Agilent InfinityLab LC Series
Installation Checklist

Thank you for purchasing an Agilent *instrument*. This checklist is used by the installing engineer to ensure that the instrument and associated systems are correctly installed, upgraded, and functioning as designed in your facility. This checklist will be completed at the end of the service and provided to you as a record of the installation.

Introduction

Customer Responsibilities

1. Customers should leave the instrument shipment for the engineer to unpack.
2. Customers should provide all necessary operating supplies upon request of the engineer.
3. A customer representative should be available to the engineer while performing the installation.
4. Some installation tasks will be beneficial to you if you are present – refer to sections in this checklist.

Important Customer Web Links

- Videos about specific preparation requirements for your instrument can be found by searching the *Agilent YouTube* channel at **https://www.youtube.com/user/agilent**
- To access *Agilent University*, visit **http://www.agilent.com/crosslab/university/** to learn about training options, which include online, classroom and onsite delivery.

  A training specialist can work directly with you to help determine your best options.
- A useful *Agilent Resource Center* web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information.
- Need technical support, FAQs, supplies? – visit our *Support Home page* at **http://www.agilent.com/search/support**
- Get answers. Share insights. Build connections:

  Join the *Agilent Community* at **https://community.agilent.com/welcome**

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Service Engineer's Responsibilities

- Only complete/printout pages that relate to the system being installed.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using a "X" or tick mark ✓.
- Check "Section not applicable" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the Service Review section together with the customer.
- Complete the fields for page numbers at the foot of each selected page
- Complete the total number of pages field in the Service Completion section
- Ask the customer to sign the Service Completion section including the customer's and your signature.

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Instrument Installation

System Information

❑ Check this box if an instrument configuration report is attached instead of completing the table.

Instrument System Name and ID	
Instrument System Site and Location	

List System Component Product Numbers	**List the Serial Numbers of Each Component**
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

Preparation

- ❑ Unpack/verify the condition and completeness of shipment. For discrepancies, use the following table.

Product or Part Description	Observation	Action

- ❑ Discuss any specific questions or issues with the customer before starting.
- ❑ Discuss any configuration options with the customer before starting.
- ❑ Check for required service note applicability and firmware updates if connecting to instruments.
- ❑ *Upgrades only* – Ensure with the customer that instrument control settings, data, methods etc. have been properly saved or archived before starting any installation procedures.
- ❑ When plumbing the customers system, make sure that the relevant capillary kit and instructions are used.
- ❑ If you use the PC or the Instant Pilot for firmware updates, use the correct date/time.
- ❑ The installation of ELSD drivers depends upon the customer's choice of software platform. If OpenLAB version A.02.01 is installed then ELSD drivers' version 1.2 is installed as part of the installation. An UPGRADE to 1.3 will be seen during the new install. If a THIRD PARTY software package is used a minimum of ICF A.02.02 is required.

Agilent Information Center

- ❑ Perform one of the following:
  - Install the Agilent Information Center to a different PC.
  - If this is also not permitted, use the installation medium (Agilent InfinityLab LC Series User Documentation (G4800-64600)) to view the required user documentation.
  - If the Agilent Information Center has not been installed, record that the installation medium has been delivered, and keep it close to the instrumentation for future reference.
- ❑ Record the location to which the Agilent Information Center has been installed or made available.
  - _____

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Module List

Module identification: The module identifier (e.g. G7117A) can be found on the lower right side of the module front cover.

Module	Instrument Description
G4260B	1260 Infinity II Evaporative Light Scattering Detector
G7102A	1290 Infinity II Evaporative Light Scattering Detector
G7104A	1290 Infinity II Flexible Pump
G7104C	1260 Infinity II Flexible Pump
G7110B	1260 Infinity II Isocratic Pump
G7111A	1260 Infinity II Quaternary Pump VL
G7111B	1260 Infinity II Quaternary Pump
G7112B	1260 Infinity II Binary Pump
G7114A	1260 Infinity II Variable Wavelength Detector
G7114B	1290 Infinity II Variable Wavelength Detector
G7115A	1260 Infinity II Diode Array Detector WR
G7116A	1260 Infinity II Multicolumn Thermostat
G7116B	1290 Infinity II Multicolumn Thermostat
G7117A	1290 Infinity II Diode Array Detector FS
G7117B	1290 Infinity II Diode Array Detector
G7117C	1260 Infinity II Diode Array Detector HS
G7120A	1290 Infinity II High Speed Pump
G7121A	1260 Infinity II Fluorescence Detector
G7121B	1260 Infinity II Fluorescence Detector Spectra
G7122A	1260 Infinity II Degasser

