02 - Rinse Station
2 Port, 12mm



285-03 - Rinse Station
2 Port, 23mm

PGB Part

OEM Part

Torches & Accessories

250-08	Torch	
250-25	Torch Bonnet	190400-75

Spray Chambers & Accessories

120-56	O-ring for Spray Chamber, PTFE Coated Viton	
250-16	Scott Spray Chamber, Standard	127947-00
250-30	Aerosol Baffle for 250-16	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	
510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	

Nebulizers

500-92	Crossflow Nebulizer	126989-00
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3120SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00

Spectro Modula, CIROS, Genesis, & ARCOS

PGB Part

OEM Part

SOP Torches

750-07	Torch, Fixed, 1.0mm	48205001
750-05	Torch, Fixed, 1.8mm, Standard	
750-05F	Torch, Fixed, 1.8mm, Standard with Fittings	75060596
750-08	Torch, Fixed, 2.5mm	
750-06	Demountable Torch, Spectroflame	48206002
750-49	Fixed Sheath Gas System Torch, 3.0 mm	
750-49F	Fixed Sheath Gas System Torch, 3.0 mm with Fittings	75260533

EOP Torches

750-41	Flared End Torch, 1.8mm	48105052A
750-41F	Flared End Torch, 1.8mm with Fittings	75160592
750-40	Flared End Torch, 2.5mm	48105052
750-40F	Flared End Torch, 2.5mm with Fittings	75160526
750-42	Demountable Torch	48206007
750-44	Demountable Flared End Torch	
750-47	Fixed Sheath Gas System Torch, 1.8 mm	
750-47F	Fixed Sheath Gas System Torch, 1.8 mm with Fittings	75160549
750-48	Fixed Sheath Gas System Torch, 3.0 mm	
750-48F	Fixed Sheath Gas System Torch, 3.0 mm with Fittings	75160537

Torch Accessories

750-21	Quartz Injector, 1.5mm, Standard	48105008
750-22	Quartz Injector, 1.8mm, Standard	48105010
750-23	Quartz Injector, 2.5mm, Standard	48105009
750-46	Quartz Injector, 2.5mm, EOP/Standard	48105058
750-55	Gas Adapter	

Spray Chambers & Accessories

750-10	Conical Spray Chamber, Slurry, Open End	
750-12	Conical Spray Chamber, Vertical Exit, Open End	48105003
750-13	Scott Spray Chamber, Double Pass, 90° Exit	48105051
750-14	Scott Spray Chamber, Double Pass, Large	48105006
750-15	Cyclonic Spray Chamber, Gravity Drain	
750-16	Cyclonic Spray Chamber, MLN, Gravity Drain	
510-27	Cyclonic Spray Chamber, MLN, Pump Drain	48105061
750-17	Elbow Adapter, EOP Torch to Spray Chamber	48105062
750-18	Elbow Adapter, EOP Torch to Slurry Spray Chamber	48105002
750-30	Spectro Drain Pressure Lock	

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	76060510
500-92S	Crossflow Nebulizer, 34mm	75060502
510-20S	Modified Lichte MDSN Nebulizer, 1 lpm Ar	48205036
510-20SF	Modified Lichte MDSN Nebulizer, 1 lpm Ar, with Fittings	76060529
520-30S	PTFE End Cap for use with 34mm Open End Spray Chamber	75060522
520-32S	O-ring for 500-92S	
750-93	O-ring for Crossflow Nebulizer (OEM Replacement)	

Spectro Type 2-Stop Pump Tubing

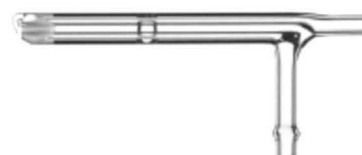
PT-2080P	Orange-Green, 015" (.38mm), PVC, 12/pk	47201037
PT-2120P	Orange-White, 0.025" (.64mm), PVC, 12.pk	47101001
PT-2140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	47101003
PT-2150P	White-Black, 0.037" (.95mm), PVC, 12/pk	47101004
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	47501010
PT-2220P	Yellow-Blue, 0.06" (1.52mm), PVC, 12/pk	47101006
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	47101014
PT-2240P	Blue-Green, (1.75mm), PVC, 12/pk	47101005
PT-2080SV	Orange-Green, 015" (.38mm), Solva, 12/pk	47501016
PT-2140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	47501018



750-40 - EOP Flared End Torch, 2.5mm, 48105052



750-12 - Small Upward Conical Spray Chamber, 48105003



510-20S - Modified Lichte Nebulizer (MLN), 1 lpm, Ar, 48205036

Thermo Scientific - TJA 61E, Iris Advantage Radial, Intrepid Radial, Intrepid II Radial

ICP & ICP-MS CONSUMABLES



275-07 - Ceramic Base Torch,
High Flow with 1.5mm Injector,
126432-01

PGB Part

OEM Part

Torches & Accessories

275-06	Ceramic Base Torch, High/Low Flow with 1.5mm Injector	126432-02
275-06W	Ceramic Base Torch, High/Low Flow, 1.5mm Inj., Wear Metals	
275-06W/O	Ceramic Base Torch, High/Low Flow without Injector	126440-02
275-07	Ceramic Base Torch, High Flow with 1.5mm Injector	126432-01
275-07HF	Ceramic Base Torch, High Flow with 1.5mm Alumina Injector	127179-01
275-07W/O	Ceramic Base Torch, High Flow without Injector	126440-01
275-08	Ceramic Base Torch, High Flow with 1.0mm Injector, Organics	125124-01
275-08W/O	Ceramic Base Torch, High Flow without Injector	126440-01
275-09	Ceramic Base Torch, Slotted with 1.5mm Injector	126432-04
275-09W/O	Ceramic Base Torch, Slotted without Injector	126440-06
250-40	Quartz Injector, 1.0mm	125407-01
250-41	Quartz Injector, 1.5mm	125407-00
250-42	Quartz Injector, 2.0mm	136502-01
250-43	Quartz Injector, 2.4mm	136502-02
254-45	O-ring for Injector Tube	125847-00
260-83	Alumina Injector, 1.5mm	136436-01
260-84	Alumina Injector, 1.0mm	
275-20	TJA PTFE Adapter, Torch	
275-25	Anti-arc Cap	085207-00
275-26	Anti-arc Cap, Flat Edge	085207-01
275-35	Argon Fittings for Ceramic Base Torches	

Spray Chambers & Accessories

250-19	Spray Chamber, Open End	130089-00
250-30	Aerosol Baffle for 250-19	003952-00
275-14	Cyclonic Spray Chamber, Radial, Pump	139663-00
275-18	Cyclonic Spray Chamber, Radial, Pump	140542-00
275-19	Cyclonic Spray Chamber, 10mm Drain	136105-00
275-19J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
275-21	Conical Spray Chamber	139219-00
275-53	Conical Spray Chamber, Water-Cooled	139123-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

Nebulizers

500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	134365-00
500-92	Crossflow Nebulizer	126989-00
510-10	Noordermeer V-Groove MDSN Nebulizer	080963
520-30	PTFE End Cap for use with 35mm Open End Spray Chambers	
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red-Orange, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green-Orange, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3210SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00

PGB Part #

OEM Part #

Torches & Accessories

250-05	Demountable Torch with Removable 1.0mm Tip	190400-54
250-05-A	Demountable Torch with 1 Extra Removable 1.0mm Tip	
250-05-B	Demountable Torch with 2 Extra Removable 1.0mm Tips	
250-05-C	Demountable Torch with 3 Extra Removable 1.0mm Tips	
250-05W	Demountable Torch with Removable 1.0mm Tip, Wear Metals	
250-06	Demountable Torch with Removable 1.25mm Tip	
250-06-A	Demountable Torch with 1 Extra Removable 1.25mm Tip	
250-06-B	Demountable Torch with 2 Extra Removable 1.25mm Tips	
250-06W	Demountable Torch with Removable 1.25mm Tip, Wear Metals	
250-07	Demountable Torch with Removable 1.5mm Tip	
250-07-A	Demountable Torch with 1 Extra Removable 1.5mm Tip	
250-07-B	Demountable Torch with 2 Extra Removable 1.5mm Tips	
250-09	Demountable Torch with Removable 1.7mm Tip	
250-21	Torch Extension	
250-22	Torch Extension with Optical Port	
250-25	Torch Bonnet	190400-75
260-55	Demountable Torch with Removable Tip, High Solids	
260-62	TJA Standard Low Flow Torch	
260-81	Alumina Injector Tube 1.5mm	136436-02
260-82	HF/CR Torch Body for Alumina/Sapphire Injector	
260-85	PTFE Injector Holder	

Spray Chambers & Accessories

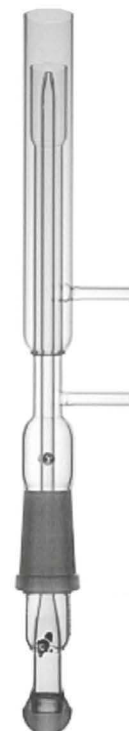
250-12	Scott Spray Chamber	190400-65
250-18	Scott Spray Chamber, Curved Drain	
250-20	Scott Spray Chamber, Open Ends, Water-Cooled	
250-20R	O-ring for Scott Spray Chamber, Water-Cooled	
250-30	Aerosol Baffle for 250-12 & 250-18	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

Nebulizers

500-92	Crossflow Nebulizer	126989-00
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3210SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00



250-05 - Demountable Torch with Removable 1.0mm Tip, 190400-54



250-12 - Scott Spray Chamber, 190400-65

ICP & ICP-MS
CONSUMABLES



450-05 - Torch, 1.5mm,
3201192



450-13 - Conical Spray
Chamber with Impact
Bead, Quartz, 3600170



450-28 - Torch Bonnet,
72mm, 3204703

PGB Part #

OEM Part #

Torches & Accessories

450-05	Torch, 1.5mm	3201192
450-06	Torch, 2.0mm	3201732
450-08	Torch Body, Demountable	1200080
450-09	Quartz Injector	
450-10	Torch Body, Demountable with Quartz Injector	
450-11	Alumina Injector	1200079
450-12	Torch Body, Corrosion Resistant	3203095
450-21	Torch Extension	
450-25	Torch Bonnet	
450-26	Torch Bonnet Cap	1200274
450-27	RF Insulator Shield	3203025
450-28	Torch Bonnet, 72mm	3204703
450-29	Torch Shield	3203789

Spray Chambers & Accessories

450-13	Conical Spray Chamber with Impact Bead, Quartz	3600170
450-14	Conical Spray Chamber with Impact Bead for Concentric Neb.	
450-15	Scott Spray Chamber, Water-Cooled, Pyrex	
450-16	Scott Spray Chamber, Water-Cooled, Quartz	3200841
450-17	Conical Spray Chamber, Water-Cooled for Maxim	3203739
450-22	Conical Spray Chamber, Water-Cooled, Pyrex	3204313
450-22Q	Conical Spray Chamber, Water-Cooled, Quartz	3600374
450-30	Elbow for use with 450-13, Quartz	3600169
450-31	Elbow, Ball & Socket, Pyrex	
450-32	Elbow, Ball & Socket, Quartz	3200727

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	1040894
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Accessories

450-18	Clamp, Stainless Steel, #12	1201261
450-18L	Clamp, Stainless Steel, #12 with Lock	
450-19	Clamp, Stainless Steel, #18	1202081
450-36	UV Laser Sample Cell	3007383
450-40	Probe UV Laser Sample Cell	3201104
450-42	Micro Probe UV Laser Sample Cell	
450-43	Quartz Sleeve	3202287
450-44	Quartz Tube	3201759
450-45	Quartz Sleeve, #2	3200176
450-46	Quartz Sleeve, Silica	3201070
450-49	Quartz Socket Tube Adapter	3200004
450-51	Glass Probe	1041167

VG Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk
PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk

Thermo Scientific - TJA 61E Trace, Iris AP, Intrepid, Intrepid II

PGB Part #

OEM Part #

Torches & Accessories

275-10	Ceramic Base Torch, Trace with 1.5mm Injector	126432-03
275-10W/O	Ceramic Base Torch, Trace without Injector	126440-03
275-10HF	Ceramic Base Torch, Trace with 1.5mm Alumina Injector	138566-03
275-10DV	Ceramic Base Torch, DV with 1.5mm Injector	
275-10DVKIT	Ceramic Base Torch, DV, 1.5mm Injector, Optic Sleeve, Seal	138562-00
275-10DVW/O	Ceramic Base Torch, DV without Injector	126440-05
250-23	Optic Sleeve for DV Torch	137689-00
250-24	Seal for Optic Sleeve - Duo Torch	137688-00
250-26	Duo Torch Sleeve and Seal Kit	138563-00
250-40	Quartz Injector, 1.0mm	125407-01
250-41	Quartz Injector, 1.5mm	125407-00
250-42	Quartz Injector, 2.0mm	136502-01
250-43	Quartz Injector, 2.4mm	136502-02
260-83	Alumina Injector, 1.5mm	136436-01
260-84	Alumina Injector, 1.0mm	
275-20	PTFE Adapter, Torch to Cyclonic Spray Chamber	

Spray Chambers & Accessories

275-13	Cyclonic Spray Chamber, Axial, Pump	139662-00
275-15	Cyclonic Spray Chamber, Gravity Drain, Trace	134620-00
275-16	Cyclonic Spray Chamber, Axial, Gravity Drain	136120-00
250-19	Spray Chamber, Open End	130089-00
250-30	Aerosol Baffle for 250-19	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

Nebulizers

500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	134365-00
500-92	Crossflow Nebulizer	126989-00
510-10	Noordermeer V-Groove MDSN Nebulizer	080963
520-30	PTFE End Cap for use with 35mm Open End Spray Chambers	
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

TJA® Type 3-Stop Pump Tubing

See page 24 for complete list of TJA® Type Pump tubing.

Determining the Correct Replacement TJA Ceramic Base Torch and Injector

Follow the charts below to identify which torch and injector you have and the correct PGB replacement part number.

Ceramic Base Torches

OEM Part #	Rings on Outer Tube of Torch	Rings on Injector (Center Tube)	PGB Part #
126432-02	1 Red Ring, Approx. 63mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-06
126432-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-07
127179-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.5mm Alumina Injector, No Ring	275-07HF
125124-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.0mm Injector, 2 Red Rings	275-08
126432-03	2 Red Rings, Approx. 136mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-10
138562-00	2 Red Rings, Hole for Radial Viewing, Approx. 136mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-10DV

Injectors

OEM Part #	Rings on Injector (Center Tube)	PGB Part #
125407-01	Quartz, 1.0mm bore, 2 Red Rings	250-40
125407-00	Quartz, 1.5mm bore, 1 Red Ring	250-41
136502-01	Quartz, 2.0mm bore, 1 Blue Ring	250-42
136502-02	Quartz, 2.4mm bore, 2 Blue Rings	250-43
N/A	Alumina, 1.0mm bore, No Rings	260-84
136463-01	Alumina, 1.5mm bore, No Rings	260-83



275-10DV - Ceramic Base Torch, DV with 1.5mm Injector



275-15 - Cyclonic Spray Chamber, Gravity Drain, Trace, 134620-00

Varian UltraMass-700

ICP & ICP-MS CONSUMABLES



800-34 - ICP-MS Torch
with Placement Posts,
20-101007-00

PGB Part

OEM Part

Torches & Accessories

800-06	Torch, One Piece, Low Flow	20-100783-00
800-11	Torch, Demountable, Body Only	20-100793-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm, 3/pk	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-90
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-51	Demountable Torch, Complete (800-11, -45, -48)	99-100717-00

Spray Chambers & Accessories

510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	
800-17	Sturman-Masters Spray Chamber, Water-Cooled	99-100704-00
800-21	Cyclonic Spray Chamber, 8mm Top, 4mm Drain	20-100817-00

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

Varian 800-MS Series



800-33 - ICP-MS Spray
Chamber,
20-101010-00

PGB Part

OEM Part

Torches & Accessories

800-34	ICP-MS Torch with Placement Posts	20-101007-00
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Spray Chambers & Accessories

800-31	ICP-MS Sheath Bypass	20-101008-00
800-32	ICP-MS Sheath Gas Port	20-101009-00
800-33	ICP-MS Spray Chamber	20-101010-00

Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-70MQDAC	C-Type Concentric, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect, Argon Connect	20-101021-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

