

Agilent CrossLab Start Up Services

Agilent G5571AA, G5572AA AssayMAP Bravo Platform Site Preparation Checklist



Thank you for purchasing an AssayMAP Bravo Platform from **Agilent Technologies**. CrossLab Start Up is focused on helping customers shorten the time it takes to start realizing the full value of their instrument investment.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This **checklist** outlines the supplies, space, and utility requirements for the system set up in your lab.

Introduction

Customer Information

- If you have questions or problems in providing anything described as part of *Customer Responsibilities* below, please contact your local Agilent or partner support / service organization for assistance prior to delivery.
- Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your laboratory. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-schedule any services that have been purchased.
- Other optional services such as additional training, operational qualification (OQ) and consultation for user-specific applications can be ordered with the system but should be contracted separately.
- Be aware that all Bravo safety equipment will be installed unless Option #020 is specified on the sales order.

If Option #020 is specified, the Bravo [Safety and Liability Waiver Agreement for Stand-alone Sales without Safety Light Curtains](#) (part number D0006132) must be completed before the installation is completed. If an authorized customer representative does not sign this waiver and does not plan to implement their own Bravo safety protection, the Agilent Field Engineer may not install the AssayMAP Bravo Platform.

Customer Responsibilities

- Ensure that your site meets the following requirements before the installation date:

Site requirements for the AssayMAP Bravo Platform	Links to detailed specifications	Does your site meet the requirement?	
		Yes	No
Laboratory or bench space	Dimensions and Weight		
Environmental conditions	Environmental Conditions		
Number, type, and location of electrical outlets	Power Consumption		
Supplies for product installation and operation	Customer-Provided Supplies		
Computer and software requirements	Computer Specifications and Requirements		
Additional equipment, laboratory bench specifications, computer requirements, and safety equipment	Special Requirements and Other Considerations		

- Locate your **sales order information**, software authorization codes, and/or software licenses/certificates.
- Provide availability of a system/network administrator as needed to connect to your intranet.
- While Agilent is delivering **Installation and Introduction** services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.
- If you cannot meet the requirements and responsibilities listed in this section, please contact Agilent as soon as possible to re-schedule any services that have been purchased.

Important Customer Web Links

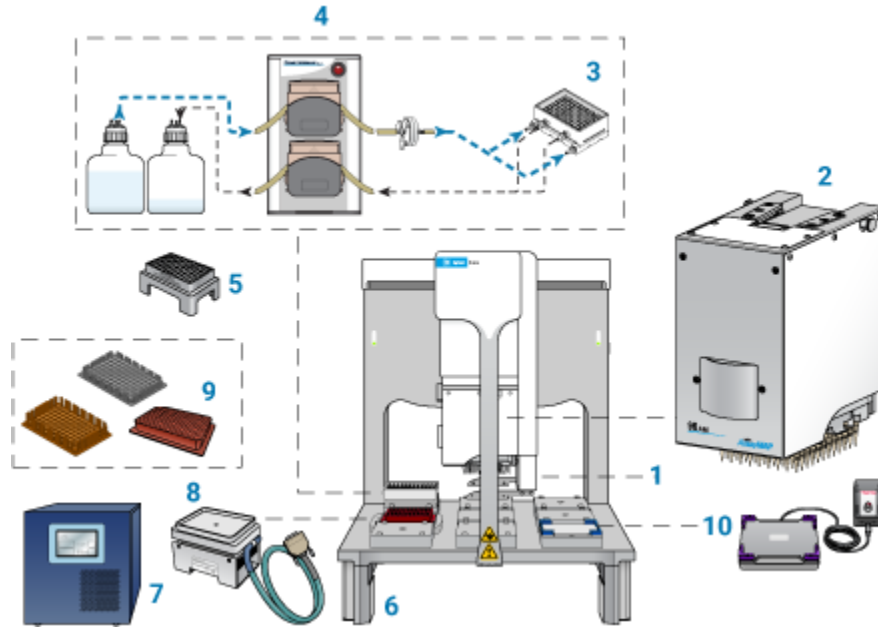
- For additional information about the AssayMAP platform, please visit the product pages at <https://www.agilent.com/en/product/automated-liquid-handling/automated-liquid-handling-applications/assaymap-bravo-protein-sample-prep-platform>
- The **Agilent Community** is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>

The AssayMAP community pages are at <https://community.agilent.com/technical/assaymap>

- **Need to place a service call?** [Flexible Repair Options | Agilent](#)

Site Preparation

The following figure and table provide an overview of the hardware components.