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Module	Instrument Description
G7129A	1260 Infinity II Vialsampler
G7129B	1290 Infinity II Vialsampler
G7129C	1260 Infinity II Vialsampler
G7130A	InfinityLab Integrated Column Compartment
G7167-60101	InfinityLab Sample Thermostat
G7162A	1260 Infinity II Refractive Index Detector
G7162B	1290 Infinity II Refractive Index Detector
G7165A	1260 Infinity II Multiple Wavelength Detector
G7167A	1260 Infinity II Multisampler
G7167B	1290 Infinity II Multisampler
G1328C	1260 Infinity II Manual Injector
G5654A	1260 Infinity II Bio-inert Quaternary Pump
G5664B	1260 Infinity II Bio-inert Fraction Collector
G5668A	1260 Infinity II Bio-inert Multisampler
G1364F	1260 Infinity II Analytical Fraction Collector
G5628A	1260 Infinity II Bio-inert Manual Injector
G4208A	1200 Infinity Series Instant Pilot
G7108AA	InfinityLab Companion

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Installation Procedure

G7122A Degasser

- ❑ *Section NOT Applicable*
- ❑ Connect solvent inlet/outlet tubings.
- ❑ Connect APG/ERI cable between pump and degasser.
- ❑ Plug in power cable.
- ❑ Verify that the status LED is not red (red LED could appear approx. 16 min after the module was powered on).
- ❑ Prime each channel with solvent from bottle to pump inlet.

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G7120A High Speed Pump, G7104A/C Flexible Pump

- ❑ *Section NOT Applicable*
- ❑ Connect solvent inlet and seal wash tubings.
- ❑ Connect waste and seal wash sensor outlet tubings.
- ❑ Connect remote control cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable (if applicable).

NOTE

LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Fill each channel with isopropanol from the solvent bottle to the internal degassing unit inlet.
- ❑ Purge each channel for 3 minutes at 3 mL/min.
- ❑ Condition the pump.
- ❑ Run the pump in normal operation and ensure the tuning is between ±0.2 .

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G7110B Isocratic Pump, G7111A Quaternary Pump VL, G7111B Quaternary Pump, G5654A Bio-inert Pump, G7112B Binary Pump

- ❑ *Section NOT Applicable*
- ❑ Install optional Upgrade Kits, ordered separately (if applicable).
- ❑ Connect inlet/outlet tubings and capillaries.
- ❑ Connect waste tubing.
- ❑ Connect remote control (ERI) cable (if applicable).
- ❑ Connect seal wash tubing (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable (if applicable).

NOTE

LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Install the solvent cabinet (if applicable).
- ❑ Prepare HPLC grade water for Channel A (A1).
- ❑ Prepare HPLC grade acetonitrile for Channel B (B1).
- ❑ Prepare HPLC grade isopropanol for Channels C&D (A2&B2).
- ❑ Turn on the pump.
- ❑ Purge each channel for 3 min at 3 mL/min.
- ❑ After completing the stack installation, purge the complete system.
- ❑ Monitor the pressure, ripple should be <2 %.
- ❑ Run Pump Leak Rate Test.

Pump Leak Rate Test	Pass/Fail	Leak rate values

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G7129A/B/C Vialsampler

- ❑ *Section NOT Applicable*
- ❑ Remove transport foam.
- ❑ Set up the Vialsampler in the required stack configuration.
- ❑ Connect capillaries.
- ❑ Connect tubings for needle wash.
- ❑ Connect tubings for waste/leak handling.
- ❑ Install the Multidraw Kit (if applicable).
- ❑ Mount the Column Identifier Kit (if applicable).
- ❑ Mount the External Tray (if applicable).
- ❑ Connect remote control (ERI) cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable (if applicable).

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Prime the needle wash tubings with an appropriate wash solvent (for example, 10 % isopropanol in water).

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G7130A Integrated Column Compartment (ICC)

- ❑ *Section NOT Applicable*
- ❑ Connect the Integrated Column Compartment to the Vialsampler.
- ❑ Note down the part number and serial number of the ICC:

_____

- ❑ Connect capillaries.
- ❑ Install the column.
- ❑ Perform ICC Heater Test.

