Agilent Technologies

6100 Series Single Quadrupole LC/MS – Site Preparation Checklist

Thank you for purchasing an Agilent instrument. To get you started and to assure a successful and timely installation, please refer to this specification or set of requirements.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide AND checklist** prepared for you that outlines the supplies, consumables, space and utility requirements for your equipment for your site.

For additional information about our solutions, please visit our web site at http://www.chem.agilent.com/en-US/Pages/HomePage.aspx

Customer Responsibilities

Make sure your site meets the following **prior to the installation date using the checklist below. For details, see specific sections within this document**, including:

- ☐ the necessary **laboratory or bench space is available.**
- ☐ the **environmental conditions for the lab** as well as laboratory gases, tubing,
- ☐ the **power requirements** related to the product (e.g. **number & location** of electrical outlets)
- ☐ the **required operating supplies** necessary for the product and installation
- ☐ please consult **Gas Selection** and **Exhaust Venting Requirements** sections below for other product-specific information
- ☐ For more details, please consult the product-specific Site Prep manual
- ☐ **If Agilent is delivering installation and familiarization services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.**

Important Customer Information

1. If you have questions or problems in providing anything described as a *Customer Responsibilities* above, please contact your local Agilent or partner support/service organization for assistance prior to delivery. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your laboratory.

2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.

3. Other optional services such as additional training, operational qualification (OQ) and consultation for user-specific applications may also be provided at the time of installation when ordered with the system, but should be contracted separately.

Dimensions and Weight

Identify the laboratory bench space before your system arrives based on the table below.
Pay special attention to the total height and total weight requirements for all system components you have ordered and avoid bench space with overhanging shelves. Also pay special attention to the total weight of the modules you have ordered to ensure your laboratory bench can support this weight.

Special Notes:
1. At least 2 people must be present to lift the LC/MS and foreline pump.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
6100 Series Single Quad LC/MS System	60.7 kg	133.8 lbs	45.0 cm	18.0 in	63.5 cm	25.0 in	40.0 cm	15.5 in
Foreline pump (6100A) Edwards E1M18 with oil mist filter	32.0 kg	70.4 lbs	23.0 cm	9.2 in	51.0 cm	20.4 in	17.0 cm	6.8 in
Foreline pump (6100B) Varian MS40+	33.0 kg	72.7 lbs	22.8 cm	9.0 in	41.8 cm	16.5 in	29.7 cm	11.7 in
Foreline pump (optional) Edwards XDS35i	48.0 kg	106 lbs	39.0 cm	15.3 in	47.6 cm	18.7 in	29.0 cm	11.4 in
G1948B ESI Source	1.7 kg	3.75 lbs	17.0 cm	6.8 in	9.5 cm	3.7 in	18.0 cm	7.1 in
G1947B APCI Source	1.7 kg	3.75 lbs	23.0 cm	9.2 in	11.5 cm	4.5 in	18.0 cm	7.1 in
G1971B APPI Source	1.7 kg	3.75 lbs	23.0 cm	9.2 in	13.0 cm	5.1 in	18.0 cm	7.1 in
G1978B MultiMode Source	2.3 kg	5.05 lbs	23.0 cm	9.2 in	13.0 cm	5.1 in	18.0 cm	7.1 in
Agilent Jet Stream Technology	1.7 kg	3.75 lbs	23.0 cm	9.2 in	11.5 cm	4.5 in	18.0 cm	7.1 in
G4240A HPLC Chip Cube ***Note:*** *This is WITHOUT Chip Cube interface assembly*	14 kg	31 lbs	35.9 cm	14.1 in	29.8 cm	11.7 in	34.9 cm	13.7 in

Environmental Conditions

Operating your instrument within the recommended temperature ranges insures optimum instrument performance and lifetime.

Special Notes:

1. Performance can be affected by sources of heat & cold e.g. direct sunlight, heating/cooling from air conditioning outlets, drafts and/or vibrations.
2. The site's ambient temperature conditions must be stable for optimum performance. Temperature changes of 3°C / hour or less (as defined by ASTM conditions) are required to achieve best possible baseline stability. Higher variations will result in higher signal drift and wander of the baseline.

Instrument Description	Operating temp range °C (F)	Operating humidity range (%)	Heat Dissipation (BTU)
6100 Series Single Quad LC/MS System including the rough pump and source[1]	15 to 35°C (59 to 95°F), constant temperature.	< 80%, non-condensing	Up to 6800 BTU/hr (2000 Watts)
G4240A HPLC Chip Cube (Please refer the installation manual for this source for more detailed information.)	5 to 40°C (41 to 104°F), constant temperature.	< 80% @ 40°C, non-condensing	N/A

[1]Approximately 2047 BTU/hr are removed with the ion source exhaust.

