

Agilent technical experts have compiled a list of recommended supplies that you should consider using with your new instrument in order to keep your lab operational without any disruptions and to achieve optimal performance.

## Top Supplies for 5000 series ICP-OES for aqueous matrices



### Torches

- [G8010-60228](#): One-piece Easy fit torch with 1.8 mm id injector (standard torch for DV systems)
- [G8012-60000](#): One-piece Easy fit torch with 1.4 mm id injector (standard torch for RV systems)

### Sample introduction

- [G8010-60255](#): SeaSpray nebulizer  **(Top Recommendation)**
- [G8010-60256](#): Double-pass glass cyclonic spray chamber
- [G8010-67001](#): Operating supplies kit, for 5000 series SVDV/VDV (dual view) ICP-OES
- [G8012-67001](#): Operating supplies kit, for 5000 series RV (radial view) ICP-OES

### Peristaltic pump tubing

- [3710034400](#): PVC tubing with white/white tabs for aqueous samples  **(Top Recommendation)**
- [3710034600](#): PVC tubing with blue/blue tabs for aqueous waste  **(Top Recommendation)**
- [3710046900](#): PVC tubing with orange/white tabs for Internal Standard (aqueous based)
- [1610132400](#): Y-piece connector for online addition of internal standard

## Standard (aqueous) 5000 series ICP-OES supplies recommendations

Part Number	Description	Reason to Use	
<a href="#">See this link</a> for a full selection of torches including the new fully demountable torch	One-piece, semi-demountable, and fully demountable torch options are available	One-piece torches are supplied as standard with the instrument. Semi-demountable torches allow the outer tube-set to be removed and replaced when required. Fully demountable torches allow both the injector and outer tube set to be removed and replaced when required	
<a href="#">G8010-80035</a>	UniFit sample connector, 0.75 mm id, 10/pk	Sample capillaries are used to introduce sample into the nebulizer. Users will need to periodically change this sample connector and should have extras on hand	
<a href="#">G8010-80036</a>	UniFit drain connector for use with 5000 series ICP-OES spray chamber, 3/pk	Additional drain lines used to remove waste from the spray chamber. Users will need to periodically change this drain line and should have extras on hand	
<a href="#">G8010-68014</a> (axial window) <a href="#">G8010-68018</a> (axial O-ring) <a href="#">G8010-68015</a> (radial window)	Replacement glass and O-ring for pre-optics window assembly	Additional glass or O-rings for the pre-optic window assemblies for axial and radial view. The windows need to be cleaned regularly and will need periodic replacement. It is advised for users to have spare windows to minimize downtime if a replacement is required	
<a href="#">G8020-68016</a> <a href="#">G8010-68019</a>	Replacement air filter element	Filter element for the cooling air inlet on the 5800/5900 ICP-OES Filter element for the cooling air inlet in the 5100/5110 ICP-OES	
<a href="#">6610030100</a>	Bottle of wavelength calibration solution for ICP-OES 500 mL 5 ppm (ready to use)	This solution is required periodically by the user for wavelength calibration of the instrument  <b>(Top Recommendation)</b>	
<a href="#">G8000-63003</a>	Multimode Sample Introduction System (MSIS)	An optional accessory for Agilent's ICP-OES that allows sample introduction using either vapor generation or nebulization modes, or both at the same time. This eliminates the need to swap between a standard spray chamber and a vapor generation accessory, allowing the same instrument configuration to be used for both standard sample nebulization and vapor generation enabling analysis of both hydride and non-hydride elements. Recommended for environmentally sensitive elements including As, Se, Hg, Sn, and others where low µg/L detection limits are required	
<a href="#">3710027200</a>	PVC peristaltic pump tubing for aqueous samples, black/black tabs, 12/pk	Peristaltic pump tubing used to pump reductant when using the MSIS. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	
<a href="#">3710068900</a>	PVC peristaltic pump tubing for aqueous samples, black/white tabs, 12/pk	Peristaltic pump tubing used to pump aqueous waste from the MSIS. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	

