



# Agilent 6100 Series Single Quadrupole LC/MS Systems

## Data Sheet



**Agilent Technologies**

## Performance Specifications

The Agilent 6100 Series Single Quadrupole LC/MS Systems achieve sensitivity and resolution specifications after autotune without manual user intervention.

Note: the (\*) indicates the sensitivity to be verified at installation.

Parameter	6120B	6130B	6150B
<b>Agilent Jet Stream sensitivity</b> Reserpine on-column Positive ion selected ion monitoring (SIM) of $m/z$ 609 70:30 ACN:water + 0.1% formic acid 400 $\mu$ L/min mobile phase flow	n/a	<b>500 fg</b> 250:1 RMS 50:1 (P-P) <b>1 pg *</b> 500:1 RMS 100:1 (P-P) <b>10 pg</b> 5000:1 RMS 1000:1 (P-P)	<b>500 fg</b> 250:1 RMS 50:1 (P-P) <b>1 pg *</b> 500:1 RMS 100:1 (P-P) <b>10 pg</b> 5000:1 RMS 1000:1 (P-P)
Scan sensitivity reserpine positive ion	n/a	<b>50 pg</b> 500:1 RMS 100:1 (P-P)	<b>50 pg</b> 500:1 RMS 100:1 (P-P)
<b>API electrospray (ESI) and Multimode Source ESI-only mode sensitivity</b> Reserpine on-column Positive ion selected ion monitoring (SIM) of $m/z$ 609 70:30 ACN:water + 0.1% formic acid 400 $\mu$ L/min mobile phase flow Scan sensitivity reserpine positive ion	n/a  <b>10 pg *</b> 250:1 RMS 50:1 (P-P)  n/a	<b>1 pg</b> 100:1 RMS 20:1 (P-P) <b>10 pg</b> 1000:1 RMS 200:1 (P-P) <b>50 pg</b> 100:1 RMS 20:1 (P-P)	<b>1 pg *</b> 100:1 RMS 20:1 (P-P) <b>10 pg</b> 1000:1 RMS 200:1 (P-P) <b>50 pg</b> 100:1 RMS 20:1 (P-P)
<b>Atmospheric pressure chemical ionization (APCI) sensitivity</b> Reserpine on-column Positive ion selected ion monitoring (SIM) of $m/z$ 609 70:30 ACN:water + 0.1% formic acid 800 $\mu$ L/min mobile phase flow APCI source (G1947B) Multimode source (G1978B) in APCI-only mode	<b>10 pg</b>   100:1 RMS 20:1 (P-P) 50:1 RMS 10:1 (P-P)	<b>1 pg</b>   100:1 RMS 20:1 (P-P) 50:1 RMS 10:1 (P-P)	<b>1 pg</b>   100:1 RMS 20:1 (P-P) 50:1 RMS 10:1 (P-P)
Scan speed (max)	5250 u/s	5250 u/s	10000 u/s
Scan speed (standard)	2500 u/s	2500 u/s	2500 u/s
POS/NEG Switching	300 ms (30 ms optional)	30 ms	20 ms
Mass range	$m/z$ 10–2000	$m/z$ 2–3000	$m/z$ 2–1350
Mass accuracy within the calibrated mass range in scan mode	$\pm$ 0.13 u	$\pm$ 0.13 u	$\pm$ 0.13 u
Mass axis stability	Larger of $\pm$ 0.1 u or 100 ppm per 12 h	Larger of $\pm$ 0.1 u or 100 ppm per 12 h	Larger of $\pm$ 0.1 u or 100 ppm per 12 h

## Performance Specifications continued

	6120B	6130B	6150B
<b>Parameter</b>			
Flow rate ranges	<b>ESI</b> 50–1000 µL/min (flow to 1 µL/min with microflow nebulizer-part # G1385A Capillary LC/MS Nebulizer) <b>APCI</b> 100-2000 µL/min <b>Multimode</b> 100-2000 µL/min	<b>ESI</b> 50–1000 µL/min (flow to 1 µL/min with microflow nebulizer-part # G1385A Capillary LC/MS Nebulizer) <b>APCI</b> 100-2000 µL/min <b>Multimode</b> 100-2000 µL/min <b>Agilent Jet Stream</b> 20-2000 µL/min	<b>ESI</b> 50–1000 µL/min (flow to 1 µL/min with microflow nebulizer-part # G1385A Capillary LC/MS Nebulizer) <b>APCI</b> 100-2000 µL/min <b>Multimode</b> 100-2000 µL/min <b>Agilent Jet Stream</b> 20-2000 µL/min