Item	Description
1	Bravo with Gripper assembly
2	AssayMAP liquid-handling head (Bravo 96AM Head)
3	96 Channel Wash Station (part no. G5498B#90) or 96AM Wash Station (part no. G5498B#57)
4	Pump Module 2.0 with tubing and two carboys
5	96AM Cartridge and Tip Seating Station (seating station)
6	Deck risers
7	STC controller (for Peltier Thermal Station)
8	Peltier Thermal Station with custom plate nest
9	Thermal Plate Inserts
10	Orbital Shaking Station
11	Plate Risers (not shown)
12	Safety equipment: Light Curtain and emergency-stop pendant (not shown)
13	Computer (not shown)

Dimensions and Weight

Identify the laboratory bench space before your system arrives based on the following table.

Pay special attention to the total height 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

- The table surface must be at least 86 cm (34 in) from the floor to restrict reach-over access above the Light Curtain and shields.

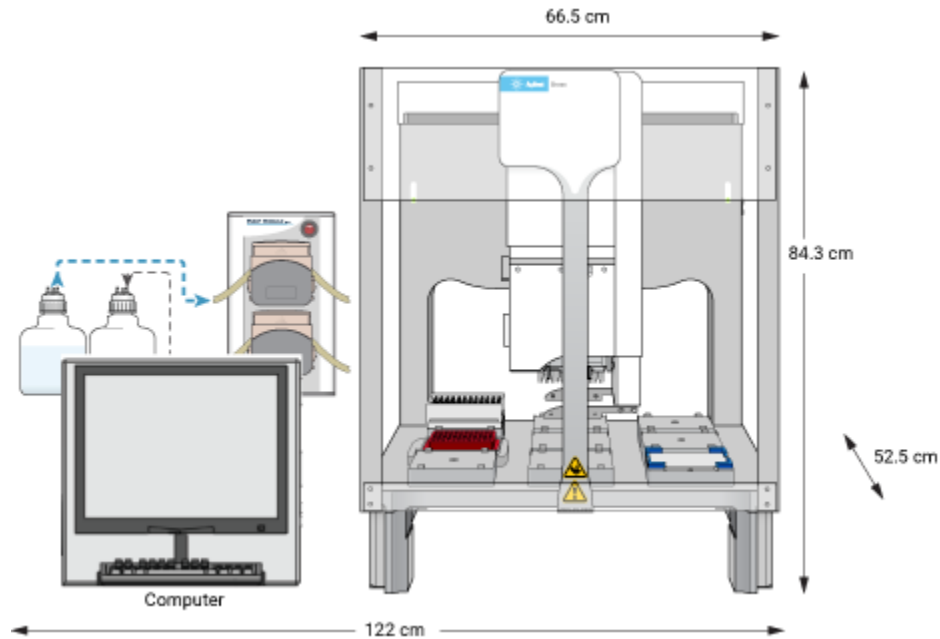
WARNING Reaching over the Light Curtain and shields can expose operators to moving-parts hazards.

- In addition to the dimensions of the AssayMAP Bravo Platform, you must plan space for the computer workstation
- This product requires additional lifting assistance due to its weight. Please discuss the arrangements for this activity with the service engineer prior to installation.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
Bravo instrument on risers with Light Curtain	60.7	133.5	84.3	33.2	52.5	20.7	66.5	26.2
Bravo 96AM Head	3.83	8.5	20.3	8.0	18.4	7.25	10.5	4.13
Pump Module 2.0			25.4	10.0	23.5	9.25	14.6	5.75
Computer workstation with space for emergency-stop pendant	2.9 approx	6.4 approx	36.3	14.3	61.6	24.3	72.6	28.6
Orbital Shaking Station with Control Unit	(Installs on the Bravo deck at location 9.)							
Peltier Thermal Station (CPAC Ultraflat Heater/Cooler)	(Installs in the Bravo deck at location 4.)							
Single Inheco Control (STC) for the Peltier Thermal Station*	3.3	7.3	17.7	7	22.4	8.8	14.7	5.8

* The STC controller must be placed within proximity of the Bravo deck to accommodate the reach of the cables that connect to the Peltier Thermal Station installed on the deck. The controller may be placed on a shelf or on the floor below the Bravo Platform.