## Inert (HF Compatible) 5000 series ICP-OES supplies recommendations

Part Number	Description	Reason to Use	
<a href="#">G8010-68007</a> (DV) <a href="#">G8010-68006</a> (RV)	Inert sample introduction kit, for use with HF digests	Complete supplies kit for inert sample introduction. Includes inert spray chamber, OneNeb Series 2 nebulizer, inert semidemountable Easy-fit torch with 1.8 mm alumina injector, and Solvaflex peristaltic pump tubing for sample (black/black) and waste (grey/grey)	
<a href="#">G8010-60231</a> (DV) or <a href="#">G8010-60234</a> (RV)	Semi-demountable Easy-fit inert torch for HF digests	An inert injector is required for the analysis of HF containing samples. The semi demountable torch allows the removal/replacement of the outer tube-set. For additional flexibility, the inert fully demountable torch can also be used	
<a href="#">G8010-60293</a>	OneNeb Series 2 inert concentric nebulizer	Ideal for routine analysis of samples up to 25% TDS with good precision and better sensitivity than a SeaSpray; inert construction makes it suitable for most solution types	
<a href="#">G8010-60345</a>	Sample inlet fitting for OneNeb Series 2 nebulizer 1/pk	Sample capillary for the OneNeb 2 nebulizer. Recommended to periodically replace this component and have extras on hand	
<a href="#">G8014-68002</a>	Inert spray chamber for 5000 series ICP-OES	Cyclonic design inert spray chamber made of PET for use with HF digests, samples with high TDS levels or samples with particulates such as wear metals (used oils). Includes removeable baffle that allows it to be used as a double or single pass design. Features a durable sandblasted internal finish to ensure good drainage	
<a href="#">3710034800</a>	SolvaFlex peristaltic pump tubing for HF digested samples, black/black tabs, 12/pk	Standard-size tubing used for HF acid digested samples. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	
<a href="#">3710035200</a>	SolvaFlex peristaltic pump tubing for HF acid waste, gray/gray tabs, 12/pk	Standard-size tubing used for waste line when analyzing HF acid digested samples. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	

## Semi-Volatile organic solvent compatible 5000 series ICP-OES supplies recommendations

Part Number	Description	Reason to Use	
G8010-68029 (DV) or G8010-68030 (RV)	Semi-volatile organics sample introduction kit for samples prepared in semi-volatile organic solvents (including kerosene)	Complete supplies kit for introduction of semi-volatile organic samples. Includes double pass glass cyclonic spray chamber, Conikal nebulizer, fully demountable Easy-fit torch with 1.4 mm ID quartz injector and outer tube-set for organics, solvent resistant drain tubing and PVC Solvaflex peristaltic pump tubes for sample (black/black tabs) and waste (grey/grey tabs)	
G8010-68009 (DV) or G8010-68008 (RV)	Ketone based organic solvent introduction kit for samples prepared in ketone based organic solvents (including MIBK)	Complete supplies kit for introduction of ketone based organic samples. Includes double pass glass cyclonic spray chamber, Conikal nebulizer, fully demountable Easy-fit torch with 1.4 mm ID quartz injector and outer tube-set for organics, solvent resistant drain tubing and Marprene peristaltic pump tubes for sample (white/white tabs) and waste (blue/blue tabs)	
G8020-68002	Fully demountable 1.4 mm torch (DV)	Users analyzing organic solvents may have carbon build up on the injector. Removing this carbon build-up can be hazardous and a chore with the semi-demountable torch. The removable injector on the fully demountable torch simplifies maintenance by enabling the injector to be removed and placed in a muffle furnace for cleaning	
G8014-60022 (DV) or G8016-60000 (RV)	High purity quartz outer tube set for ICP-OES used with organic solvents	The fully demountable torch for organics is supplied with one outer tube-set. While the organic tube sets have long lifetime, it is recommended that users have an extra on hand to minimize downtime due to breakage or routine maintenance	
G8020-60806	1.4 mm ID tapered quartz injector for the fully demountable torch	Users analyzing organic solvents experience carbon build-up on the injectors. When carbon build-up occurs more frequently, it may be time to replace the injector. It is recommended that users have an extra injector on hand to minimize downtime due to breakage or routine maintenance	
G8010-60270	Conikal Nebulizer (Glass concentric), U-Series 1/pk	The Conikal nebulizer is recommended for routine analysis of most organic samples. Users should order at least 1 spare nebulizer to ensure they have an extra nebulizer to minimize downtime during routine maintenance, or if the nebulizer is damaged	
G8010-80035	UniFit sample connector, 0.75 mm id, 10/pk	Additional sample capillaries used to introduce sample into the nebulizer. Users recommended to periodically change this sample connector and have extras on hand	
3710034800	SolvaFlex peristaltic pump tubing for semi-volatile organic solvents, black/black tabs, 12/pk	Standard size tubing used for samples prepared in semi-volatile organic solvents. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	
3710035200	SolvaFlex peristaltic pump tubing for semi-volatile organic waste, gray/gray tabs, 12/pk	Standard size tubing used for waste line when analyzing samples prepared in semi-volatile organic solvents. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	

