

GC Preventive Maintenance Routine

	Maintenance Task	Frequency	Description
Daily Maintenance	Power On/Off	Daily	Turn on the GC at the start of the day and turn it off at the end.
	Check Gas Supply	Daily	Verify carrier gases are supplied and at the required pressure.
	Check Detectors	Daily	Ensure detectors are functioning correctly and perform a quick system check.
	Injector and Column Inspection	Daily	Check for leaks in the sample injector and column connections.
Weekly Maintenance	Clean Injector and Liner	Weekly	Remove and clean the sample injector and liner components.
	Check Column Integrity	Weekly	Inspect the GC column for damage or contamination.
	Leak Check	Weekly	Perform a leak check on all connections and fix any leaks.
	Clean Filters	Weekly	Clean filters in the gas lines (moisture trap, gas filters).
Monthly Maintenance	Calibration	Monthly	Calibrate the GC using standards and check calibration curves.
	Check for Drift	Monthly	Monitor detector baselines for signs of drift or instability.
	Inspect Electrical Connections	Monthly	Examine electrical connections for wear, corrosion, or looseness.
	Clean and Check Detector Jets	Monthly	Clean detector jets and replace if necessary. Clean detector flame/ionization source.
Every 3 Months	Replace Septa	Quarterly	Replace the injector septum to prevent sample contamination.
	Clean the Detector	Quarterly	Perform a thorough cleaning of the detector components.
	Replace Gas Filters	Quarterly	Replace gas filters and traps to maintain gas purity.
Yearly Maintenance	Column Replacement	Annually	Consider replacing the GC column as recommended by the manufacturer.
	Preventive Maintenance	Annually	Schedule a professional maintenance visit for a comprehensive inspection and cleaning.
	Software Updates	Annually	Check and install any manufacturer-provided software updates or firmware upgrades.
	Troubleshooting	As Needed	Address operational issues promptly following manufacturer guidelines.
	Instrument Qualification	Periodically	Perform instrument qualification or verification as per laboratory quality assurance requirements.

Remember to maintain a detailed log of all maintenance activities for reference and compliance purposes.