

Cary
100/300/4000/
5000/6000i
Spectrometer

Site Preparation Guide



Agilent Technologies

Notices

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Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

Request for Installation

All preparations have been completed. Please arrange for the installation to be completed as soon as possible. I understand that if the installation site is not prepared in accordance with the enclosed instructions, additional installation charges may apply.

Company name: _____

Company address: _____

Name: _____

Position: _____

Telephone: _____

Preferred installation date: _____

Signed: _____

Date: _____

Site Preparation Checklist

Your site must meet all requirements before you request installation. Complete each requirement listed in the table. After completing each requirement, place a check in the appropriate checkbox. Ensure you compare each item inside the boxes with the packing list supplied with the boxes.

NOTE

Do not unpack the instrument. If unpacked incorrectly, equipment may become damaged. Your Agilent representative will do this for you.

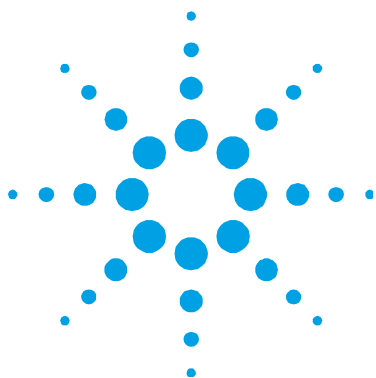
| Requirements | <input checked="" type="checkbox"/> |
|---|-------------------------------------|
| The work area is prepared and meets requirements (see Chapter 3). | <input type="checkbox"/> |
| The power supply meets requirements (see Chapter 4). | <input type="checkbox"/> |
| A nitrogen gas supply for optics path purging is ready (Cary 100/300 needs the Extended Sample Compartment option) (see Chapter 5). | <input type="checkbox"/> |
| The Cary instrument and accessories are on site and packages have been inspected (see Chapter 6). | <input type="checkbox"/> |
| The computer meets requirements (see Chapter 7). Computer type: _____ | <input type="checkbox"/> |
| The Microsoft® Windows® operating system is installed (see Chapter 7). | <input type="checkbox"/> |
| Operator training is required (see Chapter 8). | <input type="checkbox"/> |

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1. Introduction

The range of Agilent Cary spectrophotometers are complete analysis systems that have been fully tested and proven to specification before dispatch from the manufacturing plant.

This manual contains general information relevant to the preparation of an installation site, and details the facilities that must be provided to ensure that the system can be effective. Detailed operating procedures are provided in the operation manual that is supplied with the spectrophotometer.

You should complete the site preparation checklist on Page 4 and then send a copy of the checklist to the Agilent sales and service office or local Agilent agent dealing with the supply of the equipment. On receipt of this document, the Agilent representative will contact you and arrange a convenient time for installation.

As a guide to the time required for installation by an Agilent representative, a typical Cary system will be completed and ready for use within four hours. This time may be extended if the system includes accessories. The installation time can be kept to a minimum by ensuring proper preparation of the site and arrangement of all units to allow for easy access.

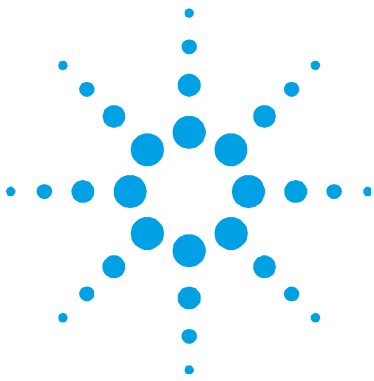
NOTE

The remainder of this manual contains information such as the environmental requirements and technical specifications for the Cary spectrophotometer, and it should not be discarded — keep this manual for future reference.

Introduction

Your local Agilent office is:

Agilent office card to be attached here.



2. Safety Practices and Hazards

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Your Agilent Cary instrument and accessories have been carefully designed so that when used properly you have an accurate, fast, flexible and safe analytical system.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Information on safety practices appears throughout the documentation (both printed and online) provided with your instrument and accessories. Before using the instrument or accessories, you must thoroughly read these safety practices.

Observe all relevant safety practices at all times.

Ultraviolet radiation

The deuterium (fitted as standard in all instrument models) and mercury lamps (if fitted) in the instrument emit hazardous ultraviolet (UV) radiation. This radiation can cause serious damage to eyes. NEVER look directly at either lamp and NEVER operate either lamp unless it is correctly mounted in the lamp turret (Cary 4000/5000/6000i only) and the turret is correctly mounted in the instrument.

