



Agilent ICP-OES Spectroscopy Supplies  
**INVENTORY CHECKLIST**

The Measure of Confidence

Agilent instruments are high quality, high performance systems that are built to last. With planned, scheduled maintenance and upkeep, they will provide reliable, defensible analysis for a long time.

Proper maintenance includes knowing when to replace and how to install genuine Agilent parts and supplies to help you maintain optimum performance.



**Agilent Technologies**



## KEEP YOUR INSTRUMENT FUNCTIONING AT PEAK PERFORMANCE WITH HIGH QUALITY AGILENT SUPPLIES

### NEBULIZER

Delivers fine droplets for optimum signal-to-noise

**Why replace?** If damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged; Clean weekly; Replace 6-12 months

Inert OneNeb for most samples and high TDS	2010126900 <sup>#,5</sup>
SeaSpray glass concentric for most samples	2010096400 <sup>E,#</sup> or G8010-60255 <sup>U,5</sup>
Conikal glass concentric for organics	2010106800 <sup>E,#</sup> or G8010-60270 <sup>U,5</sup>
Cleaning tool for concentric nebulizer	G3266-80020
Inert V-groove for high TDS	9910057400 <sup>S,#</sup>

[agilent.com/chem/ICP-OESnebulizers](http://agilent.com/chem/ICP-OESnebulizers)



### SPRAY CHAMBER

Removes large droplets for optimum signal-to-noise

**Why replace?** If damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Soak when droplets form; Replace 6-12 months

Single pass glass cyclonic	2010081700 <sup>0,#</sup> or G8010-60271 <sup>H,B,5</sup>
Double pass glass cyclonic	7910043700 <sup>0,#</sup> or G8010-60256 <sup>H,B,5</sup>
Inert single pass cyclonic	G8000-70008 <sup>H,B,5</sup>
Inert double pass cyclonic	G8010-80034 <sup>H,B,5</sup>
Inert Sturman-Masters	110593190 <sup>#</sup>

[agilent.com/chem/ICP-OESspraychamber](http://agilent.com/chem/ICP-OESspraychamber)



### AXIAL ICP TORCH<sup>#</sup>

Creates plasma and excites sample

**Why replace?** If outer tube is damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged; Clean weekly; Replace 2-4 months

One piece quartz torch w/2.4 mm id inj.	2010090400
One piece w/tapered 2.4 mm id inj. for high TDS	2010094800
One piece w/1.4 mm id inj. for organics	2010104800
One piece w/0.8 mm id inj. for volatile organics	2010104700

[agilent.com/chem/axialtorch](http://agilent.com/chem/axialtorch)



### 5100 DV ICP TORCH

Creates plasma and excites sample

**Why replace?** If outer tube is damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged; Clean weekly; Replace 3-6 months

Dual View Torches for 5100 SVDV/VDV systems	
One piece EzyFit torch w/1.8 mm id inj.	G8010-60228
Demountable EzyFit torch w/1.8 mm id inj.	G8010-60236
Demountable EzyFit w/1.4 mm id inj. for organics	G8010-60233
Demountable EzyFit w/2.4 mm id inj. for high TDS	G8010-60232
Inert, demountable EzyFit w/ceramic inj. for HF	G8010-60231
Quartz outer tube set for DV demountable torch	G8010-60263
Radial View Torches for 5100 RV systems	
One piece EzyFit torch w/1.4 mm id inj.	G8012-60000
Demountable EzyFit torch w/1.4 mm id inj.	G8010-60237
Demountable EzyFit w/0.8 mm id inj. for volatile organics	G8010-60235
Inert, demountable EzyFit w/ceramic inj. for HF	G8010-60234
Quartz outer tube set for RV demountable torch	G8010-60264

[agilent.com/chem/5100torch](http://agilent.com/chem/5100torch)



### RADIAL ICP TORCH<sup>#</sup>

Creates plasma and excites sample

**Why replace?** If outer tube is damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged; Clean weekly; Replace 3-6 months

One piece quartz torch w/1.4 mm id inj.	2010069690
One piece w/tapered 1.8 mm id inj. for high TDS	2010095000
One piece w/1.4 mm id inj. for organics	2010117500
One piece w/0.8 mm id inj. for volatile organics	2010117400

[agilent.com/chem/radialtorch](http://agilent.com/chem/radialtorch)



### SEMI-DEMOUNTABLE ICP TORCH<sup>#</sup>

Reduces operating costs. Flexible – change injector with application

**Why replace?** If outer tube is damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged; Clean weekly; Replace 3-6 months