## Volatile organic solvent compatible 5800/5900 ICP-OES workflow supplies recommendations

Part Number	Description	Reason to Use	
G8010-68005 (DV) or G8010-68004 (RV)	Volatile organics sample introduction kit for samples prepared in volatile organic solvents (e.g. gasoline)	Complete supplies kit for introduction of volatile organic samples. Includes Conikal nebulizer, fully demountable Easy-fit torch with 0.8 mm ID quartz injector and outer tube-set for organics, solvent resistant drain tubing and Viton peristaltic pump tubes for sample (white/white tabs) and waste (blue/blue tabs). Requires but does NOT include a cooled spray chamber. The IsoMist temperature-controlled spray chamber is recommended	
G8486A #100	IsoMist temperature-controlled spray chamber	The IsoMist temperature-controlled spray chamber provides the benefits of a temperature-controlled sample introduction system with a temperature range between -10 °C and +60 °C. Includes self-installable software, polymer coated glass double pass spray chamber, PuraFlex transfer line, 90° elbow for waste and operation/installation manual. Recommended for analysis of volatile solvents	
G8020-68001	Fully demountable 0.8 mm id torch (RV)	Users analyzing organic solvents may experience carbon build up on the injectors. Removing this carbon build-up can be hazardous and a chore with the semi-demountable torch. The removable injector on the fully demountable torches simplifies maintenance by enabling the injector to be removed and placed in a muffle furnace for cleaning	
G8014-60022 (DV) or G8016-60000 (RV)	High purity quartz outer tube set for ICP-OES used with organic solvents	The fully demountable torch for organics is supplied with one outer tube-set. While the organic tube sets have long lifetime, it is recommended that users have an extra on hand to minimize downtime due to breakage or routine maintenance	
G8020-60805	0.8 mm ID Tapered quartz injector for the fully demountable torch	Users analyzing organic solvents experience carbon build-up on the injectors. When carbon build-up occurs more frequently, it may be time to replace the injector. It is recommended that users have an extra injector on hand to minimize downtime due to breakage or routine maintenance	
G8010-60270	Conikal nebulizer (Glass concentric), U-series 1/pk	The Conikal nebulizer is recommended for routine analysis of most organic samples. Users should order at least 1 spare nebulizer to ensure they have an extra nebulizer to minimize downtime during routine maintenance, or if the nebulizer is damaged	
G8010-80035	UniFit sample connector, 0.75 mm id, 10/pk	Additional sample capillaries used to introduce sample into the nebulizer. Users will need to periodically change this sample connector and should have extras on hand	
G8010-68023	UniFit right angle drain fitting for IsoMist, 3/pk	Additional drain lines used to remove waste from the IsoMist temperature-controlled spray chamber. Users are recommended to periodically change this drain line and should have extras on hand	
3710043700	Viton peristaltic pump tubing for volatile organic solvents, white/white tabs, 12/pk	Standard size tubing used for samples prepared in volatile organic solvents. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	
3710043900	Viton peristaltic pump tubing for volatile organic waste, blue/blue tabs, 12/pk	Standard size tubing used for waste line when analyzing samples prepared in volatile organic solvents. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	

