Agilent Technologies

6100 Series Single Quadrupole LC/MS – Familiarization Checklist

Thank you for purchasing an Agilent **instrument** solution. This checklist is used to provide a guide on what aspects of your instrument should be covered when the Familiarization service has been included in your order. This checklist will be completed at the end of the service and provided to you as a record of the familiarization.

Customer Information

- Familiarization is intended to give operators a basic overview of the operation and maintenance of new instruments and is not designed to substitute for a full operator-training course.
- Further training, advice and consultation can be obtained upon request.
  The manuals/media delivered with the system will be used as a guide during familiarization.
  Please make sure they are available.
- **Specifically Not Included in the Familiarization service (unless explicitly ordered):**
  - Training on basic PC operation, peripherals and/or operating systems
  - Training to groups larger than five people
  - Customized method/application development and/or testing or testing of customer samples
  - Fundamentals/theory of instrument techniques unless explicitly stated.

Service Engineer's Responsibilities

Discuss familiarization topics and agree upon focus areas with customer within the allotted time.
Only complete/printout sections or pages that relate to the system that has been installed.
Complete empty fields with the relevant information.
Complete the relevant checkboxes in the checklist using a "X" or tick mark "✓" in the checkbox.
Complete Not Applicable check boxes to indicate optional services or product functionality not included
Complete the Service Review section together with the customer.

Additional Instruction Notes

This checklist applies to 6100B Series Single Quadrupole LC/MS instruments only. It should be followed in conjunction with the Agilent 6100 Series Single Quad LC/MS Installation Manual and the Agilent 6100 Series Single Quad LC/MS Maintenance Guide.

If a G1971B APPI Source is being installed, this checklist should be followed in conjunction with the G1971B APPI Source Installation Manual.

General Familiarization

- ❑ Provide the customer with an overview of their system, its components and locations which have been installed and indicate the parts of the system that familiarization will be provided on.
- ❑ Identify associated instrument connections, including power connections, communications and LAN interface connections.
- ❑ Describe where to find the resources available (e.g. instrument manuals, user guides, on-line help) for the instrument.
- ❑ Demonstrate how to use the on-line and off-line help

Guide

The following sections may include optional system components which may/may not be applicable during familiarization. Check the Not Applicable boxes, as appropriate.

System Start-up

- ❑ Explain how to start up the and close down the instrument/modules in the correct order.
- ❑ Explain where to find the status indicators and what they mean.
- ❑ Explain how long to wait for LC/MS initialization before opening online ChemStation

Instrument

- ❑ Locate & identify 6100 Series Single Quad LC/MS system hardware.
  - ❑ Identify LC/MS mainframe components & connections.
  - ❑ Identify CDS components & operation.
  - ❑ Explain the importance of the correct calibrant selection.
  - ❑ Explain how to replace the calibrant.
  - ❑ Identify LC/MS vacuum system components & review venting requirements.

G1948B Atmospheric Pressure Electrospray (API-ES) Source

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

- ❑ Identify the G1948B Electrospray Source and describe its operation.

G1947B Atmosphere Pressure Chemical Ionization (APCI) Source

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

- ❑ Identify the G1947B APCI Source and describe its operation.

G1971B Atmosphere Pressure Photo Ionization (APPI) Source

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

- ❑ Identify the G1971B APPI Source and describe its operation.
- ❑ Discussing turning lamp on & off

G1978B MultiMode (MM) Source

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

- ❑ Identify the G1978B MM Source and describe its operation.

Agilent Jet Stream Technology (AJS) Source

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

- ❑ Identify the Agilent Jet Stream Technology and describe its operation.

Software - ChemStation

- ❑ **Section NOT Applicable, module/option/accessory not installed.**

Guidance:
This section covers the LCMS Single Quad specific features of the ChemStation. For the general functionality of the ChemStation Software, please refer to the ChemStation Familiarization checklist, which is a separate document.