Quartz torch body for axial torch	2010083400
Quartz torch body for radial torch	2010072900
Inert alumina inj., 1.8 mm id for HF digests	2410067590
Quartz inj., 1.8 mm id for most samples	9910057000
Quartz inj., 0.8 mm id for volatile organics	2010077500

[agilent.com/chem/axialSDtorch](http://agilent.com/chem/axialSDtorch)  
[agilent.com/chem/radialSDtorch](http://agilent.com/chem/radialSDtorch)



## FULLY DEMOUNTABLE ICP TORCH#

Reduces operating costs. Flexible – change injector with application

**Why replace?** If torch body damaged, or when performance degrades

**Replacement interval\*:** Flush routinely; Inspect and replace if damaged;

Clean weekly; Replace 3-6 months

Quartz torch body for axial torch	7910044400
Quartz outer tube for axial torch	2010095200
Quartz intermediate tube, axial or radial	2010095300
Quartz torch body for radial torch	7910044500
Quartz outer tube for radial torch	2010095500
Quartz outer tube for high TDS, radial torch	2010120300
Ceramic outer tube for radial torch	2010095800
Inert alumina inj., 1.8 mm id for HF digests	2010095900
Quartz inj., 1.0 mm id for radial torch with volatile organics	2010096000
Quartz inj., 1.5 mm id for radial torch with organics	2010095600
Quartz inj., 2.4 mm id for axial torch	2010095400

[agilent.com/chem/axialFDtorch](http://agilent.com/chem/axialFDtorch)

[agilent.com/chem/radialFDtorch](http://agilent.com/chem/radialFDtorch)



## PERISTALTIC PUMP TUBING

Pumps sample to the nebulizer

**Why replace?** “Stretched” tubing causes drift and poor precision

**Replacement interval\*:** Inspect daily; Replace when stretched or has flat spots;

Flush routinely and pump out; Replace 1-2 weeks

PVC pump tubing for sample, white/white tabs, axial ICP	3710034400
PVC pump tubing for sample, grey tabs, radial ICP	3710034500
PVC pump tubing for s/chamber waste, blue/blue tabs	3710034600
PVC pump tubing for int. std., orange/white tabs	3710046900
PVC pump tubing for high TDS, black/black tabs	3710027200

Additional pump tubing for use with organic solvents and other sizes also available.

[agilent.com/chem/tubing](http://agilent.com/chem/tubing)



## STANDARDS

Required for wavelength calibration and elemental calibration

**Why replace?** Expired or contaminated standards introduce analytical errors

**Replacement interval\*:** Prepare daily-weekly based on concentration. Replace if contaminated or past expiry; Replace 1-2 years

Wavelength calibration solution, dilute 10x before use	6610030000
Wavelength calibration solution, ready to use	6610030100
Calibration blank solution, ready to use	5190-7001

Additional single and multi-element calibration standards also available.

[agilent.com/chem/ICP-OESstandards](http://agilent.com/chem/ICP-OESstandards)



## SPS 3 AUTOSAMPLER SUPPLIES

Automates instrument operation with periodic rinsing

**Why replace?** Kinked probe or transfer line degrades performance

**Replacement interval\*:** Inspect tubing and probe daily; Replace when stretched or kinked;

Flush routinely and pump out; Replace rinse tubing 1-2 weeks and probe 6-12 months

PVC Solvaflex pump tubing for rinse, grey tabs	3710049000
Inert PTFE sleeved probe, 1.0 mm id	9910112000
Operating supplies kit	190065400
Polypropylene centrifuge tubes, 30 mm od, 50 mL, 500/pk	190065200
Polypropylene sample tubes, 16 mm od, 1000/pk	190049700
Sample rack for 16 mm od tubes, 60 position	6610025400
Sample rack for 30 mm od tubes, 21 position	6610026600

Additional pump tubing for rinsing with organic solvents, plus other probe, rack and sample tube options are available

[agilent.com/chem/SPS3kit](http://agilent.com/chem/SPS3kit)

[agilent.com/chem/SPS3probes](http://agilent.com/chem/SPS3probes)

[agilent.com/chem/SPS3racks](http://agilent.com/chem/SPS3racks)



## MISCELLANEOUS SUPPLIES

**Why replace?** Worn tubing for gas, transfer, or drain degrades performance

**Replacement interval\*:** Inspect transfer, drain, and gas supply tubing daily; Replace if stretched or degraded; Flush routinely and pump out; Replace 3-6 months