Varian ICP-MS Type 2-Stop Pump Tubing

PGB Part

OEM Part

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	37-100272-00
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	37-100344-00
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100345-00
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	37-100346-00
PT-2270P	Purple-Black, 0.090" (2.29mm), PVC, 12/pk	37-100273-00
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	37-100348-00
PT-2160SV	White-White, 0.040" (1.02mm), Solva, 12/pk	37-100350-00
PT-2200SV	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100352-00
PT-2100SA	Orange-Yellow, 0.020" (.51mm), Santoprene, 12/pk	37-100440-00
PT-2130SA	Black-Black, 0.030" (.76mm), Santoprene, 12/pk	37-100441-00
PT-2160SA	White-White, 0.040" (1.02mm), Santoprene, 12/pk	37-100442-00
PT-2200SA	Gray-Gray, 0.050" (1.30mm), Santoprene, 12/pk	37-100443-00
PT-2230SA	Blue-Blue, 0.065" (1.65mm), Santoprene, 12/pk	37-100444-00

Varian 700-ES Series, Liberty, Vista

PGB Part

OEM Part

Torches & Accessories, Radial

800-05	Low Flow Torch, One Piece, Radial	20-100696-90
800-05B	Low Flow Torch, One Piece, Radial with Ball Joint,	20-100696-90B
800-05S	Low Flow Torch, One Piece, Radial with Socket	
800-08	Extended for Nitrogen Determination	20-100764-00
800-10	Torch, Demountable, Body Only, Radial	20-100729-00
800-25	Torch Bonnet	20-100707-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-00
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-50	Demountable Torch, Complete Kit for Radial (800-10,-45,-48)	99-100568-00

Torches & Accessories, Axial

800-12	Low Flow Torch, One Piece, Axial, 90° Bend	20-100904-00
800-12B	Low Flow Torch, One Piece, Axial, 90° Bend with Ball Joint	
800-12S	Low Flow Torch, One Piece, Axial, 90° Bend, 12/5 Socket	
800-14	Low Flow Torch, One Piece, Axial	20-100812-00
800-15	Torch, Demountable, Body Only, Axial	20-100834-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm, 3/pk	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-90
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-49	Demountable Torch, Complete Kit for Axial (800-15, -45, -48)	99-100847-00

Spray Chambers & Accessories

800-20	Transfer Tube, Torch to Spray Chamber	
800-21	Cyclonic Spray Chamber, 8mm Top, 4mm Drain	20-100817-00
800-21B	Cyclonic Spray Chamber, 8mm Top, 4mm Drain, Baffle	79-100437-00
800-17	Sturman-Masters Spray Chamber, Water-Cooled	99-100704-00

Nebulizers

500-70	C-Type Concentric, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-70MQDAC	C-Type Concentric, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect, Argon Connect	20-101021-00
500-65QDAC	K-Type Concentric, 30 psi, 2 mL/min, Quick Disconnect, Argon Connect	20-100964-00
500-80	K-Type, 0.7 lpm Ar, 30psi, 3mL/min	20-100695-00
500-80QDAC	K-Type, 30psi, 3mL/min Quick Disconnect, Argon Connect	20-101068-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
510-10	Noordermeer V-Groove MDSN Nebulizer	
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

Varian® Type 2-Stop Pump Tubing

PT-2120P	Orange-White, 0.025" (.64mm), PVC, 12/pk	37-100469-00
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	37-100272-00
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	37-100344-00
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100345-00
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	37-100346-00
PT-2270P	Purple-Black, 0.090" (2.29mm), PVC, 12/pk	37-100273-00
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	37-100348-00
PT-2160SV	White-White, 0.040" (1.02mm), Solva, 12/pk	37-100350-00
PT-2200SV	Gray-Gray, 0.050" (1.30mm), Solva, 12/pk	37-100352-00
PT-2100SA	Orange-Yellow, 0.020" (.51), Santoprene, 12/pk	37-100440-00
PT-2130SA	Black-Black, 0.030" (.76mm), Santoprene, 12/pk	37-100441-00
PT-2160SA	White-White, 0.040" (1.02mm), Santoprene, 12/pk	37-100442-00
PT-2200SA	Gray-Gray, 0.050" (1.30mm), Santoprene, 12/pk	37-100443-00
PT-2230SA	Blue-Blue, 0.065" (1.65mm), Santoprene, 12/pk	37-100444-00
PT-2100V	Orange-Yellow, 0.020" (.51mm), Viton, 12/pk	37-100435-00
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk	37-100436-00
PT-2160V	White-White, 0.040" (1.02mm), Viton, 12/pk	37-100437-00
PT-2200V	Gray-Gray, 0.050" (1.30mm), Viton, 12/pk	37-100438-00
PT-2230V	Blue-Blue, 0.065" (1.65mm), Viton, 12/pk	37-100439-00



800-05 - Low Flow Torch, One Piece, Radial, 20-100696-90



800-12 - Low Flow Torch, One Piece, Axial, 90° Bend, 20-100904-00



800-21 - Cyclonic Spray Chamber, 8mm Top, 4mm Drain, 20-100817-00



550-20 - 1 Piece Torch with Ball Joint, Aqueous, 120-3748



510-26T - Cyclonic Spray Chamber, PTFE

Specialty ICP Items

PGB Part #		OEM Part #
Torches & Accessories		
550-05	1 Piece Torch, Beveled End, 1.0 Injector	318-0016
550-06	1 Piece Torch, Beveled End, 1.5 Injector	
550-20	1 Piece Torch with Ball Joint, Aqueous	120-3748
550-20F	1 Piece Torch with Ball Joint, Aqueous with Fittings	120-00336-1
550-22	1 Piece Torch with Ball Joint, Organics	120-3749
550-22F	1 Piece Torch with Ball Joint, Organics with Fittings	120-00336-2
550-22W	1 Piece Torch with Ball Joint, Organics, Wear Metals	
550-23	Argon Hose and Fitting for Torch	
550-43	Demountable Torch	318-0001
550-50	Aqueous Torch, Axial, 190mm Long	318-00062
550-64	Aqueous Torch, Axial	120-00200-1
550-64F	Aqueous Torch, Axial with Fittings	120-00309-1
550-65	Aqueous Torch, Axial, Dual View	318-00065
550-65F	Aqueous Torch, Axial, Dual View with Fittings	120-00309-2
550-69	Demountable Torch, Axial, Aqueous	318-00069
550-70	Demountable Torch, Dual View, Aqueous	318-00070
550-45	Quartz Injector	318-0004
550-94	Torch, Axial, 2.5mm Injector	
550-94F	Torch, Axial, 2.5mm Injector, with Argon Fittings and Restrictor	
550-95	Torch, DV, 2.5mm Injector	
550-95F	Torch, DV, 2.5mm Injector, with Argon Fittings and Restrictor	
Spray Chambers & Accessories		
550-24	Hose and Fitting for Spray Chamber	
550-25	Spray Chamber, Scott, Radial	120-3751
550-25J	Spray Chamber, Scott, Radial, Water Cooled	
550-27	Cyclonic Spray Chamber, Radial, Hildebrand Grid	
550-37	Cyclonic Spray Chamber, Radial, Concentric	
550-38	Cyclonic Spray Chamber, Axial, Long Neck with Knockout Tube	
550-39	Cyclonic Spray Chamber, Axial, Long Neck without Knockout Tube	
550-55	Spray Chamber, Scott, Axial	120-00201-1
550-57	Cyclonic Spray Chamber, Axial, Concentric	
550-58	Cyclonic Spray Chamber, Axial, Hildebrand Grid	
550-60	Quartz Purge Window	
550-66	Purge Tube, Axial, Quartz	318-00066
550-67	Purge Tube, V2, Dual View	318-00067
550-68	Purge Tube, Radial	318-00068
Specialty 2-Stop Pump Tubing		
PT-2140P	Orange, 0.020", PVC, 12/pk	309-3551
PT-2130P	Black, 0.030", PVC, 12/pk	309-3552
PT-2180P	Red, 0.045", PVC, 12/pk	309-3538

Spray Chambers

PGB Part #		
Spray Chambers & Accessories		
510-26	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain	
510-26J	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Water Cooled	
510-26NB	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, No Baffle	
510-26Q	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Quartz	
510-26QJ	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Quartz, Water Cooled	
510-26T	Cyclonic Spray Chamber, PTFE	
510-26U	Cyclonic Spray Chamber, Ultem	
510-27	Cyclonic Spray Chamber for Modified Lichte	
510-27J	Cyclonic Spray Chamber for Modified Lichte, Water Cooled	
510-27Q	Cyclonic Spray Chamber for Modified Lichte, Quartz	
510-30	Mini Cyclonic Spray Chamber	

Nebulizers

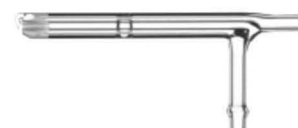
Nebulizer Type	Material/Chemical Resistance	Application	Sensitivity
Crossflow pg. 32	PVDF fluorinated polymer; Good chemical resistance for most acids and organic solvents	For use with Scott style spray chambers; High stability; Great high-solids capability	Moderate sensitivity due to wide range of droplet size
Noordermeer V-Groove pg. 32	Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF	For use with Scott style and cyclonic spray chambers; Great high-solids capability; Same principle as Babington	Moderate to high sensitivity for a high-solids nebulizer; Better efficiency compared to Babington V-groove
Modified Lichte pg. 32	Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF	For use with Modified Lichte spray chamber; Unique patented design; Great high-solids capability	Great sensitivity; Patented design with impingement bead to further atomize aerosol resulting in uniform droplet size
Glass Concentric pg. 31	Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF	For use with Scott style and cyclonic spray chambers; Not recommended for high-solids applications	Great sensitivity due to uniform droplet size inherent in the concentric design
Burgener Mira Mist & Ari Mist pg. 33	Teflon; can be used for any liquid. PEEK; Good chemical resistance for most acids and organic solvents.	For use with Scott style and cyclonic spray chambers: Great high-solids capability.	Great Sensitivity; enhanced parallel path design improves upon original Babington V-groove.



500-92 - Crossflow Nebulizer



510-10 - Noordermeer V-Groove MDSN Nebulizer



510-20S - Modified Lichte MDSN Nebulizer, 1 lpm Ar



500-72 - C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min



TMM 3500 - Teflon Mira Mist

Glass Concentric Nebulizers

Concentric nebulizers sample uptake rates are as follows:

Sample flow rate (mL/min)	Accepted range (mL/min)
Micro	0.1-0.4
1.0	0.5-1.4
2.0	1.5-2.4
3.0	2.5-3.4
Argon Pressure (psi)	Accepted range (psi)
30	28-38
50	45-55

PGB Part

Aerosalt - High Solids, 0.7 lpm Ar

500-65QD	30 psi, 2 mL/min, Quick Disconnect
500-65QDAC	30 psi, 2 mL/min, Quick Disconnect, Argon Connect

C-Type, 1.0 lpm Ar

500-70	30psi, 1mL/min
500-70M	30psi, Microflow (0.1-0.4 mL/min)
500-70MQD	30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect
500-70P	50psi, 1mL/min
500-70Q	30psi, 1mL/min, Quartz
500-70QD	30psi, 1mL/min, Quick Disconnect
500-70QDAC	30psi, 1mL/min, Quick Disconnect, Argon Connect
500-70QP	50psi, 1mL/min, Quartz
500-70QQD	30psi, 1mL/min, Quartz Quick Disconnect
500-70QQDAC	30psi, 1mL/min, Quartz, Quick Disconnect, Argon Connect
500-71	30psi, 2mL/min
500-71P	50psi, 2mL/min
500-71Q	30psi, 2mL/min, Quartz
500-71QD	30psi, 2mL/min, Quick Disconnect
500-72	30psi, 3mL/min
500-72P	50psi, 3mL/min
500-72Q	30psi, 3mL/min, Quartz
500-72QD	30psi, 3mL/min, Quick Disconnect
500-72QQD	30psi, 3mL/min, Quartz, Quick Disconnect

A-Type, 1.0 lpm, Ar

500-75	30psi, 1mL/min
500-75P	50psi, 1mL/min
500-75Q	30psi, 1mL/min, Quartz
500-76	30psi, 2mL/min
500-76P	50psi, 2mL/min
500-76Q	30psi, 2mL/min, Quartz
500-76QDAC	30psi, 2mL/min, Quick Disconnect, Argon Connect
500-77	30psi, 3mL/min
500-77P	50psi, 3mL/min
500-77Q	30psi, 3mL/min, Quartz
500-77QD	30psi, 3mL/min, Quick Disconnect

K-Type, 0.7 lpm Ar

500-80	30psi, 3mL/min
500-80Q	30psi, 3mL/min, Quartz
500-80QD	30psi, 3mL/min, Quick Disconnect
500-80QDAC	30psi, 3mL/min, Quick Disconnect, Argon Connect
500-80QQD	30psi, 3mL/min, Quartz, Quick Disconnect
500-81	30psi, 1mL/min
500-81QD	30psi, 1mL/min, Quick Disconnect
500-81QDAC	30psi, 1mL/min, Quick Disconnect, Argon Connect
500-82	30psi, 2mL/min
500-82QD	30psi, 2mL/min, Quick Disconnect
500-82QDAC	30psi, 2mL/min, Quick Disconnect, Argon Connect
500-85	High Flow Concentric Nebulizer
500-85QD	High Flow Concentric Nebulizer, Quick Disconnect
500-AC	Argon Connect for Concentric Nebulizers Includes Insert and Body
500-QD	Quick Disconnect for Nebulizer, Teflon with PFA Capillary Tubing

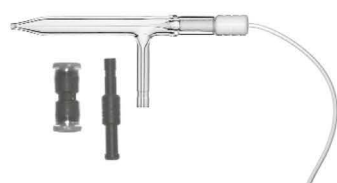
ICP & ICP-MS CONSUMABLES



500-70 - 30psi, 1mL/min



500-72QD - 30psi, 3mL/min, Quick Disconnect



500-80QDAC - 30psi, 3mL/min, Quick Disconnect, Argon Connect



500-QD - Quick Disconnect for Nebulizer, Teflon with PFA Capillary Tubing



500-AC - Argon Connect for Concentric Nebulizers Includes Insert and Body

Crossflow Nebulizers

PGB Part

500-92	Crossflow Nebulizer
500-92S	Crossflow Nebulizer, 34mm
500-93	Crossflow Nebulizer, High-Solids
500-94	High Flow Crossflow Nebulizer



500-92 - Crossflow Nebulizer

V- Groove Nebulizers

PGB Part

Noordermeer V-Groove Nebulizers

510-10	Noordermeer V-Groove MDSN Nebulizer
510-10QD	Noordermeer V-Groove MDSN Nebulizer, Quick Disconnect
510-10Q	Noordermeer V-Groove MDSN Nebulizer, Quartz
510-10S	Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar

Modified Lichte Nebulizers

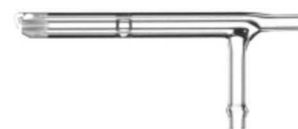
510-20	Modified Lichte MDSN Nebulizer
510-20QD	Modified Lichte MDSN Nebulizer, Quick Disconnect
510-20Q	Modified Lichte MDSN Nebulizer, Quartz
510-20S	Modified Lichte MDSN Nebulizer, 1 lpm Ar

Babington V-Groove

510-50	Babington MDSN, HF Resistant
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510-10 - Noordermeer V-Groove MDSN Nebulizer



510-20S - Modified Lichte MDSN Nebulizer, 1 lpm Ar

Nebulizer Accessories

PGB Part

520-30	PTFE End Cap for use with 35mm Open End Spray Chambers
520-30S	PTFE End Cap for use with 34mm Open End Spray Chambers
520-40	PTFE End Cap, 35mm for use with Babington
520-40S	PTFE End Cap, 34mm for use with Babington
510-51	O-ring for Babington MDSN Nebulizer
520-31	O-ring for Concentric Nebulizer Inlet
520-32	O-ring, 35mm for 520-30 and 520-40
520-32S	O-ring, 34mm for 520-30S and 520-40S
520-36	O-ring, 35mm for 500-92, 2 per pack
520-36S	O-ring, 34mm for 500-92S, 2 per pack
520-35	Swagelok Fitting
520-37	Sample Tube, PTFE for Crossflow Nebulizer
520-38	Argon Inlet Fittings for Crossflow
510-52	Tubing and Collet for Babington MDSN Nebulizer
510-53	Argon Tube for Babington MDSN Nebulizer



510-50 - Babington MDSN, HF Resistant



520-30 - PTFE End Cap for use with 35mm Open End Spray Chambers

Burgener ICP - ICP-MS Nebulizers

ICP & ICP-MS CONSUMABLES



TMM 3500 - Teflon
Mira Mist

Mira Mist and Ari Mist Nebulizers for ICP & ICP-MS

TMM 3500 Teflon Mira Mist, Enhanced Parallel Path Teflon Nebulizer. Can operate on 0.2 ml/min to 2.5 ml/min. Excellent mist, and can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Operates on standard pressures of 35 - 45 psi. The Teflon Mira Mist can be used for any liquid. Salting is very rare, but can occur over long periods of time, especially with high Sodium levels in the solution. Such salting can be cleared easily with a dip in 5 - 10% HF, (Caution: Be careful when handling HF. It soaks into the skin before you feel it burning, and in low concentrations it looks like water.)