- ❑ LC/MS Tune View:
  - ❑ Perform an Autotune & describe the Autotune feature.
  - ❑ Perform a Checktune & describe the Checktune feature.
  - ❑ Discuss the importance of tuning & when to perform Autotune vs. Checktune.
  - ❑ Discuss source contamination and how to diagnose problems.
  - ❑ Describe the manual tune process (refer to Online Help).
  - ❑ Review tune file “Reset to Defaults” feature.
  - ❑ Review Gain Calibration.

- ❑ Method & Run Control View:
  - ❑ Describe the feature of the System Diagram & Sampling GUI and pull-down menus.
  - ❑ Develop Scan & SIM methods with appropriate LC/MS parameters using GUI & pull-down menus.

- ❑ Describe Flow Injection Analysis (FIA) series (table) & create an FIA method.
- ❑ Describe how to acquire multiple signals during a run.
- ❑ Describe how to run multiple FIA methods.

- ❑ Data Analysis View:
  - ❑ Demonstrate loading UV & MS data files (MSDemo).
  - ❑ Demonstrate overlaying & separating UV & MS total ion chromatogram (TIC) signals.
  - ❑ Demonstrate "Edit Options for Ion Labs" dialog box.
  - ❑ Create an Extracted Ion Chromatogram (EIC) from an MS data file.
  - ❑ Demonstrate how to add & display annotations.
  - ❑ Demonstrate & describe the use of MS peak purity.
  - ❑ Describe Spectral Math Toolbar features.
  - ❑ Launch the Molecular Weight Calculator by entering ShowMW on the ChemStation command line.
  - ❑ Review built-in LC/MS report styles.

- ❑ Diagnosis View:
  - ❑ Demonstrate "Show Module Details" and "Update Variables Display" items.
  - ❑ Discuss LC/MS Vent & Pumpdown features.
  - ❑ Demonstrate how to access instrument logs.
  - ❑ Describe LC/MS features on EMF Info Pad.
  - ❑ Describe LC/MS diagnostic features & tests in software.

Maintenance & Diagnostics

- ❑ Demonstrate how to search and access maintenance/diagnostic tools, documents and guides.
- ❑ Review the following basic instrument maintenance and troubleshooting procedures:
  - ❑ Checking the Foreline Pump Oil Level (if applicable).
  - ❑ Converting from one Source to another (if applicable).
  - ❑ Source Cleaning (Daily and Weekly procedures).
  - ❑ Nebulizer needle adjustment.
  - ❑ Nebulizer needle replacement.
  - ❑ Corona needle cleaning & replacement (if applicable).
  - ❑ Inlet Filter frit replacement.
  - ❑ Foreline Pump ballast valve use & oil return issues (if applicable).
  - ❑ EMF & instrument logs.
  - ❑ APPI Lamp Intensity Test & Module Details (if applicable).
- ❑ Explain how to download and update any necessary customer-installable firmware.

Service Review

- ❑ Complete the Service Engineer Comments section below, if applicable.
- ❑ Explain how to log an instrument service call and what support services are available.
- ❑ Perform a review (~10mins) of Agilent's web site and web links listed below.
- ❑ Explain Agilent's instrument warranty policy.
- ❑ Advise customer of additional instrument training options available.

- ❑ Attach all tune reports and sensitivity checkout reports to the Checklist for future reference. Place all of these documents in the provided instrument logbook.
- ❑ Record in the provided instrument logbook the data and time installation is completed

Service Engineer Comments (optional):

If there are any specific points you wish to note as part of performing the familiarization or other items of interest for the customer, please write in this box.

Service Completion

Service Request number..... Date service completed.....

Agilent Signature..... Customer Signature.....

Other Important Customer Web Links

How to get information on your product: Literature Library - http://www.agilent.com/chem/library
Need to know more? - www.agilent.com/chem/education
Need technical support, FAQs? - www.agilent.com/chem/techsupp
Need supplies? - www.agilent.com/chem/supplies
Software Status bulletins, patches, drivers, software utilities - www.agilent.com/chem/techsupp