## General Specifications

Parameter	Measure
Single point of control	Single-point data system method capability with full control of Agilent 1100 Series and 1200 Series HPLC Systems and 6100 Series Single Quadrupole LC/MS Systems
Time programming	<ul style="list-style-type: none"> <li>Cycles through up to four different acquisition modes on a scan-by-scan basis within a single run. Each mode can feature a unique combination of ion polarity, fragmentor voltage, and selected ion monitoring or scanning.</li> <li>Solvent divert through calibrant delivery system valve.</li> </ul>
Wide range of ionization sources	<ul style="list-style-type: none"> <li>Electrospray (ESI) at standard, capillary (microliter), and nanoflow (nanoliter) flow rates.</li> <li>Nanospray with HPLC-Chip Cube MS interface</li> <li>Atmospheric pressure chemical ionization (APCI)</li> <li>Multimode simultaneous ESI and APCI</li> <li>Atmospheric pressure photoionization (APPI)</li> </ul>
Autotune	Automated optimization of ion optics, detector gain, and mass axis calibration for ESI and multimode operation
Detector	High-energy conversion dynode and easily replaceable electron multiplier horn

## Ordering Information

Description	Product Number
<b>Agilent 6120 Series Quadrupole LC/MS Electrospray System Bundle</b> Includes Agilent G6120B single quadrupole mass spectrometer (calibrant delivery system, ion optics, quadrupole mass analyzer, mass range to $m/z$ 2000, scan speed to 5250 u/s, POS/NEG ion polarity switching, vacuum system, and electronics), G1948B electrospray ion source, Agilent LC/MS ChemStation software, and data system with PC, display, and printer. System installation and familiarization are included.	G6120BA
<b>Agilent 6130 Series Quadrupole LC/MS Electrospray System Bundle</b> Includes Agilent G6130B single quadrupole mass spectrometer (calibrant delivery system, ion optics, quadrupole mass analyzer to $m/z$ 3000, scan speed to 5250 u/s, POS/NEG ion polarity switching, multi-signal capability, vacuum system, and electronics), G1948B electrospray ion source, compatible with Agilent Jet Stream. Agilent LC/MS ChemStation software, and data system with PC, display, and printer. System installation and familiarization are included.	G6130BA
<b>Agilent 6150 Series Quadrupole LC/MS Agilent Jet Stream System Bundle</b> Includes Agilent G6150B single quadrupole mass spectrometer (calibrant delivery system, ion optics, quadrupole mass analyzer to $m/z$ 1350, Agilent Jet Stream technology, scan speed to 10,000 u/s, POS/NEG ion polarity switching, multi-signal capability, vacuum system, and electronics), Agilent LC/MS ChemStation software, and data system with PC, display, and printer. System installation and familiarization are included.	G6150BA

## Ordering Information continued

Description	Product Number
<b>Upgrade Kit – G6120B to G6130B</b> Extends capability of G6120B to G6130B including mass range to $m/z$ 3000 and 1 pg sensitivity and polarity switching to 50 ms.	G2735J
<b>Upgrade Kit – G6130B to G6150B</b> Extends capability of G6130B to G6150B including fast scanning to 10000 amu/sec. Mass range up to $m/z$ 1350 for fast scanning model. Agilent Jet Stream technology must be ordered separately.	G2735K
<b>Atmospheric Pressure Chemical Ionization (APCI) Source</b>	G1947B
<b>Electrospray Ion Source</b>	G1948B
<b>Atmospheric Pressure Photoionization Source</b>	G1971B
<b>Multimode (ESI/APCI) Ion Source</b>	G1978B
<b>Agilent Jet Stream Technology (AJS)</b>	G1958B
<b>Multimode Source Enablement Kit</b> Includes parts and test mixes for moving the multimode source to another 6100 Series LC/MS system.	If second instrument is ESI only, order G1978-60451 and G1947-60451. If second instrument is APCI capable, order G1978-60451.
<b>APCI Source Enablement Kit</b> Includes parts and test mixes for moving the APCI source to another 6100 Series LC/MS system.	G1947-60451
<b>Dry Pump for LCMS</b> Can be used in place of the oil based rough pump for easier and less expensive maintenance	If ordering a new instrument, order Option 984 to substitute the dry pump for the standard oil-based pump. If ordering the dry pump for an installed system, order G1998B.
<b>Nitrogen Generator</b> All models include integrated air compressor Option 1 32L/min (Peak Scientific Model NM32LA) Option 2 64L/min (Peak Scientific Model Genius 3010) Option 3 2 x 32L/min (Peak Scientific Model Genius 3020)	G1953A
<b>Easy Access Software</b> Software for simple sample submission in a walk-up workflow	G2725AA
<b>Data Conversion Software</b> Software for converting LC/MS ChemStation data to MassHunter format. Requires G3336AA MassHunter data analysis software.	G3785AA
<b>Analytical Studio Reviewer Software</b> Software for browsing large volumes of data quickly and efficiently	G3772AA

### Physical and environmental specifications

Dimensions	Width 35 cm (14.0 in) Height 45 cm (18.0 in) Depth 63.5 cm (25.0 in)
Weight	63.4 kg (137.6 lb)
Operating temperatures	15–35°C (59–95°F)
Operating humidity	< 80% relative humidity

### Electrical specifications

Power requirements	200–230 VAC, 60 Hz or 200–240 VAC, 50 Hz
Power consumption	maximum continuous power consumption 2000 VA
Supply circuit rating	15 A
Number of outlets	1

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