NOTE

The mercury lamp is fitted as standard in the Cary 4000/5000/6000i.

Ozone can be generated by radiation from the source lamps. Exposure to ozone can result in severe irritation to the skin, eyes, and upper respiratory system. The maximum permissible exposure level is 0.1 parts per million (0.2 milligrams per cubic meter).

ALWAYS ventilate the area surrounding the spectrophotometer such that the concentration of ozone does not exceed the maximum permissible level. All venting must be to outside air, never within the building.

Electrical hazards

The Cary 100/300/4000/5000/6000i instruments and some accessories contain electrical circuits, devices, and components operating at dangerous voltages. Contact with these circuits, devices and components can cause death, serious injury, or painful electrical shock.

Panels or covers which are retained by screws on the spectrophotometer and accessories (with the exception of the lamp access cover) may be opened ONLY by Agilent-trained, Agilent-qualified, or Agilent-approved service engineers. Consult the manuals or product labels supplied with your computer, monitor and printer to determine which parts are operator-accessible.

Operators and other unauthorized personnel are permitted access **ONLY** to the lamp compartment and the sample compartment of the Cary instrument. **ALWAYS** switch off the spectrophotometer before changing a lamp in the lamp compartment.

Good grounding/earthing is essential to avoid a potentially serious electric shock hazard. Ensure that there is an integral ground connection between the metal base of the spectrophotometer and accessories and the 3 pin earth-grounded receptacle. Consult the manuals or product labels supplied with your computer, monitor and printer for the relevant grounding requirements.

NOTE

The safety classification is given as Equipment Class I.

Application of the wrong supply voltage can create a fire hazard and a potentially serious shock hazard, and could seriously damage the Cary system, accessories and any attached ancillary equipment. The Cary 4000/5000/6000i has a Universal Power Supply that adapts to the supply voltage. However, care must be taken to ensure that the correct voltage is used.

IMPORTANT

Set the slide switch(es) at the rear of the Cary 100/300 to the appropriate voltage before connecting the spectrophotometer or accessories to the mains power supply.

Do not connect the spectrophotometer or accessories to the mains power supply until you have made sure that the slide switch(es) (Cary 100/300 only) at the rear of these are correctly set for the mains power supply in the specific outlet in your laboratory to which the equipment will be connected. Consult the manuals supplied with your computer, monitor and printer for their specific voltage requirements.

Replace blown fuses with fuses of the size and rating as stipulated in the text adjacent to the fuse holder or in the manuals where listed.

Do NOT use power cords with faulty or frayed insulation.

Other precautions

Both the deuterium and the visible lamps operate at high temperatures, and touching either of these lamps may result in burns. Before replacing a lamp that has been lit, switch off the spectrophotometer and either ensure that the lamp has cooled, or protect your fingers from burns.

Do not block the ventilation grilles on the spectrophotometer and accessories. Consult the manuals supplied with your computer, monitor and printer for their specific ventilation requirements.

Use of the Cary system and accessories may involve materials, solvents and solutions which are flammable, corrosive, toxic or otherwise hazardous.

Careless, improper, or unskilled use of such materials, solvents and solutions can create explosion hazards, fire hazards, toxicity and other hazards which can result in death, serious personal injury, and damage to equipment and property.

ALWAYS ensure that laboratory safety practices governing the use, handling and disposal of such materials are strictly observed. These safety practices should include the wearing of appropriate safety clothing and safety glasses.

Warning and caution messages

Carefully read all warnings and cautions and observe them at all times.

A Warning message is used in the text when failure to observe instructions or precautions could result in death or injury. Warnings have the following format:

WARNING



Hazard Type

Nature of the hazard, information on how to avoid the hazard, and possible consequences if you don't.

The triangular symbols that appear in conjunction with warnings are outlined in the next section.

A Caution message is used when failure to observe instructions could result in damage to equipment (Agilent supplied and/or other associated equipment). Cautions have the following format:

CAUTION Caution information appears here.

Information symbols

The following triangular symbols appear in conjunction with warnings on the spectrometer and associated documentation. The hazard they depict is shown below each symbol:



Broken glass



Corrosive liquid



Ejecting parts



Electrical shock



Eye hazard



Fire hazard



*Heavy weight
(danger to feet)*



*Heavy weight
(danger to hands)*



Hot surface



Moving parts



Noxious gas

Safety Practices and Hazards

The following symbol may be used on warning labels attached to the instrument. When you see this symbol, refer to the relevant operation or service manual for the correct procedure referred to by that warning label.