PMM 4000 PEEK Mira Mist, Same as the Teflon Mira Mist, but easier to make than the Teflon Mira Mist, so you save a little. Works for most samples, but not concentrated acids, and not some organic solvents. Still has Teflon capillaries for the samples and for the gas. Standard pressure (45 psi), low sample flow, enhanced parallel path design. Can operate on 0.2 ml/min to 2.5 ml/min. Excellent mist, and can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers.



PMM 4000 - PEEK
Mira Mist

T2100 Enhanced Parallel Path Teflon Nebulizer. Huge Sample Capillary: 750 microns / 1/32 inch. Designed as replacement for T2002 and BTN. Essentially unpluggable with un-dissolved particles. Can operate on 0.5 ml/min to 3.0 ml/min. Excellent mist, but not quite as good as Mira Mist, but better than most concentrics. Can handle very high level of particles in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Operates on standard pressures of 30 - 45 psi. The T 2100 can be used for any liquid. Salting is very rare, but can occur over long periods of time, especially with high Sodium levels in the solution. Such salting can be cleared easily with a dip in 5 - 10% HF



T2100

PMM CE Mira Mist CE, Designed for ICP-MS - CE interface. Medium pressure (80-90 psi), Very low sample flow (10 µl/min or less), enhanced parallel path design. Can operate on 0.01 ml/min to 2.5 ml/min. With Alcohol solutions can operate down to .001 ml/min. Excellent mist, can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Designed for CE / ICP / MS analysis. Allows CE capillary to extend to tip of nebulizer for zero suction, zero back pressure CE interfacing with ICP-MS. Works best with mini chamber.



PMM CE - Mira
Mist CE

AM 5000 Ari Mist, Very low sample flow, enhanced parallel path design. Standard pressure (40 - 50 psi). Black PEEK body, Teflon sample and gas capillaries. Can operate on 0.050 ml/min to 1.0 ml/min. Good for ICP & ICP-MS. Only for samples that are particulate free. Fits regular chambers as a direct replacement for glass concentric nebulizers.



AM 5000- Ari Mist

AM HP 5500 Ari Mist HP, Ultra low sample flow, enhanced parallel path design. Higher Pressure (80 psi). Black PEEK body, Teflon sample and gas capillaries. Can operate on 0.005 ml/min to 1.0 ml/min. Good for LC/ICP-MS. Only for samples that are particulate free. Fits regular chambers as a direct replacement for glass concentric nebulizers. When run at 10 to 15 µl/min it provides similar results to direct injection nebulizers without the difficulties of direct injection.



AM HP 5500- Ari
Mist HP

Thermo iCap 6000 and X Series

		Thermo Part #
iCAP 6000		
ASAP6000	Cyclonic Spray Chamber Aqueous	842312051411
ASAP6000	Cyclonic Spray Chamber, Baffled	842312051311
ASAP6000	Baffled Jacketed Cyclonic Spray Chamber	842312051441
ASAP6000	Periscope Sleeve for Duo Torch	842312051591
ASAP6000	Torch, Duo, iCap	842312051241
ASAP6000	Plasma Torch, Radial	842312051141
ASAP6000	Adapter, Radial, 18/9 Ball	842312051151
ASAP6000	Adapter, Axial, 18/9 Ball	842312051251
ASAP6000	Window, Silica, 25 x 41.5mm	430116850301
ASAP6000	Inj. Tube, 1.0mm, Quartz	842312051341
ASAP6000	Inj. Tube, 1.5mm, Qtz	842312051351
ASAP6000	Inj. Tube, 2.0mm, Qtz	842312051371
ASAP6000	iCAP Duo EMT Torch	842312051841
ASAP6000	iCAP Radial EMT Torch	842312051741
ASAP6000	Centre Tube 1.0, Quartz	842312051941
ASAP6000	Centre Tube 1.5, Quartz	842312051951
ASAP6000	Centre Tube 2.0, Quartz	842312051971
ASAP6000	Sample Intro Tubing and Connectors Kit	842312051402
ASAP6000	Aerosalt High-Solids Nebulizer, 0.7 lpm Ar, 30 psi, 2 mL/min	842312051331
ASAP6000	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 2mL/min	842312051431
ASAP6000	Noordemeer V-Groove MDSN Nebulizer	842312051321
ASAP6000	2-Stop White/White PVC Flared End Pump Tubing, 12/Pack	842312051521
ASAP6000	2-Stop Orange/White PVC Flared End Pump Tubing, 12/Pack	842312051511
X - Series		
ASAP6000	Torch 1.5mm	3600969
ASAP6000	Demountable Torch	3600970
ASAP6000	Demountable Torch w/ Screen Location	3601146
ASAP6000	Qtz Torch, 1.5 inj.	3601145
ASAP6000	Qtz Torch, 2.0 inj.	3601147
ASAP6000	Demountable Torch	3600416
ASAP6000	Plasma Torch, 2.0mm	3600971
ASAP6000	Torch Bonnet	3601149
ASAP6000	Pyrex Conical Spray Chamber w/ QD Drain	4600508
ASAP6000	Torch w/ Additional Inlet	3601203
ASAP6000	Qtz 12/5 Adaptor	3601204
ASAP6000	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	4600294

ICP & ICP-MS
CONSUMABLES



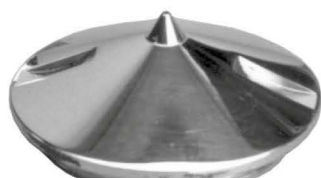
SC2011-Ni - Nickel Sampler - 6000/6100, WE02-1140



SC2012-Ni - Nickel Skimmer - 6000/6100, WE02-1137



VG1001-Ni - Nickel Sampler, 3004661



VG1004-Ni - Nickel Micro-Skimmer (Enhanced Interface), 3200860



T1002A-Al - Aluminum Skimmer



T1001-Ni - 100% Nickel Sampler, 1044530

Spectron manufactures sampler and skimmer cones for all the major brands of ICP mass spectrometers including Agilent, GBC, MicroMass/GV, Nu Instruments, PerkinElmer and Thermo Fisher. As an OEM component manufacturer supporting these leading instrument manufacturers, Spectron have extensive experience in ICP-MS and ICP-OES techniques, bringing a unique level of expertise to the manufacturing process. They offer customers the highest quality consumables and accessories available.

Using an exclusive proprietary process, Spectron Inc. has created a platinum cone with an expanded solid platinum shield. The analytical zone, the area most in need of maintenance, displays the most significant differences.

These differences, together with sample type (ground water, soil digests, sea water, etc), contribute to the rate at which oxides and salts accumulate in and around the cone orifice.

All sample and skimmer cones, regardless of ICP-MS manufacturer or design, serve the same function. They are the differential apertures separating the sample at atmosphere pressure from the mass filter and detector(s) at high vacuum. The analytical zone, the area most in need of maintenance displays the most significant differences. These differences, together with sample type (ground water, soil digests, sea water, etc) contribute to the rate at which oxides and salts accumulate in and around the cone orifice.

When should I clean or exchange my cone:

Ultimately, the quality of your data is the best diagnostic tool for determining when to clean or change your cones. However, if you notice significant build-up on the cone(s), which appear to be occluding the cone orifice, cone removal and cleaning is warranted.

Whenever possible we recommend cleaning your cones under mild, non-mechanical conditions. This is especially true for platinum cones, where accidental damage is very costly.

Careful handling and proper cleaning will typically enable you to get about 500 hours (several months) of operational use from each set of nickel cones and about 1500 hours (18 months) from platinum cones. Some common symptoms of cone degradation are elevated oxide levels (e.g. CeO), doubly-charged species, and in severe cases poor vacuum levels.

Cones manufactured by Spectron

e•SPEC™ Products

	PerkinElmer	Spectron (std)	e•SPEC™ NEW!
Pt Sampler	WE027802	SC2013-Pt	SC2013-Pte
Pt Skimmer	WE027803	SC2014-Pt	SC2014-Pte

	Agilent	Spectron (std)	e•SPEC™ NEW!
Pt Sampler 18mm Pt tip	G1820-65360	HP1006A-Pt	HP1006A-Pte

Pt Sampler 10mm Pt tip	G1820-65239	HP1006-Pt	HP1006-Pte*
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*Standard 10mm Pt tip in a nickel core for greater longevity over the Pt in Cu design.

	Thermo Finnigan	Spectron (std)	e•SPEC™ NEW!
Sampler	1044530	T1001-Ni	T1001TE-Nie
Skimmer	1067600	T1002A-Ni	T1002TE-Nie
Guard Electrode	1226640		T5004

High TDS cones for the Thermo Finnigan Element 2 and Neptune series ICP-MS

	Thermo Elemental	Spectron (std)*	e•SPEC™
	Xi Cones	Xi Cones	NEW!
Sampler	3600812	VG1021-Ni/Cu	VG1021TE-Ni/Cue
Skimmer	3600811		VG1022-Ni

* Spectron Xi cones are available in nickel/copper, nickel and aluminum configurations



e•SPEC™ HP1006-Pte sampler Displayed with Pt and Ni skimmers, Pt shields for 4500 and 7500



e•SPEC™ Thermally Enhanced (TE) cones for Element 2 & Neptune in nickel (standard) and aluminum (optional), with Pt Guard Electrode



e•SPEC™ platinum cones for the Elan 6000 and 9000 series ICP-MS



e•SPEC™ Thermally Enhanced (TE) cones for X-Series ICP-MS systems

ICP-MS Cones manufactured by Spectron

ICP & ICP-MS CONSUMABLES



HP1002-Ni - Nickel Skimmer
(4500), G1820-65265



HP1001-Ni - Nickel Sampler -
(25mm Nickel Insert),
G1820-65238



T1002A-Al - Aluminum Skimmer



T1001-Ni - 100% Nickel Sampler,
1044530

PGB Part

OEM Part

Agilent Technologies

HP1001-Ni	Nickel Sampler - (25mm Nickel Insert)	G1820-65238
HP1001T-Ni	Nickel Sampler - T Mode	G1820-65480
HP1002CE-Ni	Nickel Skimmer - 7500ce	G3270-65024
HP1002C-Ni	Nickel Skimmer - 7500c	G1833-65497
HP1002-Ni	Nickel Skimmer (4500)	G1820-65265
HP1002-Ni	Nickel Skimmer (7500)	G1820-65050
HP1002T-Ni	Nickel Skimmer - T Mode	G1820-65481
HP1006A-Pt	Platinum Sampler - (18mm Platinum Insert)	G1820-65360
HP1006-Pt	Platinum Sampler - (10mm Platinum Insert)	G1820-65239
HP1008C-Pt	Platinum Skimmer - 7500c	G1833-65092
HP1008-CS-Pt	Platinum Skimmer - 7500cs	G1883-65132
HP1008-Pt	Platinum Skimmer - (7.2mm Platinum Insert)	G1820-65237
HP5003	Platinum Shield Plate	G1820-65357
HP5004	Platinum Shield Plate (7500)	G1820-65357

LECO

LE1001-Ni	Nickel Sampler	703-633
LE1002-Ni	Nickel Skimmer	703-634
LE1002-Ni/Cu	Nickel Skimmer	
LE1002-SS	Modified; Electro polished	710-804
LE1004-SS	Skimmer cone; modified 56 mech. Polish	A117-0563
LE1006-Pt	Platinum Sampler	
LE1008-Pt	Platinum Skimmer	

Finnigan

T1001-Al	Aluminum Sampler	
T1001-Ni	100% Nickel Sampler	1044530
T1001-Ni/Cu	Nickel Sampler, Copper Core	1044520
T1002A-Al	Aluminum Skimmer	
T1002A-Ni	Nickel Skimmer	1067600
T-1002X-Al	Aluminum X-Skimmer	
T1002X-Ni	Nickel X-Skimmer	1142160
T1003-Ni	Nickel Accelerator	
T1006A-Pt/Cu	Platinum Sampler, Copper Core	1067500
T1006-Pt/Cu	Platinum Sampler, Copper Core	
T1006-Pt/Ni	Platinum Sampler, 100% Nickel Base	
T1007A-Pt	Platinum Skimmer, Nickel Base	1047510
T1007-Pt	Platinum Skimmer, Nickel Base	
T1007-Pt/Cu	Platinum Skimmer, Copper Base	
TJA1001-Ni	Nickel Sampler	133076
TJA1002-Ni	Nickel Skimmer	133075
TJA1006-Pt	Platinum Sampler	135558
TJA1008-Pt	Platinum Skimmer	135827

MicroMass

M1001-Ni/Cu	Nickel Sampler, Copper Base	M695080BD1
M1002-Ni	Nickel Skimmer	M695011BD1
M1006-Pt/Cu	Platinum Sampler, Copper Base	
M1008-Pt	Platinum Skimmer	
MM1001-Al	Aluminum Sampler	M749629CD2
MM1001-Al	Aluminum Skimmer	M695440BD2
MM1001-Al	Aluminum Sampler	M749629CD2
MM1001-Ni	Nickel Sampler	M749629CD3
MM1001-Ni	Nickel Sampler	M749629CD3
MM1002-Ni	Nickel Skimmer	M695440BD1
MM1002X-Al	Aluminum Skimmer Enhanced Low Mass	
MM1002X-Ni	Nickel Skimmer Enhanced Low Mass	
MM1003-Ni	Nickel Collimator Cone	M749666B
MM3000	Copper Cartridge	

ICP-MS Cones manufactured by Spectron

PGB Part #		OEM Part #
MicroMass continued		
MP1001-Al	Aluminum Sampler	M695439BD2
MP1001-Ni/Cu	Nickel Sampler, Copper Base	M695439BD1
MP1002-Al	Aluminum Skimmer	M695440BD2
MP1002-Ni	Nickel Skimmer	M695440BD1
MP1006-Pt/Cu	Platinum Sampler, Copper Base	
MP1008-Pt	Platinum Skimmer	
NU		
NU1001-Ni	Nickel Sampler	319-285
NU1004-Ni	Nickel Skimmer	319-284 WA6
Sciex / Perkin Elmer		
SC2001-Ni	Nickel Sampler - 250/500	N810-2101
SC2002-Ni	Nickel Skimmer - 250/500	N810-2111
SC2003-Ni	Nickel Sampler - 5000	WE01-3087
SC2004-Ni	Nickel Skimmer - 5000	N812-2000
SC2005-Pt	Platinum Sampler - 250/500	N810 - 2131
SC2006-Pt	Platinum Skimmer - 250/500	N810-2141
SC2007-Pt	Platinum Sampler - 5000	N812-2025
SC2010-Pt	Platinum Skimmer - 5000	N812-2035
SC2011-Ni	Nickel Sampler - 6000/6100	WE02-1140
SC2012-Ni	Nickel Skimmer - 6000/6100	WE02-1137
SC2013-Pt	Platinum Sampler - 6000/6100	WE02-7802
SC2014-Pt	Platinum Skimmer - 6000/6100	WE02-7803
SC6000	Insertion Tool	WE01-7142
Spectro		
SP2003-Ni	Nickel Sampler	46501063U
SP2004-Ni	Nickel Skimmer	46501064U
SP2007Pt	Platinum Sampler	46901016
SP2010-Pt	Platinum Skimmer	46901017
Thermo		
VG1001-Ni	Nickel Sampler	3004661
VG1002-Ni	Nickel Mini-Skimmer	3004866
VG1004-Ni	Nickel Micro-Skimmer (Enhanced Interface)	3200860
VG1006A-Pt	Platinum Sampler - (18mm Platinum Insert)	
VG1006-Pt	Platinum Sampler - (15.2mm Platinum Insert)	3200262
VG1007-Pt	Platinum Mini-Skimmer	
VG1008-Pt	Platinum Micro-Skimmer (Enhanced Interface)	3201101
VG1009-Pt	Platinum Plasmatrace 1 Skimmer	3202005
VG1010-Ni	Nickel Plasmatrace 1 Skimmer	3200456
VG1011-Pt	Platinum Plasmatrace 2 Micro-Skimmer	3201941
VG1012-Ni	Nickel Micro Skimmer (PQE)	3201585
VG1014-Ni	Nickel Plasmatrace 2 Micro-Skimmer	3201457
VG1021-Ni/Cu	Nickel Sampler, Copper Core	3600812
VG1022-Ni	Nickel Skimmer	3600811
VG1023-Cu	Copper Skimmer Adapter	3600813
VG1026-Pt	Platinum Sampler	N/A
VG1028-Pt	Platinum Skimmer	N/A
Varian		
UM1001C-Ni	Nickel Sampler for Cool Plasma	99-100920-00
UM1001F-Ni	Nickel Sampler F-Series Type	99-100940-00
UM1001-Ni	Standard Nickel Sampler, Copper Base	99-100698-00
UM1002F-Ni	Nickel Skimmer F-Series Type	99-100941-00
UM1002-Ni	Standard Nickel Skimmer	99-100699-00
UM1006-Pt	Platinum Sampler	99-100700-00
UM1008-Pt	Platinum Skimmer	99-100701-00



