Optima® 8x00 ICP-OES

Demountable Torches

Demountable design using one-piece quartz tubing for plasma and auxiliary gas flow. Available in a wide range of styles from 0-3 slots, depending on your application needs. Torches without slots are recommended for organic solvents. 1-slot torches are the standard torch for aqueous solutions. 3-slot torches are typically used for organic analysis.

Quartz Torches

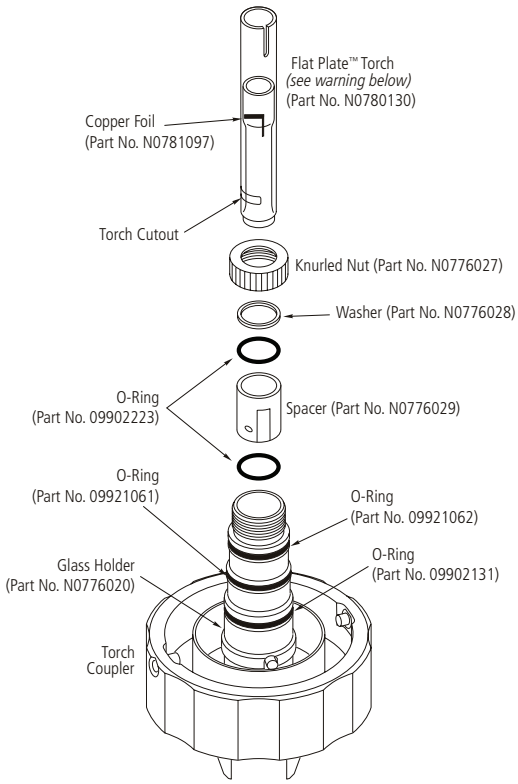
# of Slots	Part No.
0	N0780133
1	N0780130
3	N0780132

Ignitor Tape

Description	Part No.
Copper Ignitor Tape – Qty. 50 pcs.	N0781097

Torch O-Rings

Description	Qty	Part No.
O-Ring Kit for Adjustable Torch		N0780437
Includes:		
O-Ring – 1.171 ID 0.139 WD	1	09902131
O-Ring – 0.799 ID 0.103 WD	2	09902223
O-Ring – 1.109 ID 0.139 WD	1	09921061
O-Ring – 1.046 ID 0.139 WD	1	09921062
Silicone O-Ring lube 2 grams	1	09200078



WARNING: Only use PerkinElmer Flat Plate™ Torch Glassware in your Optima 8x00. Use of other torches may damage your instrument and may affect instrument performance.

HybridXLT™ Torch

The new ceramic/quartz hybrid design provides the highest performance for your Optima® ICP-OES 8x00 spectrometer with an extended lifetime of up to 10 x your current quartz torch. The HybridXLT Torch gives you a viewable plasma compared to a full ceramic design, and is ideal for all sample types, except organic solvents.

HybridXLT Torch

Description	Part No.
HybridXLT 1-Slot Torch	N0780128

PerkinElmer®
For the Better

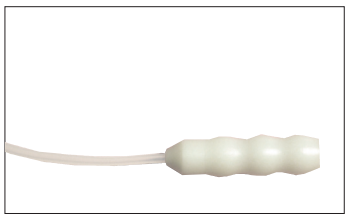
Nebulizers

PerkinElmer offers high-quality sample introduction components for a wide variety of applications.

MEINHARD® Nebulizers

Provide excellent sensitivity and precision for aqueous solutions and samples with few dissolved solids (less than 1%). MEINHARD Nebulizers are self-aspirating and must not be used with solutions containing hydrofluoric acid. All require an end cap for use with Ryton® Scott spray chambers.

Type	Application	Part No.
Type A	General purpose	00472020
Type K1 (standard)	Ar low-flow, High dissolved solids	N0777707
Type K3	Reduced flow, and organics	N0681574

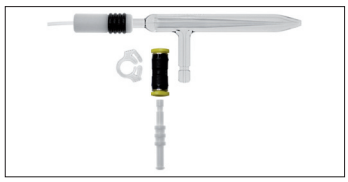


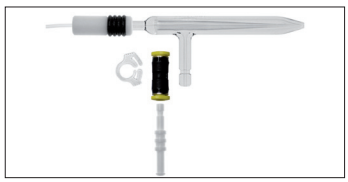
MEINHARD Nebulizer Parts

Description	Part No.
Liquid-End Connector Kit, 4 mm	N0777414
Nebulizer Clip for MEINHARD Nebulizers	N0777460

End Cap for Concentric Glass Nebulizers

Description	Part No.
End Cap	N0680504





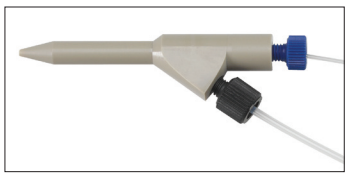
MicroMist Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
0.7 L/min	0.05 mL/min	N0775349
0.7 L/min	0.1 mL/min	N0775348
0.7 L/min	0.2 mL/min	N0775347
0.7 L/min	0.6 mL/min	N0775346

Requires Quick Disconnect Part No. N0770336.