The following symbols also appear on the instrument or in the documentation:


 Mains power on

 Mains power off

 Fuse


 Single phase alternating current


 Direct current

 When attached to the rear of the instrument, indicates that the product complies with the requirements of one or more EU directives

 Focus

 Vertical adjustment

 Horizontal adjustment

 When attached to the rear of the product, indicates that the product has been certified (evaluated) to CSA 61010.1 and UL 61010-1

Color coding

The various indicator lights appearing on Agilent instruments and associated accessories are color-coded to represent the status of the instrument or accessory.

- A green light indicates the instrument is in normal or standby mode.
- An orange light indicates that a potential hazard is present.
- A blue light indicates that operator intervention is required.
- A red light warns of danger or an emergency.

CE compliance

Cary UV-Vis-NIR instruments have been designed to comply with the requirements of the Electromagnetic Compatibility (EMC) Directive and the Low Voltage (electrical safety) Directive (commonly referred to as the LVD) of the European Union. Agilent has confirmed that each product complies with the relevant directives by testing a prototype against the prescribed EN (European Norm) standards.

Proof that a product complies with the directives is indicated by:

- The CE marking appearing on the rear of the product.
- The documentation package that accompanies the product, containing a copy of the Declaration of Conformity. This declaration is the legal declaration by Agilent that the product complies with the directives and also shows the EN standards to which the product was tested to demonstrate compliance.

Electromagnetic compatibility

EN55011/CISPR11

Group 1 ISM equipment: group 1 contains all ISM equipment in which there is intentionally generated and/or used conductively coupled radio- frequency energy which is necessary for the internal functioning of the equipment itself.

Class A equipment is equipment suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

This device complies with the requirements of CISPR11, Group 1, Class A as radiation professional equipment. Therefore, there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.

Operation is subject to the following two conditions:

- 1 This device may not cause harmful interference.
- 2 This device must accept any interference received, including interference that may cause undesired operation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:

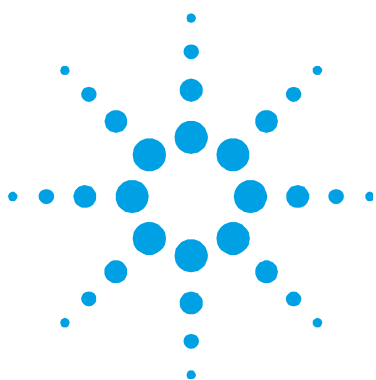
- 1 Relocate the radio or antenna.
- 2 Move the device away from the radio or television.
- 3 Plug the device into a different electrical outlet, so that the device and the radio or television are on separate electrical circuits.
- 4 Make sure that all peripheral devices are also certified.
- 5 Make sure that appropriate cables are used to connect the device to peripheral equipment.
- 6 Consult your equipment dealer, Agilent Technologies, or an experienced technician for assistance.

Changes or modifications not expressly approved by Agilent Technologies could void the user's authority to operate the equipment.

ICES/NMB-001

This ISM device complies with Canadian ICES- 001.

Cet appareil ISM est conforme à la norme NMB-001 du Canada.



3. Work Area

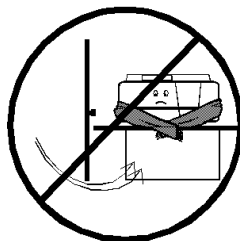
| | |
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Suitability

The instrument is suitable only for indoor use. It is suitable for these categories:

- Installation category II
- Pollution degree 2
- Equipment class I

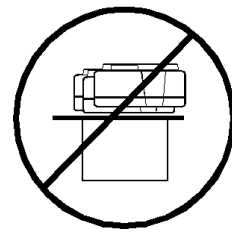
Environmental conditions



No drafts



No corrosive fumes



No vibration

Sample preparation areas and materials storage facilities should be located in a separate room.

Work Area

For optimum performance the area should have a dust-free, low humidity atmosphere. Air conditioning is recommended. The room should be temperature-controlled if your analyses are particularly sensitive.

CAUTION

The Cary instrument is designed for operation in clean air conditions. The work area must be free of all contaminants that could have a degrading effect on the instrument components. Dust, acid and organic vapors, such as acetone, must be expelled from the work area. The instrument warranty will be void if the equipment is operated in substandard conditions.

For *optimum analytical performance*, it is recommended that the ambient temperature of the laboratory be between 20 and 25 °C (68 and 77 °F) and be held constant to within ± 2 °C (± 3.6 °F) throughout the entire working day.