SC2011-Ni - Nickel Sampler - 6000/6100, WE02-1140



SC2012-Ni - Nickel Skimmer - 6000/6100, WE02-1137

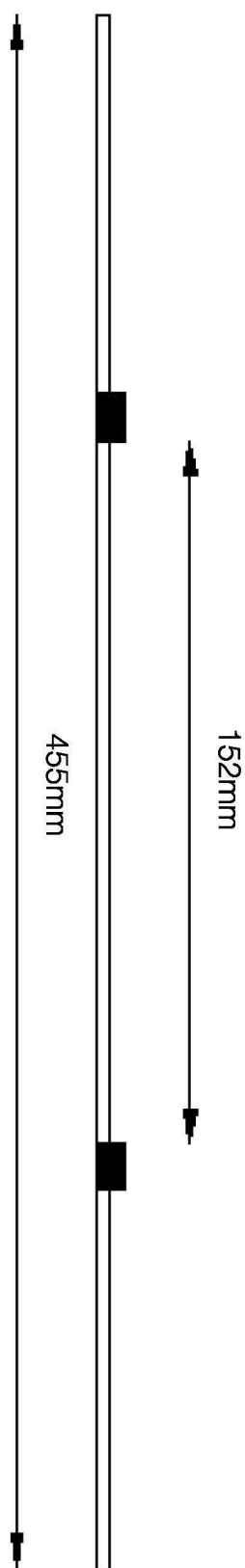


VG1001-Ni - Nickel Sampler, 3004661



VG1004-Ni - Nickel Micro-Skimmer (Enhanced Interface), 3200860

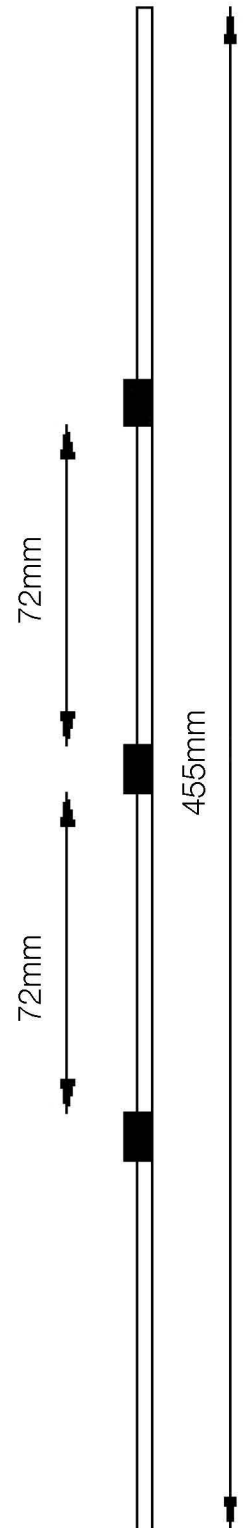
2-Stop Pump Tubing



Description	I.D. (mm)	PVC 12/pk	Solva 12/pk	Silicone 6/pk	Santoprene 12/pk	Viton 12/pk
Orange/Black	0.13	PT-2010P	PT-2010SV	PT-2010SI	N/A	N/A
Orange/Red	0.19	PT-2020P	PT-2020SV	N/A	N/A	N/A
Orange/Blue	0.25	PT-2030P	PT-2030SV	PT-2030SI	PT-2030SA	N/A
Red/Blue	0.31	PT-2050P	N/A	N/A	N/A	N/A
Orange/Green	0.38	PT-2080P	PT-2080SV	N/A	PT-2080SA	N/A
Green/Yellow	0.44	N/A	N/A	N/A	N/A	N/A
Orange/Yellow	0.51	PT-2100P	PT-2100SV	N/A	PT-2100SA	PT-2100V
White/Yellow	0.57	N/A	N/A	N/A	N/A	N/A
Orange/White	0.64	PT-2120P	PT-2120SV	PT-2120SI	PT-2120SA	PT-2120V
Black/Black	0.76	PT-2130P	PT-2130SV	PT-2130SI	PT-2130SA	PT-2130V
Orange/Orange	0.89	PT-2140P	PT-2140SV	PT-2140SI	PT-2140SA	PT-2140V
White/Black	0.95	N/A	N/A	N/A	N/A	N/A
White/White	1.02	PT-2160P	PT-2160SV	PT-2160SI	PT-2160SA	PT-2160V
White/Red	1.09	N/A	N/A	N/A	N/A	N/A
Red/Red	1.14	PT-2180P	PT-2180SV	PT-2180SI	PT-2180SA	PT-2180V
Red/Grey	1.22	N/A	N/A	N/A	N/A	N/A
Grey/Grey	1.30	PT-2200P	PT-2200SV	PT-2200SI	PT-2200SA	PT-2200V
Yellow/Yellow	1.42	PT-2210P	PT-2210SV	PT-2210SI	PT-2210SA	PT-2210V
Yellow/Blue	1.52	PT-2220P	PT-2220SV	PT-2220SI	PT-2220SA	PT-2220V
Blue/Blue	1.65	PT-2230P	PT-2230SV	PT-2230SI	PT-2230SA	PT-2230V
Blue/Green	1.75	PT-2240P	N/A	N/A	N/A	N/A
Green/Green	1.85	PT-2250P	PT-2250SV	PT-2250SI	PT-2250SA	PT-2250V
Purple/Purple	2.06	PT-2260P	PT-2260SV	PT-2260SI	PT-2260SA	PT-2260V
Purple/Black	2.29	PT-2270P	PT-2270SV	PT-2270SI	PT-2270SA	PT-2270V
Purple/Orange	2.54	PT-2280P	PT-2280SV	PT-2280SI	PT-2280SA	PT-2280V
Purple/White	2.79	PT-2290P	PT-2290SV	PT-2290SI	PT-2290SA	PT-2290V
Black/White	3.18	PT-2300P	N/A	N/A	N/A	N/A

3-Stop Pump Tubing

Description	I.D. (mm)	PVC 12/pk	Solva 12/pk	Silicone 6/pk	Santoprene 12/pk	Viton 12/pk
Orange/Black	0.13	N/A	N/A	N/A	N/A	N/A
Orange/Red	0.19	PT-3020P	N/A	N/A	N/A	N/A
Orange/Blue	0.25	PT-3030P	PT-3030SV	N/A	PT-3030SA	N/A
Red/Blue	0.31	N/A	N/A	N/A	N/A	N/A
Orange/Green	0.38	PT-3080P	PT-3080SV	N/A	PT-3080SA	N/A
Green/Yellow	0.44	PT-3090P	N/A	N/A	N/A	N/A
Orange/Yellow	0.51	PT-3100P	PT-3100SV	N/A	PT-3100SA	PT-3100V
White/Yellow	0.57	PT-3110P	N/A	N/A	N/A	N/A
Orange/White	0.64	PT-3120P	PT-3120SV	PT-3120SI	PT-3120SA	PT-3120V
Black/Black	0.76	PT-3130P	PT-3130SV	PT-3130SI	PT-3130SA	PT-3130V
Orange/Orange	0.89	PT-3140P	PT-3140SV	PT-3140SI	PT-3140SA	PT-3140V
White/Black	0.95	PT-3150P	N/A	N/A	N/A	N/A
White/White	1.02	PT-3160P	PT-3160SV	PT-3160SI	PT-3160SA	PT-3160V
White/Red	1.09	PT-3170P	N/A	N/A	N/A	N/A
Red/Red	1.14	PT-3180P	PT-3180SV	PT-3180SI	PT-3180SA	PT-3180V
Red/Grey	1.22	PT-3190P	N/A	N/A	N/A	N/A
Grey/Grey	1.30	PT-3200P	PT-3200SV	PT-3200SI	PT-3200SA	PT-3200V
Yellow/Yellow	1.42	PT-3210P	PT-3210SV	PT-3210SI	PT-3210SA	PT-3210V
Yellow/Blue	1.52	PT-3220P	PT-3220SV	PT-3220SI	PT-3220SA	PT-3220V
Blue/Blue	1.65	PT-3230P	PT-3230SV	PT-3230SI	PT-3230SA	PT-3230V
Blue/Green	1.75	PT-3240P	N/A	N/A	N/A	N/A
Green/Green	1.85	PT-3250P	PT-3250SV	PT-3250SI	PT-3250SA	PT-3250V
Purple/Purple	2.06	PT-3260P	PT-3260SV	PT-3260SI	PT-3260SA	PT-3260V
Purple/Black	2.29	PT-3270P	PT-3270SV	PT-3270SI	PT-3270SA	PT-3270V
Purple/Orange	2.54	PT-3280P	PT-3280SV	PT-3280SI	PT-3280SA	PT-3280V
Purple/White	2.79	PT-3290P	PT-3290SV	PT-3290SI	PT-3290SA	PT-3290V
Black/White	3.18	PT-3300P	N/A	N/A	N/A	N/A



Flared End Pump Tubing



Flared end pump tubing from Precision Glassblowing of Colorado is a cost effective way to simplify your capillary to pump tubing connections, especially when dealing with small internal diameters. Available in PVC and Solva.

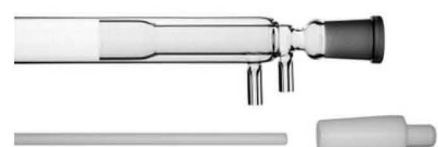
Description	I.D. (mm)	2-Stop PVC 12/pk	2-Stop Solva 12/pk	3-Stop PVC 12/pk	3-Stop Solva 12/pk
Orange/Black	0.13	PT-2010PF	PT-2010SVF	PT-3010PF	N/A
Orange/Red	0.19	PT-2020PF	PT-2020SVF	N/A	N/A
Orange/Blue	0.25	PT-2030PF	PT-2030SVF	PT-3030PF	PT-3030SVF
Red/Blue	0.31	PT-2050PF	N/A	N/A	N/A
Orange/Green	0.38	PT-2080PF	PT-2080SVF	N/A	PT-3080SVF
Green/Yellow	0.44	N/A	N/A	N/A	N/A
Orange/Yellow	0.51	PT-2100PF	PT-2100SVF	N/A	PT-3100SVF
White/Yellow	0.57	N/A	N/A	N/A	N/A
Orange/White	0.64	PT-2120PF	PT-2120SVF	PT-3120PF	PT-3120SVF
Black/Black	0.76	PT-2130PF	PT-2130SVF	PT-3130PF	PT-3130SVF
Orange/Orange	0.89	PT-2140PF	PT-2140SVF	PT-3140PF	PT-3140SVF
White/Black	0.95	N/A	N/A	N/A	N/A
White/White	1.02	PT-2160PF	PT-2160SVF	PT-3160PF	PT-3160SVF
White/Red	1.09	N/A	N/A	N/A	N/A
Red/Red	1.14	PT-2180PF	PT-2180SVF	PT-3180PF	PT-3180SVF
Red/Grey	1.22	N/A	N/A	N/A	N/A
Grey/Grey	1.30	PT-2200PF	PT-2200SVF	PT-3200PF	PT-3200SVF
Yellow/Yellow	1.42	PT-2210PF	PT-2210SVF	PT-3210PF	PT-3210SVF
Yellow/Blue	1.52	PT-2220PF	PT-2220SVF	PT-3220PF	PT-3220SVF
Blue/Blue	1.65	PT-2230PF	PT-2230SVF	PT-3230PF	PT-3230SVF
Blue/Green	1.75	PT-2240PF	N/A	PT-3240PF	N/A
Green/Green	1.85	PT-2250PF	PT-2250SVF	PT-3250PF	PT-3250SVF
Purple/Purple	2.06	PT-2260PF	PT-2260SVF	PT-3260PF	PT-3260SVF
Purple/Black	2.29	PT-2270PF	PT-2270SVF	PT-3270PF	PT-3270SVF
Purple/Orange	2.54	PT-2280PF	PT-2280SVF	PT-3280PF	PT-3280SVF
Purple/White	2.79	PT-2290PF	PT-2290SVF	3PT- 290PF	PT-3290SVF
Black/White	3.18	PT-2300P	N/A	N/A	N/A

OEM Cross Reference

OEM P/N	Precision P/N	OEM P/N	Precision P/N	OEM P/N	Precision P/N
Agilent (Hewlett Packard) 4500 & 7500		BAIRD (cont)		PerkinElmer® (cont)	
G1820-61138	500-77Q	75128	200-09	N058-0449	320-31
G1820-65015	900-30	75129	200-11	N058-0528	310-03
G1820-65026	900-24	75132	220-50	N058-0539	310-36
G1820-65028	900-05	75144	220-51	N058-1497	320-66
G1820-65030	500-77	75145	200-10	N058-2184	320-53
G1820-65033	500-93	75542	200-06	N058-2185	320-52
G1820-65035	900-08	77200	200-32	N058-2186	320-51
G1820-65215	PT-2160P	77611	200-30	N058-2235	310-24
G1820-65216	PT-2220SA	666011	200-08	N058-2248	310-35
G1820-65217	PT-2160SI	676458	210-10	N068-0375	PT-2180P
G1820-65220	PT-2020P	676459	210-11	N068-0376	PT-2180SV
G1820-65528	900-04	Finnigan		N068-1234	320-60
G1820-65336	900-11	1091250	850-12	N068-1574	500-80
G1820-65337	900-13	1122800	852-10	N068-1631	320-33
G1820-65339	900-14	1127121	850-19	N068-1690	310-03W
G1820-80237	900-38	JY		N069-0568	310-04
G1833-65421	900-25	20 925 160	160-64	N069-0672	320-73
G1833-65422	900-09	21 356 040	160-63	N069-0769	310-38
G1833-65423	900-06	21 356 110	160-40	N069-0780	310-39
G1833-65424	900-07	21 356 130	160-61	N069-1595	PT-2180SI
G1833-65425	900-03	31 021 589	160-58	N069-1662	310-14
G1833-65426	900-39	31 021 730	160-55	N069-1664	310-15
G1833-65569	PT-3160P	31 023 722	160-50	N069-1678	320-68
G1833-65570	PT-3220SA	31 023 723	160-52	N069-1689	320-69
G1833-65571	PT-3020P	31 023 724	160-53	N069-5295	310-05
G1833-80301	500-94	31 026 996	150-14	N069-5362	320-50
G3270-67002	900-01	31 026 997	160-65	N069-5379	310-11
G3285-80050	900-02	31 030 809	150-15B	N069-5400	310-37
ARL		31 031 099	160-70	N069-5441	320-40
144857	110-48	31 031 279	150-15	N069-5442	320-41
144860	110-42	46 791 010	PT-2130SV	N069-5448	320-43
1200079	120-42	46 791 012	PT-2180SV	N069-5449	320-44
137000-0000	100-08	46 791 016	PT-2250P	N069-5456	310-13
139008-0000	100-16	46 791 018	PT-2200P	N069-5460	320-46
139009-0003	100-05	46 791 022	PT-2130P	N069-5461	320-48
170631-0000	100-28	46 791 024	PT-2160P	N077-0322	320-80
170692-0000	110-32	47 929 001	500-70P	N077-0338	310-16
170693-0000	110-54	47 929 002	500-71	N077-0343	310-19
173127-0000	100-09	47 929 003	500-72	N077-0344	310-18
173131-0000	120-40	47 929 004	500-73P	N077-0437	310-43
173142-0000	100-12	47 929 006	500-70	N077-0944	320-81
173142-0002	110-33	47 929 008	500-92	N077-1116	320-67
173142-0003	110-34	49 010 100	150-05	N077-1500	310-17
173142-0004	110-36	49 010 101	150-25	N077-1501	300-32
173251-0000	100-27	LK1160497080	PT-2130SI	N077-1531	320-54
173252-0000	110-35	PerkinElmer®		N077-5014	320-74
173259-0000	510-50	0041-2047	300-12	N077-5177	310-42
173463-0000	110-30	0047-2020	500-77	N077-5223	320-76
173473-0000	110-31	0047-2022	500-70P	N077-5224	320-75
914319-000P/M	500-77	0047-2033	300-25	N077-5225	320-78
915375-000P/M	500-80	0047-2048	300-05	N077-5226	320-77
915817-0000	510-10	0047-3052	300-21	N077-5227	310-40
S111403	110-38	0047-3052	300-21	N077-5228	310-41
S213787	110-45	0047-3187	320-62	N077-5289	310-25
S702171	110-41	0047-3292	320-34	N077-5297	310-20
S702174	110-39	0047-3550	PT-2130SV	N077-6052	300-29
S702232	110-40	0047-3552	PT-2130SI	N077-6053	300-30
BAIRD		0047-3560	300-23	N077-6090	300-31
25491	200-25	0047-3561	320-64	N810-2001	400-05
25492	200-12	0990-8587	PT-2130P	N810-2006	400-07
25515	200-05	0999-2731	320-65	N810-2011	500-72
62607	200-36	B006-6549	320-67	N810-2012	500-70M
69972	200-07	B050-7486	1000-67	N812-0100	400-36
69987	220-55	B050-7487	1000-68	N812-0116	400-35
		N058-0233	310-07	N812-0150	300-19MS
		N058-0376	310-09	N812-2006	400-10