For the total bench width, allow approximately 122 cm (4 feet).



Environmental Conditions

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

Special notes

- Performance can be affected by sources of heat and cold, for example, direct sunlight, heating/cooling from air conditioning outlets, and drafts.
- The laboratory's ambient temperature conditions must be stable for optimum performance.
- The AssayMAP Bravo Platform is intended to operate in a low-vibration environment. Excessive vibration may induce pipettor and robot errors.
- The AssayMAP Bravo Platform is for indoor use only.

Operating Temperature °C	Operating Humidity %	Heat Dissipation BTU	Pollution degree	Installation category
4°C to 40°C	10-90% Relative Humidity, non-condensing	682.4 BTU/hour (200 W)	2	II

Power Consumption

Special notes

- Ensure at least four electrical outlets are in proximity of the platform. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
- Use the correct power cord, included with shipment.

Instrument Description	Line Voltage and Frequency (V, Hz)	Maximum Power Consumption (VA or W)
AssayMAP Bravo Platform	100-240 Vac, 50/60 Hz	300 VA
Laptop Computer	100-240 Vac, 50/60 Hz	150 W
Pump Module 2.0	100-240 Vac, 50/60 Hz, 1.5 A	200 W
Orbital Shaker	100-240 Vac, 50/60 Hz	-
Peltier Thermal Station with STC Controller	115 Vac, 60 Hz	-

Required Operating Supplies by Customer for Installation

The customer must provide the following supplies for product installation and operation.

Item Description (including Dimensions etc.)	Part Number (if applicable)	Recommended Quantity
Labware for your AssayMAP applications <i>Note:</i> Labware requirements vary depending on experimental design. See the AssayMAP Bravo Labware Reference Guide (part number D0012628).	various	various
AssayMAP Cartridges for your applications See the Cartridge Selection Guide for basic cartridge information.	Agilent various	varies
250 µL pipette tips	Agilent 19477-002	varies
DI water for the wash station	Not applicable	Not applicable
(Optional) AssayMAP Syringe Replacement Kit Includes syringe replacement tools and 10 new replacement syringes for head repair.	Agilent G5409-68002	1
Microsoft Office 365 Excel 32-bit (US Version)	-	-

The following supplies are included with the AssayMAP Bravo Platform:

- - AssayMAP Resin-Free Cartridges, rack of 96
- - AssayMAP Syringe Test Kit
- - Carboys, two

Computer Requirements

Software specifications

- The AssayMAP Protein Sample Prep Workbench 4.0.2 requires VWorks software 14.4. The following table lists the software specifications.

Specification Description	Minimum	Comments
Operating system name, version	Microsoft Windows 10 or 11 OS, Enterprise or Professional, 64-bit (version 19044 for Windows 10 and 22000 for Windows11)	This Windows build has been verified to work with VWorks 14.4. Ensure that Microsoft Windows is configured to Never Sleep. If the computer goes into Sleep mode, a computer restart might be required before VWorks can successfully log-in to OpenLab Shared Services.
O/S .NET and other add-ons	.NET 3.5 and .NET 4.7.2, .NET 4.8	If not already installed, the OpenLab for VWorks installer will automatically install the .NET components.
Web browser	One of the following: - Microsoft Edge - Internet Explorer 11 - Google Chrome 84 or later	The Content Browser in VWorks Plus requires a browser. A browser is required for viewing the VWorks Knowledge Base, which includes all the user guides.
Database software *	MySQL 8.0.1.18.0	MySQL is already installed on Agilent-supplied computers. MySQL is required only if you plan to use the VWorks Inventory database (for labware storage devices).
	PostgreSQL 15	PostgreSQL is automatically installed by the OpenLab for VWorks installer.
Antivirus software	Any of the following antivirus software: - Microsoft Security Essentials - McAfee - Symantec Endpoint Protection - Trend Micro	Agilent has tested the listed antivirus software for compatibility:
Language settings/compatibility	English	The VWorks software is available in English only.
Account settings/privileges	Domain user with local administrator privileges	Required for installation and configuration

* The *VWorks Automation Control Setup Guide* provides instructions on how to establish connections to the following VWorks 14.4 databases, which are required for the compliance-enabled VWorks Plus edition of Protein Sample Prep Workbench 4.0.2. These databases are configured during installation.