Table 1. Suitable conditions during instrument transportation, non-operation and operation

| Condition | Temperature (°C, °F) | Operating humidity range (%) |
|---|-------------------------|---------------------------------|
| Non-operating (transport) | -40–70, -40–158 | <90% |
| Operating within performance specifications | 10–35, 50–95 | 45–80 |

NOTE

UV-Vis spectrophotometers have been thoroughly tested for correct operation at sea level only. Please contact Agilent Technologies for advice if you wish to install a system at an altitude significantly above sea level.

CAUTION

Operating specifications for the computer, monitor and printer may differ from those for the Cary spectrophotometer. You must check in the literature provided with these units and arrange the operating environment to suit the complete system.

Workbench

The workbench must be stable and strong enough to support the total weight of equipment to be used.

Table 2. Equipment weights and dimensions

| System unit | Weight (kg, lb) | Width (cm, in.) | Depth (cm, in.) | Height (cm, in.) |
|----------------------|-----------------|-----------------|-----------------|------------------|
| Cary 100/300 | 45, 99 | 64, 25 | 65, 26 | 32, 13 |
| Cary 4000/5000/6000i | 91, 200 | 102, 40 | 71, 26 | 38, 15 |
| Printer (typical) | 5.5, 12 | 38, 15 | 30, 12 | 12, 5 |
| Computer (typical) | 20, 44 | 52, 20 | 52, 20 | 40, 16 |

The bench tops should be large enough to permit a free circulation of air around each unit in the system. Remember to provide space for the computer, monitor and printer.

The workbench should be about 90 cm (36 in.) high.

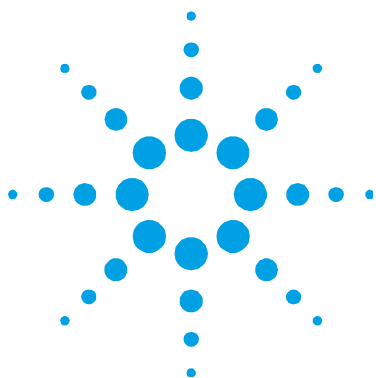
To avoid damage through spillage of the samples being analyzed, the worktops should be covered with a material that is corrosion-resistant and impervious to liquids.



After the work area requirements have been met, check the checklist box: *The work area is prepared and meets requirements.*

Work Area

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4. Electrical Specifications

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Mains supply

The installation of electrical power supplies must comply with the rules and/or regulations imposed by local authorities responsible for the supply of electrical energy to the workplace.

WARNING



Electrical Shock Hazard

Good electrical grounding is essential to avoid potentially serious shock hazards. A 3-wire outlet with ground connection must be provided for the instrument. Ensure that power outlets are earth-grounded at the grounding pin.

All power supplies must be single phase AC (alternating current) voltage, three wire system (active, neutral, earth) and should be terminated at an appropriate power outlet receptacle that is within reach of the instrument power cord assembly. For safety reasons, a separate power outlet receptacle should be provided for each unit in the system. Do not plan to use extension cords or outlet adaptors.

All Cary 100/300/4000/5000/6000i instruments are supplied with a 2 meter (6 ft. 6 in.) long power cord and three-pin plug assembly that is compatible with common standards applicable in the local area.

Avoid using power supplies from a source that may be subject to electrical or RF interference from other services; for example, large electric motors, elevators, and welders.

Electrical Specifications

Table 3. Mains voltage requirements

| System unit | Required supply voltage | Power rating (typical) | Maximum power consumption |
|----------------------|--|------------------------|---------------------------|
| Cary 100/300 | 100, 120, 220, 240 \pm 10% VAC 230 +14–6%, 230 +6–14% VAC 50/60 \pm 1 Hz | 270 VA | 173 W |
| Cary 4000/5000/6000i | 100 to 240 \pm 10%VAC 50 to 60 \pm 1 Hz | 300 VA | 185 W |

NOTE

For the computer, refer to the literature provided with the computer for details of individual power requirements.

Fuses

Table 4. Fuses

| | 220-240 VAC | 100-120 VAC |
|-----------------------------|--|--|
| Cary 100/300 | T4 AH 250 V, IEC60127-2 Sheet 5, 5x20 mm, Littelfuse 0215004 or equivalent | T5 AH 250V IEC 60127-2 Sheet 2, 5x20mm, Littelfuse 217.800 or equivalent |
| Cary 4000/5000/6000i | T2 AH 250 V, IEC60127-2 sheet 5, 5x20 mm, Littelfuse 215002 or equivalent | T2.5 AH 250 V, IEC60127-2 Sheet 5, 5x20 mm, Littelfuse 21502.5 or equivalent |

NOTE

For safety reasons, any other internal fuse or circuit breaker is not operator accessible, and should be replaced only by Agilent authorized personnel.