OEM Cross Reference

OEM P/N	Precision P/N	OEM P/N	Precision P/N	OEM P/N	Precision P/N
PerkinElmer® (cont)		Thermo Scientific® (cont)		Thermo Scientific® (cont)	
N812-2012	PT-2300P	3200841	450-16	140542-00	275-18
N812-2188	300-18DV	3201070	450-46	190400-54	250-05
N812-2252	PT-2290SA	3201104	450-40	190400-65	250-12
N812-5029	320-35	3201192	450-05	190400-75	250-25
N812-6039	320-51	3201732	450-06		
N812-6040	320-52	3201759	450-44	Varian®	
N812-6041	320-53	3202287	450-43	20-100695-00	500-80
W100-8384	400-10HE	3203025	450-27	20-100696-90	800-05
WE01-3829	400-14	3203095	450-12	20-100696-90B	800-05B
WE02-3948	400-30	3203739	450-17	20-100707-00	800-25
WE02-3951	400-37	3203789	450-29	20-100729-00	800-10
WE02-4371	500-77Q	3204313	450-22	20-100730-00	800-41
WE02-5221	400-20	3204703	450-28	20-100764-00	800-08
WE02-7005	400-32	3600169	450-30	20-100765-00	500-70
WE02-7030	400-31	3600170	450-13	20-100775-00	800-42
Spectro		3600374	450-22Q	20-100783-00	800-06
47101001	PT-2120P	003952-00	250-30	20-100793-00	800-11
47101003	PT-2140P	085207-00	275-25	20-100812-00	800-14
47101004	PT-2150P	085207-01	275-26	20-100816-00	500-85
47101005	PT-2240P	125124-01	275-08	20-100817-00	800-21
47101006	PT-2220P	125407-00	250-41	20-100834-00	800-15
47101014	PT-2230P	125407-01	250-40	20-100904-00	800-12
47201037	PT-2080P	125847-00	254-45	20-100964-00	500-65QDAC
47501010	PT-2200P	126432-01	275-07	20-101007-00	800-34
48105002	750-18	126432-02	275-06	20-101008-00	800-31
48105003	750-12	126432-03	275-10	20-101009-00	800-32
48105006	750-14	126432-04	275-09	20-101010-00	800-33
48105008	750-21	126440-01	275-07W/O	20-101021-00	500-70MQDAC
48105009	750-23	126440-01	275-08W/O	24-100675-00	800-45
48105010	750-22	126440-02	275-06W/O	37-100272-00	PT-2130P
48105051	750-13	126440-03	275-10W/O	37-100273-00	PT-2270P
48105052	750-40	126440-05	275-10DVW/O	37-100344-00	PT-2160P
48105058	750-46	126440-06	275-09W/O	37-100345-00	PT-2200P
48105061	510-27	126989-00	500-92	37-100346-00	PT-2230P
48105062	750-17	127179-01	275-07HF	37-100348-00	PT-2130SV
48205001	750-07	127947-00	250-16	37-100350-00	PT-2160SV
48205036	510-20S	130089-00	250-19	37-100352-00	PT-2200SV
48206002	750-06	130177-00	PT-3140P	37-100435-00	PT-2100V
48206007	750-42	130177-01	PT-3180P	37-100436-00	PT-2130V
75060502	500-92S	130177-02	PT-3140SI	37-100437-00	PT-2160V
75060522	520-30S	130177-03	PT-3180SI	37-100438-00	PT-2200V
75060596	750-05F	130177-04	PT-3140V	37-100439-00	PT-2230V
75160526	750-40F	130177-05	PT-3180V	37-100440-00	PT-2100SA
75160537	750-48F	130177-06	PT-3080P	37-100441-00	PT-2130SA
75160549	750-47F	131731-00	PT-3230SV	37-100442-00	PT-2160SA
75160592	750-41F	131731-01	PT-3260SV	37-100443-00	PT-2200SA
75260533	750-49F	131731-02	PT-3140SV	37-100444-00	PT-2230SA
76060510	500-70	133202-50	520-36	37-100469-00	PT-2120P
76060529	510-20SF	134365-00	500-80	79-100467-00	800-21B
48105052A	750-41	134620-00	275-15	99-100568-00	800-50
Thermo Scientific®		136105-00	275-19	99-100573-00	800-48
78530	PT-3120SV	136120-00	275-16	99-100574-00	800-55
78532	PT-3180SV	136436-01	260-83	99-100704-00	800-17
80963	510-10	136436-02	260-81	99-100717-00	800-51
1040894	500-70	136502-01	250-42	99-100847-00	800-49
1041167	450-51	136502-02	250-43		
1200079	450-11	136708-00	ISMK-101		
1200080	450-08	137688-00	250-24		
1200274	450-26	138563-00	250-23		
1201261	450-18	138563-00	250-26		
1202081	450-19	138566-03	275-10HF		
3007383	450-36	139123-00	275-53		
3200004	450-49	139219-00	275-21		
3200176	450-45	139662-00	275-13		
3200727	450-32	139663-00	275-14		



800-49
Demountable Torch, Complete Kit for Axial (800-15, -45, -48), for Varian 700-ES Series, Liberty, and Vista

Accredited Standards



Two grades to choose from - Premium and Standard

High quality Guide 34 Inorganic Standards and Certified Reference Materials.

Premium Grade Pages 46 - 49

These products are derived from the very highest quality starting material, having the lowest level of impurities. Our COA includes information showing a 72 element profile of contaminants measured to $\mu\text{g/ml}$ concentrations.

Premium Grade is most suited to :

- ✓ Preparation of multi-element standards
- ✓ Low trace level analysis
- ✓ Internal standards

Standard Grade Pages 51 - 56

High quality standards that meet the demands of laboratories requiring Guide 34 traceable CRMs.

Standard Grade prove ideal products that satisfy:

- ✓ Second source quality standards.
- ✓ Tuning solutions
- ✓ Primary standard for screening applications.



Why should I use Accredited Standards?

The adoption of reference materials with Guide 34 compliance assures your laboratory is able to demonstrate traceability between measured results of the measured standard references, and that of the measured sample, allowing your laboratory to achieve measurement targets, saving time and money, and more importantly giving confidence in your analytical data.

Why Accredited Standards Matter

Most laboratories carry out many thousands of analyses annually. The additional cost of using an appropriate certified standard accounts for a fraction of a penny per assay.

Ask yourself this. With the investment in staff and high performance instrumentation, isn't the use of standards that validate your procedures an obvious choice to make?

How can we assure accuracy, precision and most importantly traceability is realised?

The analyst has a responsibility to realise accuracy and precision by using equipment that is deemed fit for purpose, by showing how and what was done to achieve the result and most importantly the unit of measure to which it has been traced. If results obtained from different laboratories are to be comparable, it is essential that all results are based on reliable standards whose values are linked to a stated reference.

If the metrological quality of the measurement standards used in different laboratories is unclear, discrepancies will be inevitable when different labs analyse the same sample.

So what are we actually selling when we present Guide 34 Certified Standards?

What we are ensuring is that all your experimentally measured or realised values are traceable to reliable measurement standards.



Analyte	Matrix	Volume	Part Reference
Aluminum, Al	HNO ₃	125 mL	ASAL1-1
		500 mL	ASAL1-5
Aluminum, Al	HCl	125 mL	ASALCL1-1
		500 mL	ASALCL1-5
Antimony, Sb	HNO ₃ / Tartaric Acid	125 mL	ASSB1-1
		500 mL	ASSB1-5
Antimony, Sb	HNO ₃ / HF	125 mL	ASSBF1-1
		500 mL	ASSBF1-5
Arsenic, As	HNO ₃	125 mL	ASAS1-1
		500 mL	ASAS1-5
Barium, Ba	HNO ₃	125 mL	ASBA1-1
		500 mL	ASBA1-5
Beryllium, Be	HNO ₃	125 mL	ASBE1-1
		500 mL	ASBE1-5
Bismuth, Bi	HNO ₃	125 mL	ASBI1-1
		500 mL	ASBI1-5
Boron, B	H ₂ O	500 mL	ASB1-5
		125 mL	ASB1-1
Bromide, Br	H ₂ O	500 mL	ASICBR1-1
		125 mL	ASICBR1-5
Cadmium, Cd	HNO ₃	125 mL	ASCD1-1
		500 mL	ASCD1-5
Calcium, Ca	HNO ₃	125 mL	ASCA1-1
		500 mL	ASCA1-5
Carbon, C	HNO ₃	125 mL	ASC1-1
		500 mL	ASC1-5
Cerium, Ce	HNO ₃	125 mL	ASCE1-1
		500 mL	ASCE1-5
Cesium, Cs	HNO ₃	125 mL	ASCS1-1
		500 mL	ASCS1-5
Chloride, Cl-	H ₂ O	125 mL	ASICCL1-1
		500 mL	ASICCL1-5
Chromium+3, Cr+3	HNO ₃	125 mL	ASCR(3)1-1
		500 mL	ASCR(3)1-5
Chromium+6, Cr+6	H ₂ O	125 mL	ASCR(6)1-1
		500 mL	ASCR(6)1-5
Cobalt, Co	HNO ₃	125 mL	ASCO1-1
		500 mL	ASCO1-5
Copper, Cu	HNO ₃	125 mL	ASCU1-1
		500 mL	ASCU1-5
Dysprosium, Dy	HNO ₃	125 mL	ASDY1-1
		500 mL	ASDY1-5
Erbium, Er	HNO ₃	125 mL	ASER1-1
		500 mL	ASER1-5
Europium, Eu	HNO ₃	125 mL	ASEU1-1
		500 mL	ASEU1-5
Gadolinium, Gd	HNO ₃	125 mL	ASGD1-1
		500 mL	ASGD1-5
Gallium, Ga	HNO ₃	125 mL	ASGA1-1
		500 mL	ASGA1-5
Germanium, Ge	HNO ₃ / HF	125 mL	ASGE1-1
		500 mL	ASGE1-5
Gold, Au	HCl	125 mL	ASAU1-1
		125 mL	ASAU1-5
Gold, Au	HNO ₃	500 mL	ASAUN1-1
		500 mL	ASAUN1-5
Hafnium, Hf	HNO ₃ / HF	125 mL	ASHF1-1
		500 mL	ASHF1-5
Holmium, Ho	HNO ₃	125 mL	ASHO1-1
		500 mL	ASHO1-5
Indium, In	HNO ₃	125 mL	ASIN1-1
		500 mL	ASIN1-5

Analyte	Matrix	Volume	Part Reference
Iodide, I-	H ₂ O	125 mL	ASICI1-1
		500 mL	ASICI1-5
Iridium, Ir	HCl	125 mL	ASIR1-1
		500 mL	ASIR1-5
Iron, Fe	HNO ₃	500 mL	ASFE1-5
		125 mL	ASFE1-1
Lanthanum, La	HNO ₃	125 mL	ASLA1-1
		500 mL	ASLA1-5
Lead, Pb	HNO ₃	125 mL	ASPB1-1
		500 mL	ASPB1-5
Lithium, 6Li	HNO ₃	125 mL	AS6LI1-1
		500 mL	AS6LI1-5
Lithium, Li	HNO ₃	125 mL	ASLI1-1
		500 mL	ASLI1-5
Lutetium, Lu	HNO ₃	125 mL	ASLU1-1
		500 mL	ASLU1-5
Magnesium, Mg	HNO ₃	125 mL	ASMG1-1
		500 mL	ASMG1-5
Manganese, Mn	HNO ₃	125 mL	ASMN1-1
		500 mL	ASMN1-5
Mercury, Hg	HNO ₃	125 mL	ASHG1-1
		500 mL	ASHG1-5
Molybdenum, Mo	NH ₄ OH	125 mL	ASMO1-1
		500 mL	ASMO1-5
Neodymium, Nd	HNO ₃	125 mL	ASND1-1
		500 mL	ASND1-5
Nickel, Ni	HNO ₃	125 mL	ASNI1-1
		500 mL	ASNI1-5
Niobium, Nb	HNO ₃ / HF	125 mL	ASNB1-1
		500 mL	ASNB1-5
Osmium, Os	HCl	125 mL	ASOS1-1
		500 mL	ASOS1-5
Palladium, Pd	HCl	125 mL	ASPD1-1
		500 mL	ASPD1-5
Palladium, Pd	HNO ₃	125 mL	ASPDN1-1
		500 mL	ASPDN1-5
Phosphorus, P	H ₂ O	125 mL	ASP1-1
		500 mL	ASP1-5
Platinum, Pt (Cl free)	HNO ₃	125 mL	ASPTNO31-1
		500 mL	ASPTNO31-5
Platinum, Pt	HCl	125 mL	ASPT1-1
		500 mL	ASPT1-5
Platinum, Pt	HNO ₃	125 mL	ASPTN1-1
		500 mL	ASPTN1-5
Potassium, K	HNO ₃	125 mL	ASK1-1
		500 mL	ASK1-5
Praseodymium, Pr	HNO ₃	125 mL	ASPR1-1
		500 mL	ASPR1-5
Rhenium, Re	HNO ₃	125 mL	ASRE1-1
		500 mL	ASRE1-5
Rhodium, Rh	HNO ₃	500 mL	ASRHN1-5
		125 mL	ASRHN1-1
Rhodium, Rh	HCl	125 mL	ASRH1-1
		500 mL	ASRH1-5
Rubidium, Rb	HNO ₃	125 mL	ASRB1-1
		500 mL	ASRB1-5
Ruthenium, Ru	HCl	125 mL	ASRU1-1
		500 mL	ASRU1-5
Samarium, Sm	HNO ₃	125 mL	ASSM1-1
		500 mL	ASSM1-5
Scandium, Sc	HNO ₃	125 mL	ASSC1-1
		500 mL	ASSC1-5

Analyte	Matrix	Volume	Part Reference
Selenium+4, Se+4	HNO ₃	125 mL	ASSE(4)1-1
		500 mL	ASSE(4)1-5
Silica	HNO ₃ / HF	125 mL	ASSIO1-1
		500 mL	ASSIO1-5
Silica	NaOH	125 mL	ASSIONA1-1
		500 mL	ASSIONA1-5
Silicon, Si	HNO ₃ / HF	125 mL	ASSI1-1
		500 mL	ASSI1-5
Silicon, Si	NaOH	125 mL	ASSINA1-1
		500 mL	ASSINA1-5
Silver, Ag	HNO ₃	125 mL	ASAG1-1
		500 mL	ASAG1-5
Sodium, Na	HNO ₃	125 mL	ASNA1-1
		500 mL	ASNA1-5
Strontium, Sr	HNO ₃	125 mL	ASSR1-1
		500 mL	ASSR1-5
Sulfur, S (as MSA)	H ₂ O	125 mL	ASMSA1-1
		500 mL	ASMSA1-5
Sulfur, S	H ₂ O	125 mL	ASS1-1
		500 mL	ASS1-5
Tantalum, Ta	HNO ₃ / HF	125 mL	ASTA1-1
		500 mL	ASTA1-5
Tellurium, Te	HCl	125 mL	ASTE1-1
		500 mL	ASTE1-5
Tellurium, Te	HNO ₃	125 mL	ASTEN1-1
		500 mL	ASTEN1-5
Terbium, Tb	HNO ₃	125 mL	ASTB1-1
		500 mL	ASTB1-5

Analyte	Matrix	Volume	Part Reference
Thallium, Tl	HNO ₃	125 mL	ASTL1-1
		500 mL	ASTL1-5
Thorium, Th	HNO ₃	125 mL	ASTH1-1
		500 mL	ASTH1-5
Thulium, Tm	HNO ₃	125 mL	ASTM1-1
		500 mL	ASTM1-5
Tin, Sn	HNO ₃ / HF	125 mL	ASSN1-1
		500 mL	ASSN1-5
Tin, Sn	HCl	125 mL	ASSNCL1-1
		500 mL	ASSNCL1-5
Titanium, Ti	HNO ₃ / HF	125 mL	ASTI1-1
		500 mL	ASTI1-5
Tungsten, W	HNO ₃ / HF	125 mL	ASW1-1
		500 mL	ASW1-5
Tungsten, W	H ₂ O	125 mL	ASWH2O1-1
		500 mL	ASWH2O1-5
Uranium, U	HNO ₃	125 mL	ASU1-1
		500 mL	ASU1-5
Vanadium, V	HNO ₃	125 mL	ASV1-1
		500 mL	ASV1-5
Ytterbium, Yb	HNO ₃	125 mL	ASYB1-1
		500 mL	ASYB1-5
Yttrium, Y	HNO ₃	125 mL	ASY1-1
		500 mL	ASY1-5
Zinc, Zn	HNO ₃	125 mL	ASZN1-1
		500 mL	ASZN1-5
Zirconium, Zr	HNO ₃ / HF	125 mL	ASZR1-1
		500 mL	ASZR1-5

What is ISO 17034:2016?