Operating supplies kit for 5100 DV ICP	G8010-67001
Operating supplies kit for 5100 RV ICP	G8012-67001
Tubing and connectors kit for axial ICP	9910097500#
Tubing and connectors kit for radial ICP	9910105400#
Nalgene tubing for nebulizer gas supply	3710031500#
FEP transfer tube, s/chamber for axial ICP	7910051590#
FEP transfer tube, cyclonic s/c for radial ICP	7910051290#
FEP transfer tube, Sturman-Masters s/c for radial ICP	7910051490#
Silicone tubing for auxiliary and plasma gas supply to torch	2410023800#
Speedy clamp, to secure gas tubing to connector	810103200
Drain tubing for cyclonic s/chamber	3710024600#
Drain tubing for Sturman-Masters s/chamber	3710033900#

[agilent.com/chem/miscspectrosupplies](http://agilent.com/chem/miscspectrosupplies)



- \* May vary with application/sample type
- E Uses EzyFit sample connector (standard for 700 Series)
- U Uses UniFit sample connector (standard for 5100 DV)
- S Only fits Sturman-Master spray chamber
- O Uses O-ring seal for nebulizer
- H Uses Helix seal for nebulizer (standard for 5100 DV)
- B Has ball joint socket for torch (standard for 5100 DV)
- # Suits 700, Vista & Liberty Series
- 5 Suits 5100 DV

Learn more about maximizing ICP-OES performance, visit [agilent.com/chem/ICP-OESSupplies](http://agilent.com/chem/ICP-OESSupplies)

## OPERATIONAL TIPS

- Use only high purity acids/reagents
- Always matrix match your calibration standards and blanks
- Verify instrument performance before analysis
- Do not overtighten the pressure bar on the peristaltic pump tubing
- Always detach the peristaltic pump tubing from the holder after use
- Always rinse between samples and after analysis
- Routinely clean the nebulizer by reverse-flushing
- Soak the spray chamber overnight in 25% detergent to restore performance
- Clean the torch by soaking in aqua regia and rinse afterwards
- Ensure the torch is dry before re-installing

## RESOURCES

Agilent provides free spectroscopy and technical support – plus on-line resources to make you and your lab more productive

For your local Agilent Representative or Agilent Authorized Distributor:  
[agilent.com/chem/contactus](http://agilent.com/chem/contactus)

ICP-OES troubleshooting video series:

[agilent.com/chem/troubleshootICP-OES](http://agilent.com/chem/troubleshootICP-OES)

OneNeb nebulizer overview: [agilent.com/chem/oneneb](http://agilent.com/chem/oneneb)

ICP-OES supplies: [agilent.com/chem/ICP-OESSupplies](http://agilent.com/chem/ICP-OESSupplies)

Spectroscopy supplies catalog:

[agilent.com/chem/spectroscopysupplies](http://agilent.com/chem/spectroscopysupplies)

Spectroscopy information:

[agilent.com/chem/specsuppliesinfo](http://agilent.com/chem/specsuppliesinfo)

700 series axial ICP-OES quick reference guide

[agilent.com/chem/700axialqrg](http://agilent.com/chem/700axialqrg)

700 series radial ICP-OES quick reference guide

[agilent.com/chem/700radialqrg](http://agilent.com/chem/700radialqrg)

5100 series DV ICP-OES quick reference guide

[agilent.com/chem/5100qrg](http://agilent.com/chem/5100qrg)

## ICP-OES SUPPLIES CHECKLIST

Product & Description	Replacement Interval*	Part Number	Quantity Ordered
<b>Nebulizers:</b> Deliver fine droplets for optimum signal-to-noise	6-12 Months		
<b>Spray Chamber:</b> Removes large droplets for optimum signal-to-noise	6-12 Months		
<b>5100 DV ICP Torch:</b> Creates plasma and excites sample	3-6 Months		
<b>Axial ICP Torch:</b> Creates plasma and excites sample	2-4 Months		
<b>Radial ICP Torch:</b> Creates plasma and excites sample	3-6 Months		
<b>Semi-Demountable ICP Torch:</b> Reduces operating costs. Flexible – change injector with application	3-6 Months		
<b>Fully Demountable ICP Torch:</b> Reduces operating costs. Flexible – change injector with application	3-6 Months		
<b>Peristaltic Pump Tubing:</b> Pumps sample to the nebulizer	1-2 Weeks		
<b>Standards:</b> Required for wavelength calibration and elemental calibration	1-2 Years		
<b>SPS 3 Autosampler Supplies:</b> Automates instrument operation with periodic rinsing	Tubing: 1-2 Weeks Probe: 6-12 Months		
<b>Miscellaneous Supplies</b>	3-6 Months		

\* May vary with application/sample type

### For more information

Learn more at [agilent.com/chem/ICP-OESSupplies](http://agilent.com/chem/ICP-OESSupplies)

This information is subject to change without notice.

© Agilent Technologies, Inc. 2014  
Printed in the USA September 2, 2014  
5991-5047EN



**Agilent Technologies**