Power Consumption

Special Notes:

1. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
2. A dedicated 15 Amp 200-240V AC power outlet is required for the Single Quad LC/MS. The Single Quad LC/MS should be located within 2.5 meters (8 feet) of this outlet. Please refer to the Site Preparation Guide for additional details.
3. Additional outlets are required for all Agilent HPLC modules. Please refer to the Site Preparation Checklist and Manuals for the HPLC modules for more detailed information.

Instrument Description	Line Voltage & Frequency (V, Hz)	Maximum Power Consumption (VA)	Maximum Power Consumption (W)
6100A Series Single Quad LC/MS System with foreline pump	200-240 VAC @ 50/60 Hz	15 Amps	2000 VA
6100B Series Single Quad LC/MS System with foreline pump	200-240 VAC @ 50 Hz 200-230 VAC @ 60 Hz	15 Amps	2000 VA

Gas Selection

Special Notes:

1. Gases are supplied by high pressure bottles, internal distribution system, or gas generators. High pressure bottles require two staged pressure regulation. Please note that high pressure bottles are NOT suitable for supplying nitrogen for Drying Gas and Nebulizer requirements due to the high flow rates.

Gas Requirements	Purity (%)	Typical Pressure Range[5], PSI (kPa)	Typical Flow (L/min)	
			6100 Series *without* Agilent Jet Stream	6100 Series *without* Agilent Jet Stream
Bottled nitrogen	99.99% pure[1] or better and hydrocarbon free[2]	80 – 100 psi 550 – 690 kPa	Up to 16 liters/minute[4] (900 liters/hour)	Not Supported
Nitrogen generator or liquid nitrogen	99.5% pure[3] or better and hydrocarbon free[2]	80 – 100 psi 550 – 690 kPa	Up to 16 liters/minute[4] (900 liters/hour)	Up to 30 liters/minute[4] (900 liters/hour)

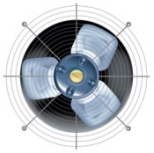
[1] With the remaining gas being oxygen.
[2] Less than 0.1 parts per million of hydrocarbons.
[3] With the remaining gas being oxygen and trace argon (< 0.1%).
[4] At least 3 liters/minute is required at all times to prevent air from entering the instrument.
[5] The following table lists minimum and maximum pressures for inlets measured at the bulkhead fitting at the gas manifold on the 6100 LC/MS.

Required Operating Supplies by Customer

Special Notes:

1. For information on Agilent consumables, accessories and laboratory operating supplies, please visit http://www.chem.agilent.com/en-US/Products/consumables/Pages/default.aspx
2. **For detailed information on Operating Supplies, please refer to the Site Preparation Guide.**

Item Description, (including dimensions etc)	Vendor/Part Number (if applicable)	Recommended Quantity
See Site Preparation Guide	G1960-90010	1
Tuning Calibrants – Dependent on LC/MS and Source		
Electrospray (ESI) Calibrant	G2431A	1
APCI/APPI Calibrant	G2432A	1
ESI-Low Calibrant	G1969-85000	1
APCI-Low Calibrant	G1969-85010	1
Performance Standard – Electrospray/APCI Positive Ion	G2423A	1
Performance Standard – Electrospray Negative Ion	G2424A	1
Performance Standard – APCI Negative Ion	G2525A	1
Performance Standard – MultiMode LC Demo Sample	G1978-85000	1
Performance Standard – Electrospray LC Demo Sample	59987-20033	1
Ammonium Formate	G1946-85021	1
Formic Acid – Reagent Grade	G2453-85060	2
HPLC Flushing Solvent (500 mL)	G1969-85026	1
Methanol, High Purity (1 L)	8500-1867	3
Acetonitrile, High Purity (1 L)	G2453-85050	2
Water, High Purity (4 L)	8500-2236	1
Pipette, 1 mL	9301-1423	3
Volumetric Flask, 50 mL	9301-1424	1
Volumetric Flask, 100 mL	9301-1433	2
Vials, 2 mL Screw Top, Wide Opening, Amber (100/pk)	5182-0716	1
Vial Caps, Blue, PTFE/red silicone septa (100/pk)	5182-0717	1



Exhaust Venting Requirements

Special Notes:

1. The Single Quad LC/MS foreline pump exhaust and spray chamber exhaust must be vented outside of the laboratory environment. Exhaust vent system should not be part of an environmental control system that re-circulates air inside of a building. Exhaust venting requirements need to comply with all local environmental and safety codes.

Instrument Description	Venting Capacity (L/min)
6100 Series *without* Agilent Jet Stream	Up to 16 liters/minute total
6100 Series *with* Agilent Jet Stream	Up to 30 liters/minute total

A 6 meter (20ft.) length of 1/2 inch ID PVC/vinyl tubing is included for venting the foreline pump exhaust and ion source (ESI, APCI, APPI, MultiMode, AJS) exhaust. This is sufficient for two 10-foot lengths.

The foreline pump exhaust and the ion source exhaust cannot share the same piece of exhaust tubing. Separate ½" hose barbs are required to connect the tubing to the exhaust vent.