This standard will be the successor of ISO Guide 34:2009 which is aligned with the relevant requirements of ISO/IEC 17025.

ISO 17025 Guide 34 Standards are Certified Reference Materials (CRMs) that have a claim of traceability to a national or international standard supported by evidence of stability and homogeneity which gives the analyst confidence that the analytical data derived from their use may be verified and validated. ISO 17034:2016 is currently in its final draft (FDIS) and when implemented by accredited bodies in 2017, will cancel and replace ISO/IEC Guide 34:2009 developed by REMCO

The adoption of reference materials with ISO 17034 compliance will further assure your laboratory is able to demonstrate traceability between obtained results of the standard references and that of the sample, allowing your laboratory to achieve your analytical targets, saving time and money and more importantly giving confidence in your analytical data.

The new standard has been developed to:

- Include requirements for production of all types of reference materials and additional specified requirements for certified reference materials
- Convert ISO/IEC Guide 34 into an International Standard
- Harmonise with the revisions of Guides 31 and 35
- Include more details on required reference material documentation
- Add a range of policy, risk and opportunity changes

Accredited Standards products are fully supported by ISO 17025 Guide 34. Once the new standard has been internationally recognised the manufacturing and quality process will be realigned to satisfy the demands of ISO 17034.

Analyte	Matrix	Volume	Part Reference
Aluminum, Al	HNO ₃	125 mL	ASAL10-1
		500 mL	ASAL10-5
Antimony, Sb	HNO ₃ / Tartaric Acid	125 mL	ASSB10-1
		500 mL	ASSB10-5
Arsenic, As	HNO ₃	125 mL	ASAS10-1
		500 mL	ASAS10-5
Barium, Ba	HNO ₃	125 mL	ASBA10-1
		500 mL	ASBA10-5
Beryllium, Be	HNO ₃	125 mL	ASBE10-1
		500 mL	ASBE10-5
Bismuth, Bi	HNO ₃	125 mL	ASBI10-1
		500 mL	ASBI10-5
Boron, B	H ₂ O	500 mL	ASB10-5
		125 mL	ASB10-1
Cadmium, Cd	HNO ₃	125 mL	ASCD10-1
		500 mL	ASCD10-5
Calcium, Ca	HNO ₃	125 mL	ASCA10-1
		500 mL	ASCA10-5
Carbon, C	HNO ₃	125 mL	ASC10-1
		500 mL	ASC10-5
Cerium, Ce	HNO ₃	125 mL	ASCE10-1
		500 mL	ASCE10-5
Cesium, Cs	HNO ₃	125 mL	ASCS10-1
		500 mL	ASCS10-5
Chromium+3, Cr+3	HNO ₃	125 mL	ASCR(3)10-1
		500 mL	ASCR(3)10-5
Cobalt, Co	HNO ₃	125 mL	ASCO10-1
		500 mL	ASCO10-5
Copper, Cu	HNO ₃	125 mL	ASCU10-1
		500 mL	ASCU10-5
Dysprosium, Dy	HNO ₃	125 mL	ASDY10-1
		500 mL	ASDY10-5
Erbium, Er	HNO ₃	125 mL	ASER10-1
		500 mL	ASER10-5
Europium, Eu	HNO ₃	125 mL	ASEU10-1
		500 mL	ASEU10-5
Gadolinium, Gd	HNO ₃	125 mL	ASGD10-1
		500 mL	ASGD10-5
Gallium, Ga	HNO ₃	125 mL	ASGA10-1
		500 mL	ASGA10-5
Germanium, Ge	HNO ₃ / HF	125 mL	ASGE10-1
		500 mL	ASGE10-5
Gold, Au	HCl	125 mL	ASAU10-1
		125 mL	ASAU10-5
Hafnium, Hf	HNO ₃ / HF	125 mL	ASHF10-1
		500 mL	ASHF10-5
Holmium, Ho	HNO ₃	125 mL	ASHO10-1
		500 mL	ASHO10-5
Indium, In	HNO ₃	125 mL	ASIN10-1
		500 mL	ASIN10-5
Iridium, Ir	HCl	125 mL	ASIR10-1
		500 mL	ASIR10-5
Iron, Fe	HNO ₃	500 mL	ASFE10-5
		125 mL	ASFE10-1
Lanthanum, La	HNO ₃	125 mL	ASLA10-1
		500 mL	ASLA10-5
Lead, Pb	HNO ₃	125 mL	ASPB10-1
		500 mL	ASPB10-5
Lithium, Li	HNO ₃	125 mL	ASLI10-1
		500 mL	ASLI10-5
Lutetium, Lu	HNO ₃	125 mL	ASLU10-1
		500 mL	ASLU10-5

Analyte	Matrix	Volume	Part Reference
Magnesium, Mg	HNO ₃	125 mL	ASMG10-1
		500 mL	ASMG10-5
Manganese, Mn	HNO ₃	125 mL	ASMN10-1
		500 mL	ASMN10-5
Mercury, Hg	HNO ₃	125 mL	ASHG10-1
		500 mL	ASHG10-5
Molybdenum, Mo	NH ₄ OH	125 mL	ASMO10-1
		500 mL	ASMO10-5
Neodymium, Nd	HNO ₃	125 mL	ASND10-1
		500 mL	ASND10-5
Nickel, Ni	HNO ₃	125 mL	ASNI10-1
		500 mL	ASNI10-5
Niobium, Nb	HNO ₃ / HF	125 mL	ASNB10-1
		500 mL	ASNB10-5
Palladium, Pd	HCl	125 mL	ASPD10-1
		500 mL	ASPD10-5
Phosphorus, P	H ₂ O	125 mL	ASP10-1
		500 mL	ASP10-5
Platinum, Pt	HCl	125 mL	ASPT10-1
		500 mL	ASPT10-5
Potassium, K	HNO ₃	125 mL	ASK10-1
		500 mL	ASK10-5
Praseodymium, Pr	HNO ₃	125 mL	ASPR10-1
		500 mL	ASPR10-5
Rhenium, Re	HNO ₃	125 mL	ASRE10-1
		500 mL	ASRE10-5
Rhodium, Rh	HCl	125 mL	ASRH10-1
		500 mL	ASRH10-5
Rubidium, Rb	HNO ₃	125 mL	ASRB10-1
		500 mL	ASRB10-5
Ruthenium, Ru	HCl	125 mL	ASRU10-1
		500 mL	ASRU10-5
Samarium, Sm	HNO ₃	125 mL	ASSM10-1
		500 mL	ASSM10-5
Scandium, Sc	HNO ₃	125 mL	ASSC10-1
		500 mL	ASSC10-5
Selenium, Se	HNO ₃	125 mL	ASSE10-1
		500 mL	ASSE10-5
Silicon	HNO ₃ / HF	125 mL	ASSI10-1
		500 mL	ASSI10-5
Silver, Ag	HNO ₃	125 mL	ASAG10-1
		500 mL	ASAG10-5
Sodium, Na	HNO ₃	125 mL	ASNA10-1
		500 mL	ASNA10-5
Strontium, Sr	HNO ₃	125 mL	ASSR10-1
		500 mL	ASSR10-5
Sulfur, S (as MSA)	H ₂ O	125 mL	ASMSA10-1
		500 mL	ASMSA10-5
Sulfur, S	H ₂ O	125 mL	ASS10-1
		500 mL	ASS10-5
Tantalum, Ta	HNO ₃ / HF	125 mL	ASTA10-1
		500 mL	ASTA10-5
Tellurium, Te	HCl	125 mL	ASTE10-1
		500 mL	ASTE10-5
Terbium, Tb	HNO ₃	125 mL	ASTB10-1
		500 mL	ASTB10-5
Thallium, Tl	HNO ₃	125 mL	ASTL10-1
		500 mL	ASTL10-5
Thorium, Th	HNO ₃	125 mL	ASTH10-1
		500 mL	ASTH10-5
Thulium, Tm	HNO ₃	125 mL	ASTM10-1
		500 mL	ASTM10-5

Analyte	Matrix	Volume	Part Reference
Tin, Sn	HNO ₃ / HF	125 mL	ASSN10-1
		500 mL	ASSN10-5
Titanium, Ti	HNO ₃ / HF	125 mL	ASTI10-1
		500 mL	ASTI10-5
Tungsten, W	HNO ₃ / HF	125 mL	ASW10-1
		500 mL	ASW10-5
Uranium, U	HNO ₃	125 mL	ASU10-1
		500 mL	ASU10-5
Vanadium, V	HNO ₃	125 mL	ASV10-1
		500 mL	ASV10-5

Analyte	Matrix	Volume	Part Reference
Ytterbium, Yb	HNO ₃	125 mL	ASYB10-1
		500 mL	ASYB10-5
Yttrium, Y	HNO ₃	125 mL	ASY10-1
		500 mL	ASY10-5
Zinc, Zn	HNO ₃	125 mL	ASZN10-1
		500 mL	ASZN10-5
Zirconium, Zr	HNO ₃ / HF	125 mL	ASZR10-1
		500 mL	ASZR10-5

What is considered as accepted use of my standard?

Improper use of CRMs can be detrimental to the performance of measurement procedures. Instructions for use, as well as those for storage should be strictly obeyed, as they extend confidence that the property values and associated uncertainties are valid.

Repeated opening and closing of reference material containers increases the risk of contamination. In the process of preparing the CRM the effect of opening and closing of the container and repeated freezing/thawing of units in terms of stability and homogeneity are considered. Where possible the unit size should be chosen such that it reflects the amount of sample needed for the type of analysis for which it is designed. In this way, once opened each unit is entirely used as soon as possible after opening to avoid potential degradation. When opened, containers of CRMs should be stored under conditions which the material has been demonstrated to be stable. These conditions will protect the material from accidental contamination and should be included in the user instructions.



Where CRMs allow multiple use, it is important to make sure that the container holding the CRM is properly closed, and is stored in an appropriate manner, otherwise the property values stated may become invalid and the CRM unusable or unreliable.

How often should I change my standards?

Although the certificate of analysis will provide an expiry date it is incumbent on the analyst to assure the product remains fit for purpose. The suitability of the CRM which may be used as a calibrant should be



checked at intervals to demonstrate metrological traceability. This may be carried out by;

- Comparing a new calibrant against an old, validated one
 - Assessing the effect of using the new calibrant as part of a quality control by e.g., measuring a QCM
- Replace your stock standard solutions on a regular basis. Regulatory agencies recommend or require at least annual replacement.

How can I be sure the standard is suitable for my application?

If the standards are certified to Guide 34, it will show its intended purpose, in addition the manufacturer may provide further information, e.g. the metallic impurities present in the indicative statement, to assure there are no conflicts with its intended use.

CRMs may be used for:

- Preparation of QC charts – to demonstrate control of a measurement process within a laboratory or to confirm the effectiveness of a laboratory's quality control process or to demonstrate control of a measurement process over a period of time
- Comparison of results (e.g. from two or more series of related samples either in a short period of time or over an extended period of time when a measurement process is known to vary)
- Method development – to establish consistency (for validation a certified reference material should be used)
- Instrument performance checks
- Repeatability and reproducibility studies; e.g. repeated use over an extended period of time, instruments, operators, etc., to estimate long-term reproducibility or robustness of a measurement process or laboratory
- AS check samples – for example, to confirm the degree of equivalence of measurement results from two or more laboratories (e.g. provider and user), where the materials are inherently stable
- Operator variability
- Impact of any changes to the environmental conditions (e.g. temperature, humidity etc.)



Can I use a CRM as a QCM?

While CRMs are produced by established reference material producers and are commercially available, QCMs are often prepared by a laboratory for its own internal use

Although QCMs are characterised for specific laboratory applications, commercially available CRMs where available may prove a more cost effective and viable option

Some analytical applications do not require a material having the full characteristics of a CRM (e.g. traceability and uncertainty) the confidence assured through the CRMs validation may add significant value to a laboratory's QA program



Analyte	Matrix	Volume	Part Reference
Aluminium, Al	in 2-5% HCl	30ml	AS1KAL03-2
		100ml	AS1KAL10-2
		250ml	AS1KAL25-2
		500ml	AS1KAL50-2
Aluminium, Al	in 2-5% HNO ₃	30ml	AS1KAL03-1
		100ml	AS1KAL10-1
		250ml	AS1KAL25-1
		500ml	AS1KAL50-1
Antimony, Sb	in 10-20% HCl	30ml	AS1KSB03-2C
		100ml	AS1KSB10-2C
		250ml	AS1KSB25-2C
		500ml	AS1KSB50-2C
Antimony, Sb	in 2-5% HNO ₃ /HF	30ml	AS1KSB03-1A
		100ml	AS1KSB10-1A
		250ml	AS1KSB25-1A
		500ml	AS1KSB50-1A
Arsenic, As	in 2-5% HNO ₃	30ml	AS1KAS03-1
		100ml	AS1KAS10-1
		250ml	AS1KAS25-1
		500ml	AS1KAS50-1
Barium, Ba	in 2-5% HCl	30ml	AS1KBA03-2
		100ml	AS1KBA10-2
		250ml	AS1KBA25-2
		500ml	AS1KBA50-2
Barium, Ba	in 2-5% HNO ₃	30ml	AS1KBA03-1
		100ml	AS1KBA10-1
		250ml	AS1KBA25-1
		500ml	AS1KBA50-1
Beryllium, Be	in 2-5% HCl	30ml	AS1KBE03-2
		100ml	AS1KBE10-2
		250ml	AS1KBE25-2
		500ml	AS1KBE50-2
Beryllium, Be	in 2-5% HNO ₃ /HF	30ml	AS1KBE03-1A
		100ml	AS1KBE10-1A
		250ml	AS1KBE25-1A
		500ml	AS1KBE50-1A
Bismuth, Bi	in 2-5% HNO ₃	30ml	AS1KBI03-1
		100ml	AS1KBI10-1
		250ml	AS1KBI25-1
		500ml	AS1KBI50-1
Boron, B	in H ₂ O	30ml	AS1KB03-3
		100ml	AS1KB10-3
		250ml	AS1KB25-3
		500ml	AS1KB50-3
Cadmium, Cd	in 2-5% HNO ₃	30ml	AS1KCD03-1
		100ml	AS1KCD10-1
		250ml	AS1KCD25-1
		500ml	AS1KCD50-1
Calcium, Ca	in 2-5% HCl	30ml	AS1KCA03-2
		100ml	AS1KCA10-2
		250ml	AS1KCA25-2
		500ml	AS1KCA50-2
Calcium, Ca	in 2-5% HNO ₃	30ml	AS1KCA03-1
		100ml	AS1KCA10-1
		250ml	AS1KCA25-1
		500ml	AS1KCA50-1
Cerium, Ce	in 2-5% HNO ₃	30ml	AS1KCE03-1
		100ml	AS1KCE10-1
		250ml	AS1KCE25-1
		500ml	AS1KCE50-1
Cesium, Cs	in 2-5% HNO ₃	30ml	AS1KCS03-1
		100ml	AS1KCS10-1
		250ml	AS1KCS25-1
		500ml	AS1KCS50-1