## High TDS compatible 5000 series ICP-OES supplies recommendations

Part Number	Description	Reason to Use	
<a href="#">G8010-60346</a>	Nebulizer gas humidifier for 5000 Series ICP-OES	The argon humidifier accessory is used to humidify the nebulizer gas when analyzing samples with high concentrations of total dissolved solids (TDS). It helps to reduce blockage in the nebulizer and sample introduction system, improving long-term stability. Recommended when solutions have > 3% TDS	
<a href="#">G8020-68004</a>	Fully demountable Easy-fit high TDS torch with 2.4 mm quartz injector (DV)	Users analyzing high TDS samples typically require more torch maintenance making the fully demountable torch an ideal choice. Fully demountable torches allow the injector and outer tube set to be removed and replaced as needed. For a more economical option, a semi-demountable high TDS torch is also available (Part Number <a href="#">G8010-60232</a> )	
<a href="#">G8010-60263</a> (DV) or <a href="#">G8010-60264</a> (RV)	Quartz outer tube set for ICP-OES used with conventional aqueous samples	The fully demountable torch for high TDS samples is supplied with one outer tube-set. It is recommended that users have an extra on hand to minimize downtime due to breakage or routine maintenance	
<a href="#">G8020-60808</a>	2.4 mm ID tapered quartz injector for the fully demountable torch	Users analyzing high TDS samples can experience injector blockage if a standard bore injector is used. A wide bore injector reduces blockage. It is recommended that users have an extra injector on hand to minimize downtime due to breakage or routine maintenance	
<a href="#">G8014-68002</a>	Inert spray chamber for the 5000 ICP-OES	Cyclonic design inert spray chamber for use with samples with high TDS levels or samples with particulates such as wear metals (used oils). Includes removeable baffle that allows it to be used as a double or single pass design. Features a durable sandblasted internal finish to ensure good drainage	
<a href="#">G8010-60293</a>	OneNeb Series 2 inert concentric nebulizer	Ideal for routine analysis of samples up to 25% TDS with good precision and better sensitivity than a SeaSpray; inert construction makes it suitable for most solution types	
<a href="#">G8010-60345</a>	Sample inlet fitting for OneNeb Series 2 nebulizer 1/pk	Additional sample capillary for the OneNeb 2 nebulizer. Users will periodically need to replace this component and have extras on hand	
<a href="#">3710034400</a>	PVC peristaltic pump tubing for aqueous samples, white/white tabs, 12/pk	Standard-size tubing used for conventional aqueous samples. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)  <b>(Top Recommendation)</b>	
<a href="#">3710034600</a>	PVC peristaltic pump tubing for aqueous samples, blue/blue tabs, 12/pk	Standard-size tubing used for waste with conventional aqueous samples. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)  <b>(Top Recommendation)</b>	
<a href="#">3710046900</a>	PVC peristaltic pump tubing for aqueous internal standard, orange/white tabs, 12/pk	Standard size tubing used for aqueous based internal standard. Peristaltic pump tubing is the most used consumable and should be replaced frequently (every 1–2 weeks for standard throughput)	
<a href="#">1610132400</a>	Y-piece connector for online addition of internal standards	This is the connector needed for on-line addition of internal standard to the sample prior to nebulization. This reduces sample preparation for the user	

## SPS 4 autosampler supplies recommendations (5000 Series ICP-OES)

Part Number	Description	Reason to Use	
68410-60100	SPS 4 autosampler cover kit, 1/pk	Recommended to fully enclose the autosampler to help reduce sample and standard contamination from dust and drafts	
5043-0065	PVC Flexible Ducting 50 mm-id for SPS 4 cover kit, 5 m	Ducting required to enable removal of fumes from the autosampler with the cover fitted. Fitted with 56 mm OD cuffs	
68410-80102	SPS 4 probe 0.8 mm id with green markers. Inert, FEP sleeved for SPS 4 autosampler, 1/pk	Required to support routine operation of the SPS 4 autosampler	
3710049000	Peristaltic pump tubing for supply of rinse solution to the autosampler, PVC Solvaflex, 3-bridged, grey/grey tabs, 12/pk	Required for routine operation as regular replacement of the pump tubing is recommended	
6610025400	Sample rack for 16 mm od tubes, 60 positions	Additional sample racks are recommended to provide additional holding and storage capacity	
6610026100	Rack overlay for 60-position sample rack Allows 13 mm od tubes to be used in 60-position rack	Additional sample racks are recommended to provide additional holding and storage capacity	
6610026600	Sample rack for 30 mm od tubes, 21 positions	Additional sample racks are recommended to provide additional holding and storage capacity	
68410-40000	Standards rack, 34 positions, for SPS 4 autosampler	Additional standard rack for AA/MP-AES and ICP-OES autosampler configuration	
190049700	Polypropylene sample tubes, 16 mm od, 125 mm height, 1000/pk	Sample tube recommended for the 60-position sample rack	
190065200	Centrifuge tubes, screw-capped, 29 mm od, 50 mL polypropylene, 500/pk	Sample tube recommended for the 21-position sample rack	
68010-60306	Autosampler Connection Kit for AVS 6/7 switching valve used with 5800/5900 ICP-OES, 1/pk	Recommended when the user wants to use the autosampler with the AVS 6/7 switching valve. Super Flangeless One-Piece Fitting, 1/4-28 Flat-Bottom, for 1/16" OD tubing used to join the probe line to the valve assembly	

## AVS 6/7 Advanced Valve System supplies recommendations (5000 series ICP-OES)

Part Number	Description	Reason to Use	
<a href="#">G8494-60002</a>	Rotor seal for 6-7 port valve for AVS 6/7 switching valve used with 5800/5900 ICP-OES, 1/pk	Standard rotor seal with the AVS 6/7. This part wears with use and should be inspected regularly. Users will periodically need to replace this component and should have extras on hand	
<a href="#">G8495-60000</a> (AVS 7) or <a href="#">G8494-60000</a> (AVS 6)	Spare valve, 6/7 port, 2 positions for AVS 6/7 switching valve used with 5800/5900 ICP-OES, 1/pk	Replacement valve assembly for the AVS 6/7. This part wears with use and should be inspected regularly. Users will periodically need to replace this component and should have extras on hand	
<a href="#">UCP316</a>	PTFE plug for 1/4-28 flat bottom, 1/pk	Blanking plug that can be used to block the 7th port of the AVS 7, if internal standard addition is NOT required	
<a href="#">G8494-60005</a>	Rinse (10 L) and waste (20 L) containers for AVS 6/7 switching valve used with 5800/5900 ICP-OES	10 L HDPE container for rinse solution and 20 L HDPE container for waste, both fitted with safety caps to prevent vapors reaching the lab. Supply lines fitted with sinkers to ensure the capillary draws from the base of the container	
<a href="#">G8495-60005</a>	Internal standard container (5 L) kit for AVS 7 switching valve used with 5800/5900 ICP-OES, 1/pk	5 L polypropylene space saver container for internal standard. Fitted with safety caps to prevent vapors in the laboratory. Supply line fitted with sinker to ensure the capillary draws from the base of the container	
<a href="#">G8494-60007</a>	Reagent uptake capillary tube 1.6 mm OD x 1.0 mm ID x 1400 mm long with heavy PTFE sinker, 1/pk	Supply line for rinse/internal standard supply to instrument, fitted with sinker to ensure the capillary draws from the base of the container	

[Learn more](#) about the comprehensive range of single-element and multi-element inorganic standards for testing elemental impurities in all markets that includes instrument calibration and tuning mixes for ICP-MS, ICP-OES, MP-AES, AA, and IC instrumentation.

## Consumables for your ICP-OES

For a complete list of consumables suitable for your ICP-OES, follow the links below—selecting your sample matrix. Internet connection and Agilent.com Order Center account registration required to access “Favorite Products Lists”.

[ICP-OES aqueous supplies list](#)

[ICP-OES Inert \(HF compatible\) supplies list](#)

[ICP-OES semi-volatile organics supplies list](#)

[ICP-OES volatile organic solvents supplies list](#)

[ICP-OES high TDS supplies list](#)

[ICP-OES ketone-based solvent supplies list](#)

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