**GETTING STARTED**

**INSTALL AND CONFIGURE**
Click setup.exe on the USB stick to run the installation wizard. Refer to the Agilent 6100 Series Single Quadrupole LC/MS Installation guide (in the doc folder) for details.

**START SOFTWARE**
Turn on the power to the instrument. Start the OpenLAB CDS Acquisition program. In the Instrument Status window, right-click the SQ device and select Pump Down. When done, right-click the SQ device and select On.

**PREPARE THE LC MODULES**
Purge the LC pump. Follow the directions for purging the pump in the online Help.

**PREPARE THE SINGLE QUADRUPOLE**
Before acquiring data, you tune the SQ which maximizes sensitivity, maintains acceptable resolution, and ensures accurate mass assignments. First, click the Get Tune Control icon. Run Checktune ( ). If necessary, run Autotune ( ).

**EDIT METHOD**
You edit a method to configure method parameters to use when acquiring data. A method can have different time segments which can have different values for some MS parameters. You change the Time Segment table in any of the SQ > Method sections. In each time segment, you can have different scan segments and source parameters. You edit scan segments in the SQ > Acquisition section.

**RUN ACQUISITION METHOD OR SEQUENCE**
You can acquire data by running a single sample or by running a sequence of samples. You click either the Single Sample or the Sequence layout. You can override some method values in a sequence.

---

**Instrument Status Window**

**SQ (SINGLE QUADRUPOLE) DEVICE ON THE DASHBOARD**

Actions from the shortcut menu:
- On - sets Gas Flow, Nebulizer, and temperatures to setpoints in current method. It does turn on voltages.
- Standby - changes SQ parameters to standby values
- Calibrant - selects whether or not the calibrant is on
- LC - selects whether to direct the LC stream to the MS or to Waste
- Vent - vents the SQ to atmospheric pressure
- Pump Down - pumps down the SQ system to achieve high vacuum
- APPI UV Lamp - turns the UV lamp on or off in the APPI source

**SQ TAB**
This tab shows status parameters. By noticing significant changes in some of these parameters, you can monitor the health of the instrument. In particular, you can monitor these values: Rough Vac, High Vac, Turbo1 Speed, and Pump1 Current.

**What’s New in 2.1**
- You can set the Scan type to SIM/Scan.
- You can use same scan table across an entire run.
- You can override method parameters in the sequence.

**Resources**
- 6000 Series LC/MS Video Maintenance Guide
  The Video Maintenance Guide contains animated instructions to maintain your LC/MS instrument.
- Getting Started modules
  LC/MS Tuning and Acquisition Methods
  6100 Series LC/MS Hardware
- Agilent 6100 Series Single Quadrupole LC/MS (OpenLAB CDS) Installation Guide
**Edit Single Quadrupole Method**

**TIME SEGMENTS PANE**

The left pane in each Single Quadrupole Method section contains the Time Segments table and other parameters:
- **Ion Source** - the source that is being used in this method.
- **St. time** - either As Pump/No Limit or the actual Stop time in minutes.
- **Tune file** - the name of the tune file to use when this method is used.
- **Fast scan** - whether or not the selected tune file is a fast scan tune file.
- **Time Segments table** - You select whether to acquire Scan, SIM, or SIM/Scan data for each time segment. You also specify when the segment starts and how to modify the electron multiplier voltage (V).

**SOURCE SECTION**

You can specify a unique set of Source Parameters for each time segment. The actual values are shown in a read-only box next to the parameter.
- **Gas Temperature (°C)** - the temperature of the drying gas. It depends on the LC flow rate, the Drying Gas Flow Rate, the type of analysis, and the thermal stability of the sample.
- **Vaporizer (°C)** - the temperature of the nitrogen drying gas through the capillary electrode.
- **Nebulizer (psi)** - the pressure of the nitrogen nebulizing gas through the capillary electrode.

**ACQUISITION SECTION**

The columns in the Scan Segments table change depending on whether you selected Scan, SIM, or SIM/Scan in the Time Segments table.
- **Segment name**, **Start mass**, **End mass**, **Scan time**, **Fragmentor**, and **Polarity**
- **Estimated Cycle time (ms/cycle)** - the estimated calculated time to execute all signals once plus a polarity switch overhead if applicable. It is calculated automatically using the mass ranges and the scan time or peak width.
- **Use scan table for all time segments box** - whether or not to use the same scan table for all Time Segments of either Scan or SIM/Scan.
- **Compound name**, **Mass** **ISTD?**, **Dwell (ms)**, **Fragmentor**, and **Polarity**
- **Estimated Cycle Time** - Dwell times added with a polarity switch overhead if applicable.

**TOOLBAR**
- Adds a time segment.
- Inserts a time segment.
- Deletes the selected time segments.
- Copies the selected cells to the other selected cells.
- Copies the selected cells to all of the other cells in the column.
- Cuts the selected rows from the table and copies to the Clipboard.
- Copies the selected rows/cells in the table to the Clipboard.
- Pastes the rows/cells from the Clipboard.

**CHROMATOGRAMS SECTION**

You select which chromatograms are displayed in the Chromatograms window.
- **TIC** - the Total Ion Chromatogram is the overlap of all of the scan segment TICs in one trace.
- **Channel TIC** - a Channel TIC is a TIC per scan segment. The first TIC is for scan segment 1. The next TIC is for scan segment 2, and so on.
- **EIC** - an Extracted Ion Chromatogram is a chromatogram for only the specified m/z or mass range.
- **BPC** - a Base Peak Chromatogram. You can specify masses or mass ranges to exclude.

**TIMETABLE SECTION**

The Timetable is used to change the position of the diverter valve during a run. You can specify to send the stream from the LC to either Waste or MS. If you divert the stream to Waste, then you do not acquire data at that time.