Analyte	Matrix	Volume	Part Reference
Cesium, Cs	in H ₂ O	30ml	AS1KCS03-3
		100ml	AS1KCS10-3
		250ml	AS1KCS25-3
		500ml	AS1KCS50-3
Chromium, Cr	in 2-5% HCl	30ml	AS1KCR03-2
		100ml	AS1KCR10-2
		250ml	AS1KCR25-2
		500ml	AS1KCR50-2
Chromium, Cr	in 2-5% HNO ₃	30ml	AS1KCR03-1
		100ml	AS1KCR10-1
		250ml	AS1KCR25-1
		500ml	AS1KCR50-1
Cobalt, Co	in 2-5% HNO ₃	30ml	AS1KCO03-1
		100ml	AS1KCO10-1
		250ml	AS1KCO25-1
		500ml	AS1KCO50-1
Copper, Cu	in 2-5% HNO ₃	30ml	AS1KCU03-1
		100ml	AS1KCU10-1
		250ml	AS1KCU25-1
		500ml	AS1KCU50-1
Dysprosium, Dy	in 2-5% HNO ₃	30ml	AS1KDY03-1
		100ml	AS1KDY10-1
		250ml	AS1KDY25-1
		500ml	AS1KDY50-1
Erbium, Er	in 2-5% HNO ₃	30ml	AS1KER03-1
		100ml	AS1KER10-1
		250ml	AS1KER25-1
		500ml	AS1KER50-1
Europium, Eu	in 2-5% HNO ₃	30ml	AS1KEU03-1
		100ml	AS1KEU10-1
		250ml	AS1KEU25-1
		500ml	AS1KEU50-1
Gadolinium, Gd	in 2-5% HNO ₃	30ml	AS1KGD03-1
		100ml	AS1KGD10-1
		250ml	AS1KGD25-1
		500ml	AS1KGD50-1
Gallium, Ga	in 2-5% HNO ₃	30ml	AS1KGA03-1
		100ml	AS1KGA10-1
		250ml	AS1KGA25-1
		500ml	AS1KGA50-1
Germanium, Ge	in 2-5% HNO ₃ /HF	30ml	AS1KGE03-1A
		100ml	AS1KGE10-1A
		250ml	AS1KGE25-1A
		500ml	AS1KGE50-1A
Gold, Au	in 2-5% HCl	30ml	AS1KAU03-2
		100ml	AS1KAU10-2
		250ml	AS1KAU25-2
		500ml	AS1KAU50-2
Hafnium, Hf	in 2-5% HCl/HF	30ml	AS1KHF03-2A
		100ml	AS1KHF10-2A
		250ml	AS1KHF25-2A
		500ml	AS1KHF50-2A
Hafnium, Hf	in 2-5% HNO ₃ /HF	30ml	AS1KHF03-1A
		100ml	AS1KHF10-1A
		250ml	AS1KHF25-1A
		500ml	AS1KHF50-1A
Holmium, Ho	in 2-5% HNO ₃	30ml	AS1KHO03-1
		100ml	AS1KHO10-1
		250ml	AS1KHO25-1
		500ml	AS1KHO50-1
Indium, In	in 2-5% HNO ₃	30ml	AS1KIN03-1
		100ml	AS1KIN10-1
		250ml	AS1KIN25-1
		500ml	AS1KIN50-1

Analyte	Matrix	Volume	Part Reference
Iridium, Ir	in 5-10% HNO ₃	30ml	AS1KIR03-1B
		100ml	AS1KIR10-1B
		250ml	AS1KIR25-1B
		500ml	AS1KIR50-1B
Iron, Fe	in 2-5% HCl	30ml	AS1KFE03-2
		100ml	AS1KFE10-2
		250ml	AS1KFE25-2
		500ml	AS1KFE50-2
Iron, Fe	in 2-5% HNO ₃	30ml	AS1KFE03-1
		100ml	AS1KFE10-1
		250ml	AS1KFE25-1
		500ml	AS1KFE50-1
Lanthanum, La	in 2-5% HNO ₃	30ml	AS1KLA03-1
		100ml	AS1KLA10-1
		250ml	AS1KLA25-1
		500ml	AS1KLA50-1
Lead, Pb	in 2-5% HNO ₃	30ml	AS1KPB03-1
		100ml	AS1KPB10-1
		250ml	AS1KPB25-1
		500ml	AS1KPB50-1
Lithium, Li	in 2-5% HCl	30ml	AS1KLI03-2
		100ml	AS1KLI10-2
		250ml	AS1KLI25-2
		500ml	AS1KLI50-2
Lithium, Li	in 2-5% HNO ₃	30ml	AS1KLI03-1
		100ml	AS1KLI10-1
		250ml	AS1KLI25-1
		500ml	AS1KLI50-1
Lutetium, Lu	in 2-5% HNO ₃	30ml	AS1KLU03-1
		100ml	AS1KLU10-1
		250ml	AS1KLU25-1
		500ml	AS1KLU50-1
Magnesium, Mg	in 2-5% HNO ₃	30ml	AS1KMG03-1
		100ml	AS1KMG10-1
		250ml	AS1KMG25-1
		500ml	AS1KMG50-1
Manganese, Mn	in 2-5% HCl	30ml	AS1KMN03-2
		100ml	AS1KMN10-2
		250ml	AS1KMN25-2
		500ml	AS1KMN50-2
Manganese, Mn	in 2-5% HNO ₃	30ml	AS1KMN03-1
		100ml	AS1KMN10-1
		250ml	AS1KMN25-1
		500ml	AS1KMN50-1
Mercury, Hg	in 5-10% HNO ₃	30ml	AS1KHG03-1B
		100ml	AS1KHG10-1B
		250ml	AS1KHG25-1B
		500ml	AS1KHG50-1B
Molybdenum, Mo	in 2-5% HNO ₃ /HF	30ml	AS1KMO03-1A
		100ml	AS1KMO10-1A
		250ml	AS1KMO25-1A
		500ml	AS1KMO50-1A
Molybdenum, Mo	in 2-5% NH ₄ OH	30ml	AS1KMO03-5
		100ml	AS1KMO10-5
		250ml	AS1KMO25-5
		500ml	AS1KMO50-5
Neodymium, Nd	in 2-5% HNO ₃	30ml	AS1KND03-1
		100ml	AS1KND10-1
		250ml	AS1KND25-1
		500ml	AS1KND50-1
Nickel, Ni	in 2-5% HNO ₃	30ml	AS1KNI03-1
		100ml	AS1KNI10-1
		250ml	AS1KNI25-1
		500ml	AS1KNI50-1

Analyte	Matrix	Volume	Part Reference
Niobium, Nb	in 2-5% HNO ₃ /HF	30ml	AS1KNB03-1A
		100ml	AS1KNB10-1A
		250ml	AS1KNB25-1A
		500ml	AS1KNB50-1A
Osmium, Os	in 2-5% HCl	30ml	AS1KOS03-2
		100ml	AS1KOS10-2
		250ml	AS1KOS25-2
		500ml	AS1KOS50-2
Palladium, Pd	in 2-5% HCl	30ml	AS1KPD03-2
		100ml	AS1KPD10-2
		250ml	AS1KPD25-2
		500ml	AS1KPD50-2
Palladium, Pd	in 2-5% HNO ₃	30ml	AS1KPD03-1
		100ml	AS1KPD10-1
		250ml	AS1KPD25-1
		500ml	AS1KPD50-1
Phosphorus, P	in 2-5% H ₂ SO ₄	30ml	AS1KP03-4
		100ml	AS1KP10-4
		250ml	AS1KP25-4
		500ml	AS1KP50-4
Phosphorus, P	in H ₂ O	30ml	AS1KP03-3
		100ml	AS1KP10-3
		250ml	AS1KP25-3
		500ml	AS1KP50-3
Platinum, Pt	in 5-10% HNO ₃	30ml	AS1KPT03-1B
		100ml	AS1KPT10-1B
		250ml	AS1KPT25-1B
		500ml	AS1KPT50-1B
Potassium, K	in 2-5% HNO ₃	30ml	AS1KK03-1
		100ml	AS1KK10-1
		250ml	AS1KK25-1
		500ml	AS1KK50-1
Potassium, K	in H ₂ O	30ml	AS1KK03-3
		100ml	AS1KK10-3
		250ml	AS1KK25-3
		500ml	AS1KK50-3
Praseodymium, Pr	in 2-5% HNO ₃	30ml	AS1KPR03-1
		100ml	AS1KPR10-1
		250ml	AS1KPR25-1
		500ml	AS1KPR50-1
Rhenium, Re	in 2-5% HNO ₃	30ml	AS1KRE03-1
		100ml	AS1KRE10-1
		250ml	AS1KRE25-1
		500ml	AS1KRE50-1
Rhenium, Re	in H ₂ O	30ml	AS1KRE03-3
		100ml	AS1KRE10-3
		250ml	AS1KRE25-3
		500ml	AS1KRE50-3
Rhodium, Rh	in 2-5% HCl	30ml	AS1KRH03-2
		100ml	AS1KRH10-2
		250ml	AS1KRH25-2
		500ml	AS1KRH50-2
Rubidium, Rb	in 2-5% HNO ₃	30ml	AS1KRB03-1
		100ml	AS1KRB10-1
		250ml	AS1KRB25-1
		500ml	AS1KRB50-1
Rubidium, Rb	in H ₂ O	30ml	AS1KRB03-3
		100ml	AS1KRB10-3
		250ml	AS1KRB25-3
		500ml	AS1KRB50-3
Ruthenium, Ru	in 2-5% HCl	30ml	AS1KRU03-2
		100ml	AS1KRU10-2
		250ml	AS1KRU25-2
		500ml	AS1KRU50-2

Analyte	Matrix	Volume	Part Reference
Samarium, Sm	in 2-5% HNO ₃	30ml	AS1KSM03-1
		100ml	AS1KSM10-1
		250ml	AS1KSM25-1
		500ml	AS1KSM50-1
Scandium, Sc	in 2-5% HNO ₃	30ml	AS1KSC03-1
		100ml	AS1KSC10-1
		250ml	AS1KSC25-1
		500ml	AS1KSC50-1
Selenium, Se	in 2-5% HNO ₃	30ml	AS1KSE03-1
		100ml	AS1KSE10-1
		250ml	AS1KSE25-1
		500ml	AS1KSE50-1
Silicon, Si	in H ₂ O	30ml	AS1KSI03-3
		100ml	AS1KSI10-3
		250ml	AS1KSI25-3
		500ml	AS1KSI50-3
Sodium, Na	in 2-5% HNO ₃	30ml	AS1KNA03-1
		100ml	AS1KNA10-1
		250ml	AS1KNA25-1
		500ml	AS1KNA50-1
Sodium, Na	in H ₂ O	30ml	AS1KNA03-3
		100ml	AS1KNA10-3
		250ml	AS1KNA25-3
		500ml	AS1KNA50-3
Silver, Ag	in 2-5% HNO ₃	30ml	AS1KAG03-1
		100ml	AS1KAG10-1
		250ml	AS1KAG25-1
		500ml	AS1KAG50-1
Strontium, Sr	in 2-5% HCl	30ml	AS1KSR03-2
		100ml	AS1KSR10-2
		250ml	AS1KSR25-2
		500ml	AS1KSR50-2
Strontium, Sr	in 2-5% HNO ₃	30ml	AS1KSR03-1
		100ml	AS1KSR10-1
		250ml	AS1KSR25-1
		500ml	AS1KSR50-1
Sulphur, S	in H ₂ O	30ml	AS1KS03-3
		100ml	AS1KS10-3
		250ml	AS1KS25-3
		500ml	AS1KS50-3
Tantalum, Ta	in 2-5% HNO ₃ /HF	30ml	AS1KTA03-1A
		100ml	AS1KTA10-1A
		250ml	AS1KTA25-1A
		500ml	AS1KTA50-1A
Tellurium, Te	in 10-20% HCl	30ml	AS1KTE03-2C
		100ml	AS1KTE10-2C
		250ml	AS1KTE25-2C
		500ml	AS1KTE50-2C
Tellurium, Te	in 10-20% HNO ₃	30ml	AS1KTE03-1C
		100ml	AS1KTE10-1C
		250ml	AS1KTE25-1C
		500ml	AS1KTE50-1C
Terbium, Tb	in 2-5% HNO ₃	30ml	AS1KTB03-1
		100ml	AS1KTB10-1
		250ml	AS1KTB25-1
		500ml	AS1KTB50-1
Thallium, Tl	in 2-5% HNO ₃	30ml	AS1KTL03-1
		100ml	AS1KTL10-1
		250ml	AS1KTL25-1
		500ml	AS1KTL50-1
Thorium, Th	in 2-5% HNO ₃	30ml	AS1KTH03-1
		100ml	AS1KTH10-1
		250ml	AS1KTH25-1
		500ml	AS1KTH50-1

Analyte	Matrix	Volume	Part Reference
Tin, Sn	in 10-20% HCl	30ml	AS1KSN03-2C
		100ml	AS1KSN10-2C
		250ml	AS1KSN25-2C
		500ml	AS1KSN50-2C
Tin, Sn	in 2-5% HNO ₃ /HF	30ml	AS1KSN03-1A
		100ml	AS1KSN10-1A
		250ml	AS1KSN25-1A
		500ml	AS1KSN50-1A
Titanium, Ti	in 2-5% HNO ₃ /HF	30ml	AS1KTI03-1A
		100ml	AS1KTI10-1A
		250ml	AS1KTI25-1A
		500ml	AS1KTI50-1A
Titanium, Ti	in 2-5% HCl/HF	30ml	AS1KTI03-2A
		100ml	AS1KTI10-2A
		250ml	AS1KTI25-2A
		500ml	AS1KTI50-2A
Thulium, Tm	in 2-5% HNO ₃	30ml	AS1KTM03-1
		100ml	AS1KTM10-1
		250ml	AS1KTM25-1
		500ml	AS1KTM50-1
Tungsten, W	in 2-5 % NH ₄ OH	30ml	AS1KW03-5
		100ml	AS1KW10-5
		250ml	AS1KW25-5
		500ml	AS1KW50-5
Tungsten, W	in 2-5% HNO ₃ /HF	30ml	AS1KW03-1A
		100ml	AS1KW10-1A
		250ml	AS1KW25-1A
		500ml	AS1KW50-1A
Uranium, U	in 2-5% HNO ₃	30ml	AS1KU03-1
		100ml	AS1KU10-1
		250ml	AS1KU25-1
		500ml	AS1KU50-1
Vanadium, V	in 2-5% HNO ₃	30ml	AS1KV03-1
		100ml	AS1KV10-1
		250ml	AS1KV25-1
		500ml	AS1KV50-1
Vanadium, V	in 2-5% H ₂ SO ₄	30ml	AS1KV03-4
		100ml	AS1KV10-4
		250ml	AS1KV25-4
		500ml	AS1KV50-4
Ytterbium, Yb	in 2-5% HNO ₃	30ml	AS1KYB03-1
		100ml	AS1KYB10-1
		250ml	AS1KYB25-1
		500ml	AS1KYB50-1
Yttrium, Y	in 2-5% HNO ₃	30ml	AS1KY03-1
		100ml	AS1KY10-1
		250ml	AS1KY25-1
		500ml	AS1KY50-1
Zinc, Zn	in 2-5% HCl	30ml	AS1KZN03-2
		100ml	AS1KZN10-2
		250ml	AS1KZN25-2
		500ml	AS1KZN50-2
Zinc, Zn	in 2-5% HNO ₃	30ml	AS1KZN03-1
		100ml	AS1KZN10-1
		250ml	AS1KZN25-1
		500ml	AS1KZN50-1
Zirconium, Zr	in 2-5% HNO ₃ /HF	30ml	AS1KZR03-1A
		100ml	AS1KZR10-1A
		250ml	AS1KZR25-1A
		500ml	AS1KZR50-1A
Zirconium, Zr	in 2-5% HCl/HF	30ml	AS1KZR03-2A
		100ml	AS1KZR10-2A
		250ml	AS1KZR25-2A
		500ml	AS1KZR50-2A