SeaSpray Nebulizers

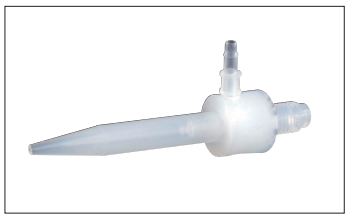
Air Flow Rate	Uptake Rate	Part No.
0.7 L/min	2 mL/min	N0775345



PEEK MiraMist® Nebulizer

The MiraMist fits regular spray chambers as a direct replacement for glass concentric nebulizers. Its features include standard pressure (45 psi), low sample flow and enhanced parallel path design.

Description	Uptake Rate	Part No.
PEEK MiraMist	0.2 to 2.5 mL/min	N0775330



MicroFlow Nebulizers

MicroFlow nebulizers are constructed entirely from chemically resistant fluoropolymers, ideal for strong acids, alkalis, organics, high salt solutions and high solid concentrations. They are resistant to clogging, are reliably self-aspirated or pumped and produce a fine aerosol for high transport efficiency and high sensitivity.

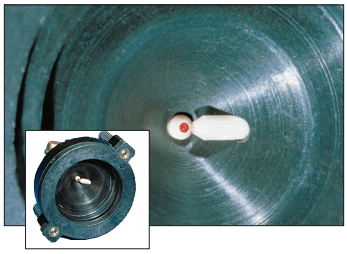
Description	Part No.
PolyPro ST Nebulizer	N0777219
PFA-ST Nebulizer	N0777049
PFA-ST3 Microflow Nebulizer	N0777676

GemCone™ and GemTip Nebulizers

Low-flow GemCones permit lower nebulizer gas flow rates, useful for spectral lines with high excitation energies and for providing a more robust plasma. GemCone Nebulizers require an end cap for use with Ryton Scott Spray Chambers.

Description	Part No.
GemCone Low-Flow Nebulizer	N0770358
GemCone High Dissolved Solids	N0690670
GemCone Sample Capillary Adapter	N0371505
End Cap for GemCone Nebulizers	N0680504
Quick Disconnect Tubing	N0770336

Nebulizers, *continued*



GemTip Cross-Flow II Nebulizers

Excellent general purpose nebulizer for the analysis of strong mineral acids (including HF) and samples with less than 5% dissolved solids.

Description	Part No.
GemTip Cross-Flow II Nebulizer for Optima 8x00	N0780546
GemTip Cross-Flow II Tip Kits for Optima 8x00	N0780676
O-Ring Kit for GemTip Cross-Flow Nebulizers	N9300067

Spray Chambers

The spray chamber is an integral part of the sample introduction system responsible for filtering the sample mist to permit the appropriate droplet size distribution to reach the plasma.

Cyclonic Spray Chambers

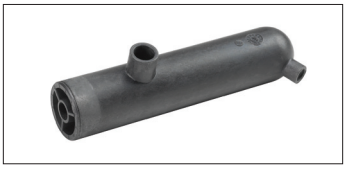
Description	Part No.
Standard	N0776052
O-Ring Free	N0775351
HF Resistant	N0777496

Unifit Drain Connectors with Tubing for Cyclonic Spray Chambers

Sample Tube Size	Qty	Part No.
1/16 in. o.d. x 0.75 mm i.d. x 700 mm	3	N0774080
1.3 mm o.d. x 0.75 mm i.d. x 700 mm	3	N0774077

Baffled Cyclonic Spray Chambers

Description	Part No.
Standard	N0776053
O-Ring Free	N0775352
O-Ring free for Oil Analysis (4 mm baffle)	N0775355
Standard for Oil Analysis (4 mm baffle)	N0776090
Standard (7 mm baffle)	N0777036

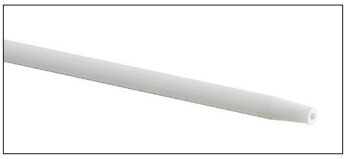


Scott Spray Chamber

The Scott Spray Chamber is corrosion-resistant and is inert to most mineral acids including HF, aqua regia and all organic solvents normally used in ICP analyses.

