Scheduling Maintenance

Routine maintenance extends the operating life of the components, and lets the Agilent 7800/7850/7900 ICP-MS perform at optimum level.

The following table shows the maintenance items/frequency for the ICP-MS.

Table 6. Maintenance Schedule

Frequency	Component	Task/Action	Remarks
Daily (As a matter of routine, check daily before starting work 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 when necessary
Monthly	Foreline Pump	Check oil level and color. Check the exhaust hose from foreline pump is not damaged, not clogged, and surely 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 Replace shield plate as needed	
	Cooling fluid	Check level and condition*[1]	
6 Months	Foreline Pump	Change oil (refer to **page 104**)	
Annually	Foreline Pump oil mist filter	Check / replace mist filter	
	Water strainer	Check and clean	
	Cooling Fluid	Replace	

Table 6. Maintenance Schedule (continued)

Frequency	Component	Task/Action	Remarks
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, sample throughput, and sample type. They should be checked periodically, at least on an annual basis, and appropriate action taken)	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 filter	Replace	Replace as needed
	Graphite gasket	Replace	Replace when surface or shape is damaged.
	Extraction/Omega Lenses	Check	Clean as needed (refer to **page 97**)
	Octopole	Replace	Replace as needed
	Cell entrance lens, Cell exit lens, Plate bias lens, Deflect lens	Clean	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 3500 V or the Pulse HV reaches 2000 V, after adjusting the EM voltage. However, it is recommended to replace EM well in advance.

NOTE

Refer to the following sections on Maintenance for further guidance about when maintenance may be needed.

The maintenance frequency is highly dependent on lab conditions, sample throughput, and sample type.

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 coverage does not extend to maintenance neglect.

NOTE

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

This chapter contains operator maintenance procedures for the ICP-MS.

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