Analyte	Matrix	Volume	Part Reference
Aluminium, Al	in 2-5% HCl	30ml	AS10KAL03-2
		100ml	AS10KAL10-2
		250ml	AS10KAL25-2
		500ml	AS10KAL50-2
Aluminium, Al	in 2-5% HNO ₃	30ml	AS10KAL03-1
		100ml	AS10KAL10-1
		250ml	AS10KAL25-1
		500ml	AS10KAL50-1
Antimony, Sb	in 2-5% HNO ₃ /HF	30ml	AS10KSB03-1A
		100ml	AS10KSB10-1A
		250ml	AS10KSB25-1A
		500ml	AS10KSB50-1A
Antimony, Sb	in 2-5% HCl	30ml	AS10KSB03-2C
		100ml	AS10KSB10-2C
		250ml	AS10KSB25-2C
		500ml	AS10KSB50-2C
Arsenic, As	in 2-5% HNO ₃	30ml	AS10KAS03-1
		100ml	AS10KAS10-1
		250ml	AS10KAS25-1
		500ml	AS10KAS50-1
Barium, Ba	in 2-5% HCl	30ml	AS10KBA03-2
		100ml	AS10KBA10-2
		250ml	AS10KBA25-2
		500ml	AS10KBA50-2
Barium, Ba	in 2-5% HNO ₃	30ml	AS10KBA03-1
		100ml	AS10KBA10-1
		250ml	AS10KBA25-1
		500ml	AS10KBA50-1
Beryllium, Be	in 2-5% HNO ₃ /HF	30ml	AS10KBE03-1A
		100ml	AS10KBE10-1A
		250ml	AS10KBE25-1A
		500ml	AS10KBE50-1A
Bismuth, Bi	in 2-5% HNO ₃	30ml	AS10KBI03-1
		100ml	AS10KBI10-1
		250ml	AS10KBI25-1
		500ml	AS10KBI50-1
Boron, B	in H ₂ O	30ml	AS10KB03-3
		100ml	AS10KB10-3
		250ml	AS10KB25-3
		500ml	AS10KB50-3
Cadmium, Cd	in 2-5% HNO ₃	30ml	AS10KCD03-1
		100ml	AS10KCD10-1
		250ml	AS10KCD25-1
		500ml	AS10KCD50-1
Calcium, Ca	in 2-5% HNO ₃	30ml	AS10KCA03-1
		100ml	AS10KCA10-1
		250ml	AS10KCA25-1
		500ml	AS10KCA50-1
Cerium, Ce	in 2-5% HNO ₃	30ml	AS10KCE03-1
		100ml	AS10KCE10-1
		250ml	AS10KCE25-1
		500ml	AS10KCE50-1
Cesium, Cs	in 2-5% HNO ₃	30ml	AS10KCS03-1
		100ml	AS10KCS10-1
		250ml	AS10KCS25-1
		500ml	AS10KCS50-1
Cesium, Cs	in H ₂ O	30ml	AS10KCS03-3
		100ml	AS10KCS10-3
		250ml	AS10KCS25-3
		500ml	AS10KCS50-3
Chromium, Cr	in 2-5% HCl	30ml	AS10KCR03-2
		100ml	AS10KCR10-2
		250ml	AS10KCR25-2
		500ml	AS10KCR50-2

Analyte	Matrix	Volume	Part Reference
Chromium, Cr	in 2-5% HNO ₃	30ml	AS10KCR03-1
		100ml	AS10KCR10-1
		250ml	AS10KCR25-1
		500ml	AS10KCR50-1
Cobalt, Co	in 2-5% HNO ₃	30ml	AS10KCO03-1
		100ml	AS10KCO10-1
		250ml	AS10KCO25-1
		500ml	AS10KCO50-1
Copper, Cu	in 2-5% HNO ₃	30ml	AS10KCU03-1
		100ml	AS10KCU10-1
		250ml	AS10KCU25-1
		500ml	AS10KCU50-1
Dysprosium, Dy	in 2-5% HNO ₃	30ml	AS10KDY03-1
		100ml	AS10KDY10-1
		250ml	AS10KDY25-1
		500ml	AS10KDY50-1
Erbium, Er	in 2-5% HNO ₃	30ml	AS10KER03-1
		100ml	AS10KER10-1
		250ml	AS10KER25-1
		500ml	AS10KER50-1
Europium, Eu	in 2-5% HNO ₃	30ml	AS10KEU03-1
		100ml	AS10KEU10-1
		250ml	AS10KEU25-1
		500ml	AS10KEU50-1
Gadolinium, Gd	in 2-5% HNO ₃	30ml	AS10KGD03-1
		100ml	AS10KGD10-1
		250ml	AS10KGD25-1
		500ml	AS10KGD50-1
Gallium, Ga	in 2-5% HNO ₃	30ml	AS10KGA03-1
		100ml	AS10KGA10-1
		250ml	AS10KGA25-1
		500ml	AS10KGA50-1
Germanium, Ge	in 2-5% HNO ₃ /HF	30ml	AS10KGE03-1A
		100ml	AS10KGE10-1A
		250ml	AS10KGE25-1A
		500ml	AS10KGE50-1A
Gold, Au	in 2-5% HCl	30ml	AS10KAU03-2
		100ml	AS10KAU10-2
		250ml	AS10KAU25-2
		500ml	AS10KAU50-2
Hafnium, Hf	in 2-5% HNO ₃ /HF	30ml	AS10KHF03-1A
		100ml	AS10KHF10-1A
		250ml	AS10KHF25-1A
		500ml	AS10KHF50-1A
Holmium, Ho	in 2-5% HNO ₃	30ml	AS10KHO03-1
		100ml	AS10KHO10-1
		250ml	AS10KHO25-1
		500ml	AS10KHO50-1
Indium, In	in 2-5% HNO ₃	30ml	AS10KIN03-1
		100ml	AS10KIN10-1
		250ml	AS10KIN25-1
		500ml	AS10KIN50-1
Iridium, Ir	in 5-10% HCl	30ml	AS10KIR03-2B
		100ml	AS10KIR10-2B
		250ml	AS10KIR25-2B
		500ml	AS10KIR50-2B
Iron, Fe	in 2-5% HNO ₃	30ml	AS10KFE03-1
		100ml	AS10KFE10-1
		250ml	AS10KFE25-1
		500ml	AS10KFE50-1
Iron, Fe	in 2-5% HCl	30ml	AS10KFE03-2
		100ml	AS10KFE10-2
		250ml	AS10KFE25-2
		500ml	AS10KFE50-2

Analyte	Matrix	Volume	Part Reference
Lanthanum, La	in 2-5% HNO ₃	30ml	AS10KLA03-1
		100ml	AS10KLA10-1
		250ml	AS10KLA25-1
		500ml	AS10KLA50-1
Lead, Pb	in 2-5% HNO ₃	30ml	AS10KPB03-1
		100ml	AS10KPB10-1
		250ml	AS10KPB25-1
		500ml	AS10KPB50-1
Lithium, Li	in 2-5% HNO ₃	30ml	AS10KLI03-1
		100ml	AS10KLI10-1
		250ml	AS10KLI25-1
		500ml	AS10KLI50-1
Lutetium, Lu	in 2-5% HNO ₃	30ml	AS10KLU03-1
		100ml	AS10KLU10-1
		250ml	AS10KLU25-1
		500ml	AS10KLU50-1
Magnesium, Mg	in 2-5% HNO ₃	30ml	AS10KMG03-1
		100ml	AS10KMG10-1
		250ml	AS10KMG25-1
		500ml	AS10KMG50-1
Manganese, Mn	in 2-5% HCl	30ml	AS10KMN03-2
		100ml	AS10KMN10-2
		250ml	AS10KMN25-2
		500ml	AS10KMN50-2
Manganese, Mn	in 2-5% HNO ₃	30ml	AS10KMN03-1
		100ml	AS10KMN10-1
		250ml	AS10KMN25-1
		500ml	AS10KMN50-1
Mercury, Hg	in 5-10% HNO ₃	30ml	AS10KHG03-1B
		100ml	AS10KHG10-1B
		250ml	AS10KHG25-1B
		500ml	AS10KHG50-1B
Molybdenum, Mo	in 2-5 % NH ₄ OH	30ml	AS10KMO03-5
		100ml	AS10KMO10-5
		250ml	AS10KMO25-5
		500ml	AS10KMO50-5
Molybdenum, Mo	in 2-5% HNO ₃ /HF	30ml	AS10KMO03-1A
		100ml	AS10KMO10-1A
		250ml	AS10KMO25-1A
		500ml	AS10KMO50-1A
Sodium, Na	in 2-5% HNO ₃	30ml	AS10KNA03-1
		100ml	AS10KNA10-1
		250ml	AS10KNA25-1
		500ml	AS10KNA50-1
Sodium, Na	in H ₂ O	30ml	AS10KNA03-3
		100ml	AS10KNA10-3
		250ml	AS10KNA25-3
		500ml	AS10KNA50-3
Niobium, Nb	in 2-5% HNO ₃ /HF	30ml	AS10KNB03-1A
		100ml	AS10KNB10-1A
		250ml	AS10KNB25-1A
		500ml	AS10KNB50-1A
Neodymium, Nd	in 2-5% HNO ₃	30ml	AS10KND03-1
		100ml	AS10KND10-1
		250ml	AS10KND25-1
		500ml	AS10KND50-1
Nickel, Ni	in 2-5% HNO ₃	30ml	AS10KNI03-1
		100ml	AS10KNI10-1
		250ml	AS10KNI25-1
		500ml	AS10KNI50-1
Palladium, Pd	in 2-5% HNO ₃	30ml	AS10KPD03-1B
		100ml	AS10KPD10-1B
		250ml	AS10KPD25-1B
		500ml	AS10KPD50-1B

Analyte	Matrix	Volume	Part Reference
Palladium, Pd	in 2-5% HCl	30ml	AS10KPD03-2
		100ml	AS10KPD10-2
		250ml	AS10KPD25-2
		500ml	AS10KPD50-2
Phosphorus, P	in H ₂ O	30ml	AS10KP03-3
		100ml	AS10KP10-3
		250ml	AS10KP25-3
		500ml	AS10KP50-3
Phosphorus, P	in 0,05% H ₂ SO ₄	30ml	AS10KP03-4A
		100ml	AS10KP10-4A
		250ml	AS10KP25-4A
		500ml	AS10KP50-4A
Platinum, Pt	in 2-5% HCl	30ml	AS10KPT03-2C
		100ml	AS10KPT10-2C
		250ml	AS10KPT25-2C
		500ml	AS10KPT50-2C
Potassium, K	in 2-5% HNO ₃	30ml	AS10KK03-1
		100ml	AS10KK10-1
		250ml	AS10KK25-1
		500ml	AS10KK50-1
Potassium, K	in H ₂ O	30ml	AS10KK03-3
		100ml	AS10KK10-3
		250ml	AS10KK25-3
		500ml	AS10KK50-3
Praseodymium,	in 2-5% HNO ₃	30ml	AS10KPR03-1
		100ml	AS10KPR10-1
		250ml	AS10KPR25-1
		500ml	AS10KPR50-1
Rubidium, Rb	in 2-5% HNO ₃	30ml	AS10KRB03-1
		100ml	AS10KRB10-1
		250ml	AS10KRB25-1
		500ml	AS10KRB50-1
Rubidium, Rb	in H ₂ O	30ml	AS10KRB03-3
		100ml	AS10KRB10-3
		250ml	AS10KRB25-3
		500ml	AS10KRB50-3
Rhenium, Re	in 2-5% HNO ₃	30ml	AS10KRE03-1
		100ml	AS10KRE10-1
		250ml	AS10KRE25-1
		500ml	AS10KRE50-1
Rhenium, Re	in H ₂ O	30ml	AS10KRE03-3
		100ml	AS10KRE10-3
		250ml	AS10KRE25-3
		500ml	AS10KRE50-3
Ruthenium, Ru	in 2-5% HCl	30ml	AS10KRU03-2C
		100ml	AS10KRU10-2C
		250ml	AS10KRU25-2C
		500ml	AS10KRU50-2C
Samarium, Sm	in 2-5% HNO ₃	30ml	AS10KSM03-1
		100ml	AS10KSM10-1
		250ml	AS10KSM25-1
		500ml	AS10KSM50-1
Scandium, Sc	in 2-5% HNO ₃	30ml	AS10KSC03-1
		100ml	AS10KSC10-1
		250ml	AS10KSC25-1
		500ml	AS10KSC50-1
Selenium, Se	in 2-5% HNO ₃	30ml	AS10KSE03-1
		100ml	AS10KSE10-1
		250ml	AS10KSE25-1
		500ml	AS10KSE50-1
Silicon, Si,	in H ₂ O	30ml	AS10KSI03-3
		100ml	AS10KSI10-3
		250ml	AS10KSI25-3
		500ml	AS10KSI50-3

Analyte	Matrix	Volume	Part Reference	Analyte	Matrix	Volume	Part Reference
Silver, Ag	in 2-5% HNO ₃	30ml	AS10KAG03-1	Thulium, Tm	in 2-5% HNO ₃	30ml	AS10KTM03-1
		100ml	AS10KAG10-1			100ml	AS10KTM10-1
		250ml	AS10KAG25-1			250ml	AS10KTM25-1
		500ml	AS10KAG50-1			500ml	AS10KTM50-1
Strontium, Sr	in 2-5% HCl	30ml	AS10KSR03-2	Tungsten, W	in 2-5% HNO ₃ /HF	30ml	AS10KW03-1A
		100ml	AS10KSR10-2			100ml	AS10KW10-1A
		250ml	AS10KSR25-2			250ml	AS10KW25-1A
		500ml	AS10KSR50-2			500ml	AS10KW50-1A
Strontium, Sr	in 2-5% HNO ₃	30ml	AS10KSR03-1	Tungsten, W	in 5-10% NH ₄ OH	30ml	AS10KW03-5C
		100ml	AS10KSR10-1			100ml	AS10KW10-5C
		250ml	AS10KSR25-1			250ml	AS10KW25-5C
Sulfur, S	in H ₂ O	500ml	AS10KSR50-1	Uranium, U	in 2-5% HNO ₃	500ml	AS10KW50-5C
		30ml	AS10KS03-3			30ml	AS10KU03-1
		100ml	AS10KS10-3			100ml	AS10KU10-1
		250ml	AS10KS25-3			250ml	AS10KU25-1
Tantalum, Ta	in 2-5% HNO ₃ /HF	500ml	AS10KS50-3	Vanadium, V	in 2-5% HNO ₃	500ml	AS10KU50-1
		30ml	AS10KTA03-1A			30ml	AS10KV03-1
		100ml	AS10KTA10-1A			100ml	AS10KV10-1
		250ml	AS10KTA25-1A			250ml	AS10KV25-1
Terbium, Tb	in 2-5% HNO ₃	500ml	AS10KTA50-1A	Vanadium, V	in 2-5% H ₂ SO ₄	500ml	AS10KV50-1
		30ml	AS10KTB03-1			30ml	AS10KV03-4
		100ml	AS10KTB10-1			100ml	AS10KV10-4
		250ml	AS10KTB25-1			250ml	AS10KV25-4
Tellurium, Te	in 2-5% HNO ₃	500ml	AS10KTB50-1	Yttrium, Y	in 2-5% HNO ₃	500ml	AS10KV50-4
		30ml	AS10KTE03-1C			30ml	AS10KY03-1
		100ml	AS10KTE10-1C			100ml	AS10KY10-1
		250ml	AS10KTE25-1C			250ml	AS10KY25-1
Tin, Sn	in 2-5% HCl	500ml	AS10KTE50-1C	Ytterbium, Yb	in 2-5% HNO ₃	500ml	AS10KY50-1
		30ml	AS10KSN03-2C			30ml	AS10KYB03-1
		100ml	AS10KSN10-2C			100ml	AS10KYB10-1
		250ml	AS10KSN25-2C			250ml	AS10KYB25-1
Tin, Sn	in 2-5% HNO ₃ /HF	500ml	AS10KSN50-2C	Zinc, Zn	in 2-5% HCl	500ml	AS10KYB50-1
		30ml	AS10KSN03-1A			30ml	AS10KZN03-2
		100ml	AS10KSN10-1A			100ml	AS10KZN10-2
		250ml	AS10KSN25-1A			250ml	AS10KZN25-2
Titanium, Ti	in 2-5% HCl/HF	500ml	AS10KSN50-1A	Zinc, Zn	in 2-5% HNO ₃	500ml	AS10KZN50-2
		30ml	AS10KTI03-2A			30ml	AS10KZN03-1
		100ml	AS10KTI10-2A			100ml	AS10KZN10-1
		250ml	AS10KTI25-2A			250ml	AS10KZN25-1
Titanium, Ti	in 2-5% HNO ₃ /HF	500ml	AS10KTI50-2A	Zirconium, Zr	in 2-5% HCl/HF	500ml	AS10KZN50-1
		30ml	AS10KTI03-1A			30ml	AS10KZR03-2A
		100ml	AS10KTI10-1A			100ml	AS10KZR10-2A
		250ml	AS10KTI25-1A			250ml	AS10KZR25-2A
Thallium, Tl	in 2-5% HNO ₃	500ml	AS10KTI50-1A	Zirconium, Zr	in 2-5% HNO ₃ /HF	500ml	AS10KZR50-2A
		30ml	AS10KTL03-1			30ml	AS10KZR03-1A
		100ml	AS10KTL10-1			100ml	AS10KZR10-1A
		250ml	AS10KTL25-1			250ml	AS10KZR25-1A
		500ml	AS10KTL50-1			500ml	AS10KZR50-1A

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