ICC Heater Test	Pass/Fail

G7167A/B Multisampler, G5668A Bio-Inert Multisampler

- ❑ *Section NOT Applicable*
- ❑ Remove transport foam.
- ❑ Install wash solvent inlet (peristaltic pump in case of Standard Hydraulic Box, or SSV in case of Multiwash Hydraulic Box).
- ❑ Install Drawer Kit(s) (if applicable).

NOTE All positions must be filled either with dummies or drawers. Drawers must be installed from the bottom to the top.

- ❑ Install Multidraw Kit (if applicable).
- ❑ Connect waste tubing (it must be in a straight line down, no bends or kinks).
- ❑ Connect remote control (ERI) cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable (if applicable).

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Turn on Multisampler and perform Auto Referencing *before* stacking other modules on top.
- ❑ Connect capillaries.
- ❑ Fill the available channels with the appropriate wash solvent from the solvent bottles.
- ❑ Configure "Prime" for the available channels.
- ❑ Activate "Prime" for the available channels.
- ❑ Perform wellplate assignment (Assign Wellplate in Chromatography Data System or Set Plate Type in Agilent Lab Advisor Software) (if applicable).
- ❑ Perform Auto Referencing under operating temperature, after stacking other modules on top.

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G7167-60101 Sample Thermostat

❑ *Section NOT Applicable*

WARNING

Flammable refrigerant

Formation of flammable gas-air mixtures inside the sample thermostat.

- ✓ **Keep open fire or sources of ignition away from the device.**
- ✓ **Ensure a room size of 1 m^3 for every 8 g of R600a refrigerant inside the Sample Thermostat (total refrigerant loading is 30 g).**
- ✓ **Ensure adequate ventilation: typical air exchange of 25 m^3/h per m^2 of laboratory floor area.**
- ✓ **Do not use mechanical devices or other means to accelerate the defrosting process.**

CAUTION

Damage to the autosampler or the Sample Thermostat electronics.

- ✓ **Do not connect the Sample Thermostat cables while the autosampler line power is connected.**
- ✓ **Wait at least 30 min before you switch on the compressor.**

❑ Slide the Sample Thermostat into the sampler.

❑ Note down the serial number of the Sample Thermostat:

_____

❑ Connect the power cable.

❑ Connect the data ribbon cable.

❑ Connect the tubings for condensate handling.

NOTE

Check the proper horizontal position.

❑ Perform Sample Cooler Function Test.

Sample Cooler Function Test	Pass/Fail

G1328C Manual Injector, G5628A Bio-Inert Manual Injector

- ❑ *Section NOT Applicable*
- ❑ Install the base plate as the most bottom module in the stack.
- ❑ Connect the organizer plate with the base plate and install the mounting pole in it.
- ❑ Mount the injector valve on the mounting pole.
- ❑ Connect capillaries.
- ❑ Connect the remote control (ERI/APG) cable to the pump.

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G7116A/B MCT

- ❑ *Section NOT Applicable*
- ❑ Fix the back cover of the divider assembly (if applicable).
- ❑ Install the valve head and note down the valve head product number and part number (if applicable):

  _____

- ❑ Install the column ID tag reader(s) (if applicable).

NOTE For column ID tag reader(s) installation, the module has to be powered off.

- ❑ Connect capillaries. For detailed instructions, see respective technical note for the valve or capillary kit installation.
- ❑ Mount Quick Connect Heat Exchanger(s) in the MCT.
- ❑ Mount column holder(s).
- ❑ Connect and mount the column(s) into the column holder(s).
- ❑ Put the column ID tag(s) into the reader(s) (if applicable).
- ❑ Clip the front cover of the divider assembly (if applicable).
- ❑ Connect CAN cable.
- ❑ Perform Thermostat Test.

Thermostat Test	Pass/Fail

G1170A Valve Drive

- ❑ *Section NOT Applicable*
- ❑ Install the leak sensor into the leak pane.
- ❑ Connect the waste tubing and the leak pane.
- ❑ Assemble the leak pane and the Valve Drive.
- ❑ Mount the Valve Drive onto a module.
- ❑ Install Quick Change Valve Head into the Valve Drive. Note the valve head product number and part number:

  _____

- ❑ Connect capillaries. For detailed instructions, see respective technical note for the valve or capillary kit installation.
- ❑ Connect CAN cable.

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G7114A/B VWD

- ❑ *Section NOT Applicable*
- ❑ Install flow cell.
- ❑ Turn on the detector and lamp as soon as possible (one hour minimum warm-up time required).
- ❑ Install solvent inlet/outlet tubings.
- ❑ Install waste tubing.
- ❑ Install remote control cable (if applicable).
- ❑ Connect analog output cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable.