Description	Part No.
Scott Spray Chamber	N0770357

Injectors and Injector Support Adapters



Alumina Injectors

Alumina injectors are corrosion-resistant to all mineral acids including HF and aqua regia. They are also used with less volatile organic solvents, e.g., xylene.

Dimensions	Part No.
0.80 mm i.d.	N0781009
1.2 mm i.d.	N0781015
1.2 mm i.d. (1.2 mm entire length of tube)	N0781007
2.0 mm i.d. (standard with Optima instrument)	N0781014

Injectors and Injector Support Adapters, *continued*

Quartz Injectors

Quartz injectors are designed for organic solvents and non-HF matrices.

Dimensions	Part No.
0.80 mm i.d.	N0781018
1.2 mm i.d.	N0781019
1.2 mm i.d. (1.2 mm entire length of tube)	N0781013
1.6 mm i.d.	N0781016
2.0 mm i.d.	N0781050
3.0 mm i.d.	N0781017

Sapphire Injectors

Sapphire injectors are ideal for silicon applications.

Dimensions	Part No.
2.0 mm i.d.	N0781008

Injector Support Adapter and O-Ring

Description	Part No.
Injector Support Adapter	N0770603
Injector Support Adapter O-Ring	N0770438

Sample Introduction Kits

Cyclonic/Concentric Kit

	Part No.
Cyclonic/Concentric Kit for Optima 8x00	**N0780617**
Includes:	
1 Slot Quartz Torch	N0780130
2.0 mm i.d. Alumina Injector	N0781014
Glass Cyclonic Spray Chamber	N0776052
Meinhard® Type K1 Nebulizer	N0777707
Quartz Torch Copper Ignitor Tape – Qty. 50 pcs.	N0781097

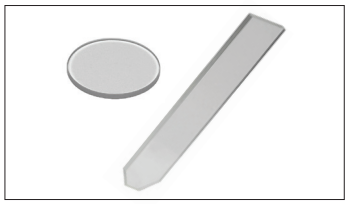
Scott/Cross-Flow II Kit

	Part No.
Scott/Cross-Flow II Kit for Optima 8x00	**N0780616**
Includes:	
1 Slot Quartz Torch	N0780130
2.0 mm i.d. Alumina Injector	N0781014
Scott Spray Chamber	N0770357
GemTip™ Cross-Flow II Nebulizer	N0780546
Quartz Torch Copper Ignitor Tape – Qty. 50 pcs.	N0781097

Organics Kit

	Qty.	Part No.
Organics Kit for Optima 8x00		**N0780608**
Includes:		
3 Slot Quartz Torch	2	N0780132
1.2 mm i.d. Alumina Injector	2	N0781007
Baffled Cyclonic Spray Chamber 4mm	1	N0776090
Gemcone Low-Flow Nebulizer	1	N0770358
Cyclonic Spray Chamber Adapter	1	N0770614
Injector Adapter Washer	1	N0776014
Injector Adapter	1	N0776091
Injector Adapter Nut	1	N0776025
O-Ring	1	09902207
O-Ring 8.74 ID 1.78 WD	2	09921028

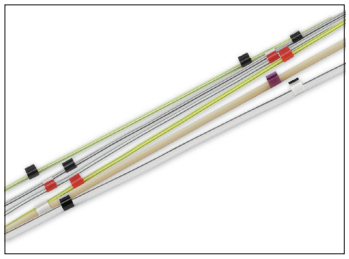
Purge Windows



Purge Extension Windows

ICP Model	View	Part No.
Optima 2x00/7000/8000	DV Axial	09992731
Optima 2x00/7000/8000	DV Radial	N0690672
Optima 4x00/5x00/7100/7200/7300/8300	DV Axial	N0771116
Optima 5x00/7100/7200/7300/8300	DV Radial	N0770944