- Experiments database (PostgreSQL)
- E-Signatures database (PostgreSQL)

- In addition, Microsoft Office 365 Excel 32-bit is required for the Protein Sample Prep Workbench method setup tools and reagent volume calculators.
 - The customer must obtain this version of Excel because Agilent is not able to provide or resell any Microsoft products

Computer hardware specifications

- Ensure that the computer meets the following specifications or equivalent.

An Agilent-supplied computer, if purchased, is an HP Z2G4 or equivalent, with 16 GB RAM and meets all the following requirements.

Specification Description	Minimum
Processor type and speed	Intel i5, i7, or Xeon E3 equivalent 3.0 GHz or faster 64-bit 4 core
Memory (RAM)	16 GB
Internal storage/devices/media	500 GB hard drive capacity with 100 GB free space
Graphic resolution	1600 x 900 minimum 1920 x 1080 recommended
Display Scale and Layout	100% recommended
RS-232 port	1 serial port if the automation device requires a serial connection Alternatively, you may connect using a USB port with USB-to-serial adapter.
USB port	USB 2 Required for software installation via provided media. May be required to connect some devices or accessories.
LAN cards	100 MB/1 GB LAN for instrument control Second LAN card for lab intranet connection, if required Agilent-supplied computers are equipped with two Ethernet ports: 1 port to connect to the AssayMAP Bravo Platform 1 port to connect to the customer's LAN IMPORTANT: Always verify the computer LAN connection to the AssayMAP Bravo Platform before connecting any other networks.

Special Requirements and Other Considerations

Laboratory table specifications

- The laboratory table must support the weight of the AssayMAP Bravo Platform without excessive shaking or movement. The table should be fixed in place, for example, castors that lock.
- The table must be level in the direction of the width and the depth of the platform. Using a traditional bubble level, the table should be leveled such that the bubble is centered between the two limit lines of the level
- The table surface must have a thickness relative to the material that will prevent warping when the AssayMAP Bravo Platform and computer are set upon the table.
- The table surface must be attached to the table frame.

Additional equipment requirements

The AssayMAP Syringe Test Kit (Agilent G5496-60050) is required for evaluating the performance of the syringes in the AssayMAP liquid-handling head (Bravo 96AM Head).

The following equipment is also required for the AssayMAP Syringe Test.

Items required for AssayMAP Syringe Test	Manufacturer and part number	Quantity required
Microplate reader Must be capable of measuring absorbance at 425 nm or 405 nm and generating a text (.txt) or Microsoft Excel (.xlsx) file for the Syringe Test Analysis.	various	1
Microplate centrifuge Must be equipped with a microplate rotor and capable of spinning at 500g for the AssayMAP Syringe Test procedure.	various	1

Safety equipment and precautions

WARNING! Changing or modifying the safety equipment can prevent the safe operation of the workstation, invalidate its safety compliance, and lead to personal injury or property damage. Any customer who does not use the supplied safety equipment or who modifies the supplied safety equipment assumes full responsibility for providing an appropriate level of safety for its operators and for providing the applicable safety compliance marking and documentation.

All safety equipment supplied with the AssayMAP Bravo Platform will be installed for you. The safety equipment includes:

- Emergency-stop pendant (e-stop pendant)
- Light Curtain and shields

The safety equipment prevents operator access to moving-parts hazards. Pressing the red emergency-stop button on the pendant or interrupting the Light Curtain will stop the motion of the device. Ensure that you understand the potential safety hazards and how to avoid them. The following guides are shipped with the Bravo Platform.

- [Automation Solutions Products General Safety Guide](#) (part number G5500-90015)
- [Bravo Platform Safety and Installation Guide](#) (part number G5563-90002)

Service Engineer Review (Optional)

Service Engineer Comments

If the Service Engineer completed a review of the Site Preparation requirements with the customer, the Service Engineer should complete the following Comments section. Both the Service Engineer and the customer should complete the Site Verification section below.

If there are any specific points that should be noted as part of performing the service review or other items of interest for the customer, please write in this box.

Site Preparation Verification

Service Request Number:

Date of Review:

Service Engineer Name:

Customer Name:

Service Engineer Signature:

Total number of pages in this document: