

Recommended ICP-OES Consumables, Standard Solutions, and Tools For the Lithium Battery Industry



Lithium battery industry consumables workflow

In the upstream and midstream of the lithium-ion battery industry chain, the quality control of raw materials and products requires the testing of anode and cathode materials, electrolytes, diaphragms and other materials by means of instrumental analysis for suppliers of the raw materials, battery manufacturers, and emerging industries such as the electric vehicle power battery sector. In the midstream of the lithium-ion battery industry chain, the research and development of product and safety performance also requires the use of analytical instruments to carry out physical and chemical analysis of each part of the battery.

As a global leader in analytical technology, Agilent has accumulated experience and data in the field of lithium-ion battery material testing. Whether in raw material testing or scientific research work, accurate and effective tolerance accessories are matched to the different needs of the sample introduction system to meet the durability and data quality requirements of different users. At the same time, Agilent also offers a one-stop supply of standard solutions, general consumables, and consumables for the whole production process.



Agilent 5000 Series ICP-OES sample introduction system supplies

Application			Part No.	Description
Raw materials and anode materials	Lithium carbonate, lithium hydroxide	RV torch outer tube set High lithium salt-tolerant sample	3710034400	Pump tube, PVC, white/white
			3710034600	Pump tube, PVC, blue/blue
			G8010-60255	U-series Seaspray concentric glass nebulizer
			G8010-60256	Double-pass glass cyclonic spray chamber
			G8010-60236	Torch, semi-demountable with 1.8 mm id injector
			G8010-60264	RV quartz outer tube set
			1610132400	Y-Piece for online addition of internal standard/ionization buffer
			3710068300	Pump Tube, PVC, orange/green
	Lithium sulfate	Mira Mist nebulizer and RV torch outer tube set Lithium sulfate-tolerant samples	3710034400	Pump tube, PVC, white/white
			3710034600	Pump tube, PVC, blue/blue
			CP913246	Mira Mist PTFE nebulizer
			G8010-60256	Double-pass glass cyclonic spray chamber
			G8010-60236	Torch, semi-demountable with 1.8 mm id injector
			G8010-60264	RV quartz outer tube set
			1610132400	Y-Piece for online addition of internal standard/ionization buffer
			3710068300	Pump Tube, PVC, orange/green

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ric nebulizer, only for organic use	
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ch for organic solvents with 1.4 mm id injector, can be replaced separately	
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d quartz injector, to be used with G8020-68002	
ty quartz DV outer tube for use with fully dicated to organic samples	
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Standard Solutions

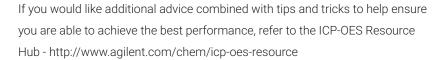
	Element	Concentration/Substrate	Size	Part No.
Standard solutions	Li	1000 μg/mL, 5% HNO ₃	100 mL	5190-8289
	Ni	1000 μg/mL, 5% HNO ₃	100 mL	5190-8298
	Co	1000 μg/mL, 5% HNO ₃	100 mL	5190-8277
	Mn	1000 μg/mL, 5% HNO ₃	100 mL	5190-8293
	Fe	1000 μg/mL, 5% HNO ₃	100 mL	5190-8285
	S	1000 μg/mL, H ₂ O	100 mL	5190-8529
	Р	1000 μg/mL, 5% HNO ₃	100 mL	5190-8499
	Hg	1000 μg/mL, 5% HNO ₃	100 mL	5190-8295
	Mixed standard solution Quality control standard, QCSTD-27	100 mg/L, 5% HNO ₃ , tr. HF	100 mL	5190-9418

Note: Mixed standard QCSTD-27 contains: Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Sr, Na, Tl, Ti, V and Zn

General ICP-OES Supplies

Name	Part No.	Recommended Service Life
Nebulizer cleaner for glass concentric nebulizers	G3266-80020	36 months
Torch tube cleaning stand	G8010-68021	36 months
Torch tube storage stand	G8010-67000	36 months
Wavelength calibration solution	6610030100	18 months
Argon gas inlet filter	G8010-60136	6-12 months
Replacement inlet cooling air filter for 5100/5110 ICP-0ES systems	G8000-68002	12 months
Replacement air inlet filter for 5800/5900 ICP-OES systems	G8020-68016	12 months
Waste tank components with activated carbon filter (10 L capacity)	5043-1338 5043-1193 5043-1198 5043-1207	6 months for activated carbon filter

Need further guidance?





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