Pump Tubing



i.d. (mm)	Stop Colors	Standard PVC (Pkg 12)	Flared PVC (Pkg 12)	Solvent Flex (Pkg 12)	Viton® (Pkg 12)	Santoprene® (Pkg 12)	Silicone (Pkg 6)
0.19	orange / red	N0695476	N0773111				
0.25	orange / blue	N0773117	N0773112				
0.38	orange / green	N0777110	N0777042	N0777874			
0.44	green / yellow		N0773113				
0.51	orange / yellow		N0777476		N0777446		
0.64	orange / white		N0777711				
0.76	black / black	09908587	N0777043	00473550	N0773118		00473552
1.02	white / white				N0777442		N0777441
1.14	red / red	09908585		09923037	N0773115	N0773119	N0691595
1.30	gray / gray				N0777445	N0777444	N0777443
1.42	yellow / yellow	N0777521					
1.52	yellow / blue	09923536					
1.65	blue / blue				N0777447		
1.85	green / green	N0777518				N0773116	
2.06	purple / purple	N0777561					
2.79	purple / white			02508080			09923448
3.18	black / white	N8122012					

Autosampler Tubes

Autosampler Graduated Tubes with Red Caps

Capacity	Size	Type	Qty	Part No.
15 mL*	17 mm x 120 mm	Conical Bottom	500/50 per bag	B0193233
50 mL*	28 mm x 115 mm	Conical/Freestanding	500/25 per bag	B0193234

Autosampler Tubes

Capacity	Size	Type	Qty	Part No.
8 mL	13 mm x 100 mm	Round Bottom	1,200 bulk	N0777156
8 mL	13 mm x 100 mm	Round Bottom	1,000/250 per bag	N0777159
15 mL	17 mm x 100 mm	Round Bottom	1,200 bulk	N0777167
	Plug for 15 mL N0777167 Tubes		1,200 bulk	N0777599
14 mL	17 mm x 100 mm	Round Bottom	1,000/125 per bag	N0777168
16 mL	17 mm x 100 mm	Round Bottom	1,000/125 per bag	N9301205
50 mL*	30 mm x 115 mm	Conical	500 bulk with teal flat caps	N0777693
50 mL*	30 mm x 115 mm	Conical	500/50 per bag with teal flat caps	N0777691

*Graduated

Single-Element Standards – 1,000 mg/L

Whatever your application, you can depend on PerkinElmer Pure Standards to yield reliable, accurate results. PerkinElmer offers a wide selection of atomic spectroscopy calibration standards. Each solution is supplied with a comprehensive Certificate of Analysis that documents the quality and reliability. Please visit our website for a complete listing of Atomic Spectroscopy Standards.

Element	Symbol	Matrix	Pure Grade 125 mL Part No.	Pure Grade 500 mL Part No.
Aluminum	Al	2% HNO_3	N9300184	N9300100
Cadmium	Cd	2% HNO_3	N9300176	N9300107
Calcium	Ca	2% HNO_3	N9303763	N9300108
Chromium	Cr	2% HNO_3	N9300173	N9300112
Copper	Cu	2% HNO_3	N9300183	N9300114
Iron	Fe	2% HNO_3	N9303771	N9300126
Lead	Pb	2% HNO_3	N9300175	N9300128
Mercury	Hg	10% HNO_3	N9300174	N9300133
Sodium	Na	2% HNO_3	N9303785	N9300152
Zinc	Zn	2% HNO_3	N9300178	N9300168

Universal Data Acquisition Standards Kit

Matrix	Contents	Vol.	Part No.
Solution Kit (Includes items listed below – 1 bottle of each)			N9306225
5% HNO_3	10 mg/L: Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Sc, Tb, Th, Tm, Y, Yb	125 mL	N9300232
5% HNO_3	10 mg/L: Al, Ag, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, V, U, Zn	125 mL	N9300233
10% HCl/ 1% HNO_3	10 mg/L: Au, Hf, Ir, Pd, Pt, Rh Ru, Te, Sb, Sn	125 mL	N9300234
5% HNO_3	10 mg/L: Hg	125 mL	N9300253
H_2O/tr HF	10 mg/L: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	N9300235

Multi-Element Standards

Matrix	Contents	Vol.	Part No.
Multi-Element Solution 1			
2% HNO_3	10 mg/L: Be, Bi, Ce, Co, In, Mg, Ni, Pb, U	125 mL	N9300231
Multi-Element Solution 2			
5% HNO_3	10 mg/L: Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb	125 mL	N9300232
Multi-Element Solution 3			
5% HNO_3	10 mg/L: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hg*, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn *Supplied in separate bottle.	125 mL	N9300233
Multi-Element Solution 3 without Mercury			N9301720
Multi-Element Solution 4			
10% HCl/1% HNO_3	10 mg/L: Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te	125 mL	N9300234
Multi-Element Solution 5			
H_2O/tr HF	10 mg/L: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	N9300235

Multi-Element Standards, *continued*

Matrix	Contents	Vol.	Part No.
PerkinElmer Pure I			
5% HNO_3	400 mg/L: Tl 200 mg/L: Bi, In, Pb 150 mg/L: Ga 100 mg/L: Al 50 mg/L: Ag, Ni 25 mg/L: Cr 20 mg/L: Cd, Co, Cu, Zn 15 mg/L: B, Fe 5 mg/L: Ba, Mn 1 mg/L: Be, Sr	125 mL	N9303940
PerkinElmer Pure IV			
10% HNO_3	1000 mg/L: Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Tl, Zn	125 mL	N9303941
PerkinElmer Pure VIII			
5% HNO_3	100 mg/L: Al, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mg, Mn, Na, Ni, Pb, Se, Sr, Te, Tl, Zn	125 mL	N9303942
PerkinElmer Pure IX			
5% HNO_3	100 mg/L: As, Be, Pb, Cd, Cr, Ni, Se, Tl	125 mL	N9303943
Mercury	100 mg/L		
5% HNO_3	100 mg/L: Mercury in 5% HNO_3	125 mL	N9300223
PerkinElmer Pure X			
2% HNO_3	35,000 ug/L: Ca 15,000 ug/L: Mg 8,000 ug/L: Na 3,000 ug/L: K 100 ug/L: B, Fe, Mo, Sr 50 ug/L: As, Ba, Ni, V, Zn 30 ug/L: Mn 25 ug/L: Co, Pb 20 ug/L: Be, Cd, Cr, Cu 10 ug/L: Bi, Se, Tl	125 mL	N9303944
Mercury	8 mg/L		
5% HNO_3	8 mg/L: Mercury in 5% HNO_3	125 mL	N9303954
PerkinElmer Pure XI			
5% HNO_3	2500 mg/L: Zn 900 mg/L: Cr, Pb 800 mg/L: Cu 200 mg/L: Ni 10 mg/L: Cd	125 mL	N9303945
Mercury	5 mg/L		
5% HNO_3	5 mg/L: Mercury in 5% HNO_3	125 mL	N9303949
PerkinElmer Pure XIII			
5% HNO_3	500 mg/L: Al 250 mg/L: V 100 mg/L: As, Be, Co, Cr, Cu, Fe, Mn, Ni, Pb, Zn 25 mg/L: Cd, Se	125 mL	N9303946
PerkinElmer Pure XVII			
15% HCL/trace HF	100 mg/L: Hf, Ir, Sb, Sn, Ta, Ti, Zr	125 mL	N9303948

Interference Check Standards

Matrix	Contents	Vol.	Part No.
Interferents A			
5% HNO_3	5,000 mg/L: Al, Ca, Mg 2,000 mg/L: Fe	500 mL	N9300226
Alternate Interferents A			
5% HNO_3	1,000 mg/L: Cr, Cu, Mn, Ni, Ti, V	500 mL	N9300228
Analytes B			
5% HNO_3/trTartaric Acid/tr HF	100 mg/L: Cd, Ni, Zn 60 mg/L: Sb 50 mg/L: Ba, Be, Co, Cr, Cu, Mn, V 20 mg/L: Ag 10 mg/L: As, Tl	125 mL	N9300227
Alternate Analytes B			
5% HNO_3/tr Tartaric Acid/tr HF	100 mg/L: Al, As, B, Mo, Na, Sb, Se, Tl 10 mg/L: Ca, Fe, Mg, Si	125 mL	N9300229

Instrument Setup Solutions

Matrix	Contents	Vol.	Part No.
Vis Wavecal Solution			
2% HNO_3	50 mg/L: K 10 mg/L: La, Li, Mn, Na, Sr 1 mg/L: Ba, Ca	250 mL	N9302946
UV Wavecal Solution			
5% HCl	100 mg/L: K, P, S 20 mg/L: As, La, Li, Mn, Mo, Na, Ni, Sc	125 mL	N0681470
5% HCl	100 mg/L: K, P, S 20 mg/L: As, La, Li, Mn, Mo, Na, Ni, Sc	500 mL	N0582152
Low UV Standard			
2% HNO_3	10 mg/L: Al, P, S	250 mL	N0691580
Calcium Stray Light Standard			
H_2O	10,000 mg/L: Ca	125 mL	N0691581

Every day, you can count on PerkinElmer to provide you with solutions that deliver reliable performance, control operating costs and maximize operational time. Our complete portfolio of consumables, parts, supplies, training and service helps you meet both routine and demanding measurement challenges. We invest heavily in testing and validating our products to ensure you receive guaranteed compatibility and performance – on-time, for every instrument in your laboratory.

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