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Perform Lamp Intensity Test.
- ❑ Perform Wavelength Calibration.

Lamp Intensity Wavelength Calibration		Pass/Fail
		Wavelength Deviation of 0-Order
		Wavelength Deviation of Alpha Line (656 nm)

G7115A DAD, G7165A MWD

- ❑ *Section NOT Applicable*
- ❑ Install flow cell.
- ❑ Turn on the detector and lamp as soon as possible (one hour minimum warm-up time required).
- ❑ Install solvent inlet/outlet tubings.
- ❑ Install waste tubing.
- ❑ Install remote control cable (if applicable).
- ❑ Connect analog output cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable.

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Perform Lamp Intensity Test.
- ❑ Perform Wavelength Calibration.

Lamp Intensity Wavelength Calibration		Pass/Fail
		D2 Alpha Line Deviation (656 nm)
		D2 Beta Line Deviation (486 nm)

G7117A DAD FS, G7117B DAD, G7117C DAD HS

- ❑ *Section NOT Applicable*
- ❑ Install flow cell.
- ❑ Turn on the detector and lamp as soon as possible (one hour minimum warm-up time required).
- ❑ Install solvent inlet/outlet tubings.
- ❑ Install waste tubing.
- ❑ Install remote control cable (if applicable).
- ❑ Connect analog output cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable.

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

NOTE If there is any detector installed after the DAD, a pressure relief valve should be installed to protect the Max-Light cartridge.

- ❑ Perform Lamp Intensity Test.
- ❑ Perform Wavelength Calibration.

Lamp Intensity Wavelength Calibration		Pass/Fail
		D2 Alpha Line Deviation (656 nm)
		D2 Beta Line Deviation (486 nm)

G7121A FLD, G7121B FLD Spectra

- ❑ *Section NOT Applicable*
- ❑ Install solvent inlet/outlet tubings.
- ❑ Install waste tubing.
- ❑ Install remote control cable (if applicable).
- ❑ Connect analog output cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable.

NOTE LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Flow cell:

NOTE New instruments are shipped with a flow cell installed and have a factory wavelength calibration.

If a flow cell other than the installed/shipped flow cell is used, then:

- Verify that the installed flow cell is fixed tightly.
- Perform a Wavelength Calibration using Glycogen (part of FLD Calibration Kit (G7121-68001)).

NOTE There is a 20 bar pressure limit on the flow cell. Make sure there is no restriction on the waste tubing. Free flow to waste needs to be assured.

- ❑ Perform Lamp Intensity Test and compare profile to a reference profile listed in the User Manual.
- ❑ Perform Wavelength Accuracy Test.

Lamp Intensity		Done
Wavelength Accuracy		Excitation Deviation
		Emission Deviation

- ❑ If the test fails, perform Wavelength Calibration (if applicable).
- ❑ Rerun Wavelength Accuracy Test if Wavelength Calibration has been done (if applicable).

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G7162A/B RID

- ❑ *Section NOT Applicable*
- ❑ Connect an inlet capillary.

NOTE

Depending on the detector, different inlet tubings are used (from the Accessory Kit):

- G7162A:
  - Interfacing capillary (G1362-87300)
- G7162B:
  - Capillary ST 0.075 mm x 220 mm (5067-4784) (Sampler to MCT/TCC)
  - Capillary ST 0.075 mm x 340 mm (5067-4783) (Column to RID)

- ❑ Turn on the detector and the heater of the optical unit as soon as possible (one hour minimum warm-up time required).
- ❑ Install solvent inlet/outlet tubings.

NOTE

The G7162B RID has a maximum flow rate of 1 mL/min of water.

- ❑ Install solvent recycle.
- ❑ Install waste tubing.

NOTE

Waste and recycle container needs to be placed *above* the detector.

NOTE

There is a 5 bar pressure limit on the flow cell.

Make sure there is no restriction on the waste tubing. Free flow to waste needs to be assured.

- ❑ Connect analog output cable (if applicable).
- ❑ Connect CAN cable.
- ❑ Connect LAN cable.

NOTE

LAN connection is made between at least one of the Agilent Infinity II modules and the Control PC. If a detector is installed, connect the LAN to this module. If there are multiple detectors with spectral capabilities, consider using additional LAN connections for each detector.

- ❑ Check Optical Balance (from the RID Tool Screen in Lab Advisor).

