Scheduling Maintenance

Routine maintenance extends the operating life of the components, and lets the Agilent 8900 Triple Quadrupole ICP-MS perform at optimum level.

The following table shows the maintenance items/frequency for the 8900.

Table 3. Maintenance Schedule

Frequency	Component	Task/Action	Remarks
Daily As a matter of routine, check these items before starting work daily and over the course of daily analysis	Argon gas	Check argon gas pressure and volume	
	Drain vessel	Check, empty if required	Refer to note in **Chapter 2**, "Precautions"
	Sample uptake tubing	Check for damage/deterioration	
Weekly	Sampling cone, Skimmer cone	Check orifice for foreign matter, deformation and enlargement	Clean if required
Monthly	Foreline Pump (MS40+ and NeoDry36E)	Check oil level and color.	
		Check that the exhaust hose from foreline pump is not damaged or clogged, and is securely connected. Check that the ballast valve is open. (Only for NeoDry36E)	
	Nebulizer	Run Nebulizer test, take appropriate action as indicated	
	Shield contact, Torch box contact plate	Clean	
	Cooling fluid	Check level and condition*[1]	
6 Months	Foreline Pump (MS40+)	Change oil	

Table 3. Maintenance Schedule (continued)

Frequency	Component	Task/Action	Remarks
Annually	Foreline Pump oil mist filter (MS40+)	Check / replace mist filter	
	Water strainer	Check and clean	
	Cooling Fluid	Replace	
	Argon gas purifier (Only for 8900 #100/#200)	Replace	Refer to the argon gas purifier's (Big Universal Trap's) instruction.
4 Years	Foreline Pump (NeoDry36E)	Maintenance free for 4 years	Replace the pump as needed*2
Periodically Maintenance frequency of these components is highly dependent on lab conditions and sample throughput. Check them periodically, at least annually and take appropriate action.	Sample Introduction area parts: such as Spray chamber, End cap	Clean	
	Torch	Clean	Replace as needed
	Electron Multiplier	Check	Replace as needed *3
	Plasma gas, auxiliary gas tubing	Check	Replace as needed
	Argon gas and Optional gas filter	Replace	Replace as needed
	Graphite gasket	Replace	Replace when surface or shape is damaged.
	Extraction/Omega Lenses	Check	Clean as needed

*1 Generally the cooling fluid requires replacement annually, however, if the cooling fluid shows noticeable deterioration it may be necessary to replace sooner.

*2 Contact your Agilent representative for the pump replacement after 4 years use.

*3 Contact your Agilent representative to arrange engineer visit if replacement needed. Note: The time for EM replacement can be judged by the EM voltage (Analog HV and Pulse HV). The EM can be used until the Analog HV reaches 3500V or the Pulse HV reaches 2000V, after adjusting the EM voltage. However, it is recommended to replace EM well in advance.

CAUTION

Depending on the samples introduced, the foreline pump oil may degrade sooner than normal and turn black in color. Change the oil before the six-month period if this occurs. Continued use with degraded oil may result in damage to the foreline pump. Be aware that warranty coverage does not extend to maintenance neglect.

CAUTION

The lifetime of the argon gas purifier (Big Universal Trap) may decrease if the argon gas is not pure enough. Use enough high-grade argon gas as described in the Site Preparation Checklist for trace Silicon and Sulfur applications.

NOTE

The frequency of maintenance indicated for these parts is a general guideline only. Actual cleaning regimen may be infrequent, depending on local lab/workload variables.

This chapter contains maintenance procedures for the Agilent 8900 that can be performed by your lab personnel.

To repair any Agilent 8900 component that is not listed, call your Agilent Technologies service representative. For maintenance of the MassHunter Workstation or a peripheral, refer to the manuals for that equipment.