Diode Balance		Value

G7102A, G426X A/B ELSD

- ❑ *Section NOT Applicable*
- ❑ Verify that the instrument is the correct module for the regional voltage (120 V/240 V). Do NOT use instruments which have an incompatible voltage.
- ❑ Connect the exhaust line to a fume hood or lab extraction line.
- ❑ Set the correct pressure at the regulator for the pressurized nitrogen line and connect it to the detector.
- ❑ Install the capillary connection from detector to HPLC.
- ❑ Install the RS-232 or LAN connection from detector to ChemStation control PC (if applicable).
- ❑ Install the Aux I/O cable connection from detector to the 1200 stack
- ❑ Connect the power lead.
- ❑ Connect the front drain to the waste container/bottle.
- ❑ Configure the detector in OpenLAB CDS ChemStation Edition or EZChrom Edition. "OpenLAB CDS ChemStation and EZChrom Edition, ELSD Driver version A.01.05 Minimum".
- ❑ Run a test measurement.

Table 1 Pass Specs

Signal Noise and Drift	ASTM baseline noise Slope of regression fit for drift	Noise: ≤ 2.000 LSU (or 2.000 mV for G426X A/B) Drift ≤ 5.000 LSU/hr (or ≤ 5.000 mV/hr for G426X A/B)
Injection Precision:	Injection Volume = 20 µL 10 x Injections	Height RSD ≤ 5.00 % Area RSD ≤ 5.00 %
Signal Height:		≥ 300 LSU (or ≥ 300 mV for G426X A/B)

G1364F Analytical Fraction Collector, G5664B Bio-Inert Fraction Collector

- ❑ *Section NOT Applicable*
- ❑ Connect solvent inlet and outlet tubings.
- ❑ Connect waste tubing.
- ❑ Connect hose to ventilation system (if applicable).
- ❑ Connect remote control cable (if applicable).
- ❑ Connect relay contacts (if applicable).
- ❑ Connect CAN cable.
- ❑ Configure communications in the Chromatography Data System (CDS).
- ❑ Configure linked pump in the CDS.
- ❑ Configure peak detector(s) in the CDS.
- ❑ Configure max. fill volume in the CDS.
- ❑ Perform Delay Calibration.

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G4208A 1200 Instant Pilot

- ❑ *Section NOT Applicable*
- ❑ Connect via CAN to available instrument module.
- ❑ Assure that the latest firmware is installed.

M8550A Lab Advisor Advanced

- ❑ *Section NOT Applicable*
- ❑ Verify with the customer whether they would like to have Lab Advisor Advanced installed.
- ❑ Install the Lab Advisor Software on the controlling PC (if applicable).
- ❑ Enter the Lab Advisor Advanced license (if applicable).

M8555A Lab Advisor Basic

- ❑ *Section NOT Applicable*
- ❑ Verify with the customer whether they would like to have Lab Advisor Basic installed.
- ❑ Install the Lab Advisor Software on the controlling PC (if applicable).

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Installation Checkout

The checkout is run after the complete installation of the module stack to affirm the functionality of all modules.

The checkout confirms that each module performs and is connected correctly. The chromatography should show a single peak for FLD, RID or ELSD or four or nine separated peaks, respectively, but is not a substitute for system suitability tests or qualifications.

The checkout for UV and Fluorescent Light Detectors should be run with one of the checkout columns supplied with the pump or with an equivalent column to ensure separation of the compounds.

The checkout for RIDs and ELSDs is done with a restriction capillary (5022-2159).

NOTE If a system is equipped with multiple detectors, only run one checkout run and always use the column based procedure for system checkout.

Checkout Columns

Table 2 Overview of column options for different pumps

Pump	Option 1	Option 2	Option 3
1260 Infinity II Isocratic, Quaternary and Binary Pump (G7110B/G7111B/ G7112B)	InfinityLab Poroshell 120 EC-C18, 4.6 x 100 mm, 2.7 µm	InfinityLab Poroshell 120 EC-C18, 3.0 x 150 mm, 2.7 µm	InfinityLab Poroshell 120 EC-C18, 3.0 x 50 mm, 2.7 µm
	695975-902T	693975-302T	699975-302T
1260 Infinity II Quaternary Pump VL (G7111A)	InfinityLab Poroshell 120 EC-C18, 4.6 x 100 mm, 4.0 µm	InfinityLab Poroshell 120 EC-C18, 4.6 x 50 mm, 2.7 µm	InfinityLab Poroshell 120 EC-C18, 4.6 x 150 mm, 4.0 µm
	695970-902T	699975-902T	693970-902T
1260 Infinity II Flexible Pump (G7104C)	InfinityLab Poroshell 120 EC-C18, 3.0 x 150 mm, 2.7 µm, 1000 bar	InfinityLab Poroshell 120 EC-C18, 3.0 x 100 mm, 2.7 µm, 1000 bar	InfinityLab Poroshell 120 EC-C18, 2.1 x 50 mm, 1.9 µm, 1300 bar
	693575-302	695575-302	699675-902
1290 Infinity II Pumps (G7120A and G7104A)	InfinityLab Poroshell 120 EC-C18, 2.1 x 50 mm, 1.9 µm, 1300 bar		
	699675-902		
1260 Infinity II Bio-inert Pump (G5654A)	AdvancedBio Peptide Map, 2.1 x 150 mm, 2.1 µm		
	653750-902		

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Checkout Samples

Checkout Sample for UV Detection at 600 bar or higher

The RRLC checkout sample (5188-6529) serves as standard for systems with 600 bar or higher and contains 100 ng/µL each of nine components dissolved in water / acetonitrile (65/35). The nine components are:

- Acetanilide
- Acetophenone
- Propiophenone
- Butyrophenone
- Benzophenone
- Valerophenone
- Hexanophenone
- Heptanophenone
- Octanophenone

Checkout Sample for UV Detection at Maximum 400 bar and FL Detection

The Agilent isocratic checkout sample (01080-68704) serves as standard for isocratic systems, systems with a FLD as only detector, and for systems with 400 bar pumps. It contains each of four components dissolved in methanol.

- Dimethylphthalate
- Diethylphthalate
- Biphenyl
- o-Terphenyl

Checkout Sample for ELSD

The Agilent Enterprise Edition Caffeine Std Kit (5190-0488) serves as standard for several instrument related procedures. The 200 µg/mL standard is used for checkout of ELSD systems. The standard kit contains calibrated amounts of caffeine in water with concentrations of:

- 0.5 µg/mL
- 1 µg/mL
- 2 µg/mL
- 5 µg/mL
- 25 µg/mL
- 50 µg/mL
- 100 µg/mL
- 200 µg/mL

Checkout Sample for RID

The Agilent Refractive Index Det OQ/PV Test Sample (5064-8220) serves as standard for several instrument related procedures. The 15 mg/mL sample is used for checkout of RID only systems. The standard kit contains calibrated amounts of glycerol in water with concentrations of:

- 5 mg/mL
- 10 mg/mL
- 15 mg/mL
- 25 mg/mL
- 50 mg/mL

Checkout Sample for Fraction Collection

The Fraction Collector Delay Calibrant (5190-8223) is used for delay calibration and for the checkout of the Fraction Collectors. It contains three dyes dissolved in DMSO, which can be separated chromatographically, resulting in three differently colored fractions. To successfully separate the dyes, acidification of the mobile phase is necessary. If not present at the customer, G2453-85060 (Formic Acid Reagent Grade) can be used to prepare the mobile phase for checkout.

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Checkout method for Isocratic, 400 bar and FLD only systems

This checkout method covers configurations with isocratic or 400 bar pumps or systems with FLD as only detectors. For column options and checkout samples, see **Table 2**, and **"Checkout Sample for UV Detection at Maximum 400 bar and FL Detection"**.

- ❑ *Section NOT Applicable*
- ❑ Install the checkout column.
- ❑ Setup the system.
  - ❑ Set parameters for the pump.

Table 3 Checkout method parameter settings G7110B

Parameter	Value
Flow	1.5 mL/min
Solvents	65 % ACN in water
Compressibility	95
Stoptime	10 min
Pressure Limit	400 bar
Minimum Stroke	Automatic

OR

Table 4 Checkout method parameter settings G7111A/B, G7112B, G7120A, G7104A/C, or G5654A

Parameter	Value
Flow	1 mL/min
Solvent A	Water
Solvent B	ACN
Compressibility	Use solvent types (Use 95 for G7111A/B) for Compressibility
Composition	35 % A (Water)
Composition	65 % B (ACN)
Stoptime	10 min
Pressure Limit	400 bar
Minimum Stroke	Automatic

❑ Set parameters for the injector.

Table 5 Checkout method parameter settings G7129A/B, G7167A/B, or G5668A

Parameter	Value
Injection	1 µL
Stoptime	as pump
Draw speed	100 µL/min

❑ Set parameters for the multicolumn thermostat.

Table 6 Checkout method parameter settings G7116A/B, or G7130A/B

Parameter	Value
Temperature (left)	40 °C
Temperature (right)	combined
Stoptime	as pump

❑ Set parameters for the detector.

Table 7 Checkout method parameter settings G7115A, G7165A, or G7117A/B/C

Parameter	Value
Signal A	254 /4 nm
Ref A	360 /100 nm
Peakwidth	40 Hz
Stoptime	as pump
Spectrum	None
Autobalance	Prerun

OR

Table 8 Checkout method parameter settings G7114A/B

Parameter	Value
Wavelength	254 nm
Peakwidth	40 Hz
Stoptime	as pump
Autobalance	Prerun

OR

Table 9 Checkout method parameter settings G7121A/B

Parameter	Value
Excitation Wavelength	246 nm
Emission Wavelength	317 nm
PMT gain	Starting at a value of 9, decrease/increase the PMT to bring the highest peak on the FLD to a value between 1 and 100 LU
Response time	4 s

❑ Start the system.

❑ Equilibrate the system until the pressure signal and the detector baseline are stable.

❑ Run the checkout sample and check the chromatogram for obvious abnormalities.

Checkout Method 1260 and 1290 Infinity II Systems with UV Detectors

This checkout method covers configurations with gradient pumps with pressures of 600 bar and above with UV detectors. For column options and checkout samples, see **Table 2**, and **"Checkout Sample for UV Detection at 600 bar or higher"**.

- ❑ *Section NOT Applicable*
- ❑ Install the checkout column.
- ❑ Setup the system.
  - ❑ Set parameters for the pump.

Table 10 Checkout method parameter settings G7111A

Parameter	Value
Flow	1 mL/min
Solvent A	Water
Solvent B	ACN
Compressibility	75
Composition	35 % A (Water)
Composition	65 % B (ACN)
Stoptime	10 min
Pressure Limit	400 bar
Minimum Stroke	Automatic

OR

Table 11 Checkout method parameter settings G7111B, G7112B, G7120A, G7104A/C, or G5654A

Parameter	Value
Flow	0.8 mL/min
Solvent A	Water
Solvent B	ACN
Compressibility	Use solvent types (use 95 for G7111B)
Composition	60 %A (Water)
Composition	40 %B (ACN)
Stoptime	10 min
Minimum Stroke	Automatic
Timetable	2.5 min, 80 %B

❑ Set parameters for the injector.

Table 12 Checkout method parameter settings G7129A/B, G7167A/B, or G5668A

Parameter	Value
Injection	1 µL
Stoptime	as pump
Draw speed	100 µL/min

❑ Set parameters for the multicolumn thermostat.

Table 13 Checkout method parameter settings G7116A/B, or G7130A/B

Parameter	Value
Temperature (left)	40 °C
Temperature (right)	combined
Stoptime	as pump

❑ Set parameters for detector.

Table 14 Checkout method parameter settings G7115A, G7165A, or G7117A/B/C

Parameter	Value
Signal A	254 /4 nm
Ref A	360 /100 nm
Peakwidth	40 Hz
Stoptime	as pump
Spectrum	None
Autobalance	Prerun

OR

Table 15 Checkout method parameter settings G7114A/B

Parameter	Value
Wavelength	254 nm
Peakwidth	40 Hz
Stoptime	as pump
Autobalance	Prerun

❑ Start the system.

❑ Equilibrate the system until the pressure signal and the detector baseline are stable.

❑ Run the checkout sample and check the chromatogram for obvious abnormalities.

Checkout Method 1260 and 1290 Infinity II Systems with ELSD or RID

This checkout method covers configurations with RI or ELS detectors as only detectors. For column options and checkout samples (keep in mind the samples are different for ELSD and RID), see **Table 2**, **"Checkout Sample for ELSD"**, and **"Checkout Sample for RID"**.

- ❑ *Section NOT Applicable*
- ❑ Install the restriction capillary to the MCT.
- ❑ Setup the system.
  - ❑ Set parameters for the pump.

Table 16 Checkout method parameter settings G7110B, G7111A/B, G7112B, G7120A, G7104A/C, or G5654A with ELSD or RID

Parameter	Value
Flow	1 mL/min
Solvents	Water
Compressibility	46
Stoptime	5 min
Pressure Limit	400 bar
Minimum Stroke	Automatic

  - ❑ Set parameters for the injector.

Table 17 Checkout method parameter settings G7129A/B, G7167A/B, or G5668A with ELSD or RID

Parameter	Value
Injection	20 µL
Stoptime	as pump
Draw speed	100 µL/min

  - ❑ Set parameters for the multicolumn thermostat.

Table 18 Checkout method parameter settings G7116A/B with ELSD, RID

Parameter	Value
Temperature (left)	35 °C
Temperature (right)	combined
Stoptime	as pump

❑ Set parameters for the detector.

Table 19 Checkout method parameter settings G7102A, G426XA/B

Parameter	Value
Nebulizer	Temperature: 70 °C
Evaporator	Temperature: 70 °C
Gas Flow	1.60 SLM
Data Rate	10 Hz
Smoothing	1 s
PMT Gain	1 (No PMT Gain setting for G7102A)
LED Intensity	100 % (No Laser setting for the Agilent G7102A)

OR

Table 20 Checkout method parameter settings G7162A/B

Parameter	Value
Optical Unit Temperate	35 °C
Signal	Acquire
Response time	4 s
Signal Polarity	positive
Automatic Zero	on
Automatic Recycling	off

❑ Start the system.

❑ Equilibrate the system until the pressure signal and the detector baseline are stable.

❑ Run the checkout sample and check the chromatogram for obvious abnormalities.

Additional Checkout method for 1260 and 1290 System with Fraction Collector

- ❑ *Section NOT Applicable*
- ❑ Install the checkout column.
- ❑ Setup the system.
  - ❑ Set parameters for the pump.

Table 21 Checkout method parameter settings G7111B, G7112B, G7120A, G7104A/C, or G5654A

Parameter	Value
Flow	1 mL/min
Solvent A	Water
Solvent B	ACN
Compressibility	Use solvent types (use 95 for G7111B)
Composition	98 %A (0.1 % FA in Water)
Composition	2 %B (0.1 % FA in ACN)
Stoptime	5.5 min
Minimum Stroke	Automatic
Timetable	0.0 min, 98 % A 0.3 min, 98 % A 3.5 min, 2 % A 4.2 min, 2 % A 4.3 min, 98 % A

  - ❑ Set parameters for the injector.

Table 22 Checkout method parameter settings G7129A/B, G7167A/B, or G5668A

Parameter	Value
Injection	2 µL
Stoptime	as pump
Draw speed	100 µL/min

❑ Set parameters for the multicolumn thermostat.

Table 23 Checkout method parameter settings G7116A/B, or G7130A/B

Parameter	Value
Temperature (left)	40 °C
Temperature (right)	combined
Stoptime	as pump

❑ Set parameters for the detector.

Table 24 Checkout method parameter settings G7115A, G7165A, or G7117A/B/C

Parameter	Value
Signal A	310/4 nm
Ref A	None
Peakwidth	5 Hz
Stoptime	as pump
Spectrum	None
Autobalance	Prerun

OR

Table 25 Checkout method parameter settings G7114A/B

Parameter	Value
Wavelength	310 nm
Peakwidth	5 Hz
Stoptime	as pump
Autobalance	Prerun

❑ Set parameters for the fraction collector.

Table 26 Checkout method parameter settings G1364F, or G5664B

Parameter	Value
Collection Behavior	Enable Fraction Collection
Peak Detector	Use the configured UV Detector
Peak Detection Mode	Threshold
Threshold	50 mAU
Timetable	Peak-based

❑ Start the system.
❑ Equilibrate the system until the pressure signal and the detector baseline are stable.
❑ Fill the fraction collector with three vessels for fraction collection.
❑ Run the checkout sample and check the chromatogram for obvious abnormalities.

Signature Page

Service Review

- ❑ Attach available reports/printouts to this documentation.
- ❑ Record the time/date of installation or upgrade completion in the customer's records/logbook.
- ❑ Complete the following Service Engineer comments section if there are additional comments.
- ❑ Review the installation/upgrade with the customer.
- ❑ Explain Agilent warranty for instruments.
- ❑ Explain how to use manuals, guides, and online help.
- ❑ Explain how to get self-help, and FAQs online.
- ❑ Explain how to log an instrument service call and support services that are available.
- ❑ Advise customer of additional instrument training options.
- ❑ If the instrument firmware was updated, record the details of the change in the service engineer's comments box or if necessary, in the customer's IQ records.
- ❑ Supply the customer with a copy of the Smart Alerts flyer.
- ❑ Describe Smart Alerts to the customer.
- ❑ Install Smart Alerts if requested.

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Service Engineer Comments (optional)

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

Service Completion

Service request number…….

Date service completed……

Agilent signature……

Customer signature……

Total number of pages in this document……

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