NOTE

Fuse information on the rear of the instrument is the most up-to-date.

External connections

Mains inlet coupler

3/2 A 120/250 VAC 50–60 Hz IEC type

Mains power cord

| Country | Mains power cord | Plug |
|-----------|------------------|--|
| Australia | 10 A 250 VAC | Complies with AS3112 |
| Europe | 6 A 250 VAC | Complies with CEE7 sheet vii or NFC61.303 VA |
| USA | 10 A 125 VAC | Complies with NEMA 5–15P |

Rear

IEEE 488 (GPIB Cary 100/300/4000/5000/6000i system connection)

Sample compartment

15-pin D-range connector with two high voltage pins: -1000 VDC, +125 VDC (Cary 4000/5000), +85 VDC (Cary 6000i)

When the Accessory Controller Board is fitted in the Cary 100/300 and for all Cary 4000/5000/6000i instruments:

- Three connectors for accessories in the sample compartment (low voltage DC, and digital lines).
- One connector for accessories on the front of the instrument (identical to one of the connectors described above).

NOTE

There is no separate Accessory Controller Board for the Cary 4000/5000/6000i. This functionality is part of the standard instrument.

NOTE

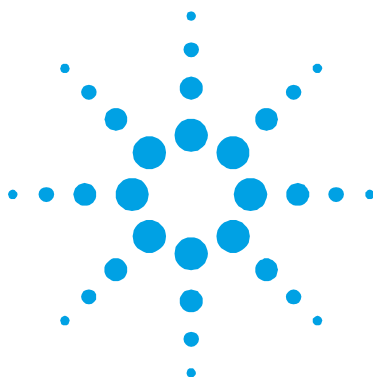
For more information, refer to the Cary 100/300 Accessory Controller information in the Cary WinUV software Help.



After the power requirements have been met, check the checklist box: *The power supply meets requirements.*

Electrical Specifications

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5. Optional Nitrogen Supply

The Cary 4000/5000/6000i instruments are fitted with connection points for purging the optical system with nitrogen to enhance the performance of each instrument at extremes of its range. More details are provided in the Cary User's Guide supplied with the instrument.

Nitrogen supplies are not available from Agilent but may be obtained from commercial suppliers. Liquid nitrogen (in conjunction with a heat exchanger) is recommended because it is generally less costly than compressed nitrogen and is of better quality. Where compressed nitrogen must be used, the gas must be dry, oil-free and uncontaminated.

CAUTION

Do not use compressed nitrogen from a supplier who uses oil or water in the compression process. These methods leave fine particles of oil or water suspended in the nitrogen that may be deposited on the instrument optics. Only use nitrogen from a supplier who fills containers from immersion pumps that are lubricated with liquid nitrogen.

NOTE

The instrument warranty will be void if damage is caused by the use of contaminated nitrogen.

Optional Nitrogen Supply

All gas supply installations must comply with the rules and/or regulations that are imposed by the local authorities responsible for the supply of compressed gas energy to the workplace.

Cylinders containing gas under pressure should be firmly secured to a rigid structure and the storage area must be well ventilated. Never locate gas cylinders near a source of ignition or in a position that is subject to direct heat. Gas storage cylinders often incorporate a pressure relief device, which will discharge the gas at a pre-determined temperature, usually around 52 °C (125 °F).

If gases are to be plumbed from a remote storage area to the instrument site, ensure that the local outlets are fitted with shut-off valves and suitable regulators that are easily accessible to the instrument operator.

Nitrogen supply tubing should be clean, flexible plastic tubing of 6 millimeters (1/4 inch) internal diameter (polyvinylchloride or equivalent).

CAUTION

Do not use rubber tubing, as this is usually treated internally with talc, which will be carried into and contaminate the instrument optics.

Operating pressure for the nitrogen purging system is 83 to 172 kPa (12 to 25 psi). Use a suitable regulator and gauge assembly to ensure that the nitrogen supply is maintained at the correct pressure.

The nitrogen system should include a manifold assembly with inlet from the supply and two outlets for connection to the instrument. Manifold outlets should each be fitted with a stop valve and flow meter for control of gas flow to the instrument. Flow meters should be adjustable for flow rates of 0 to 30 liters per minute (0 to 64 cubic feet per hour). Refer to Figure 1 for more details.

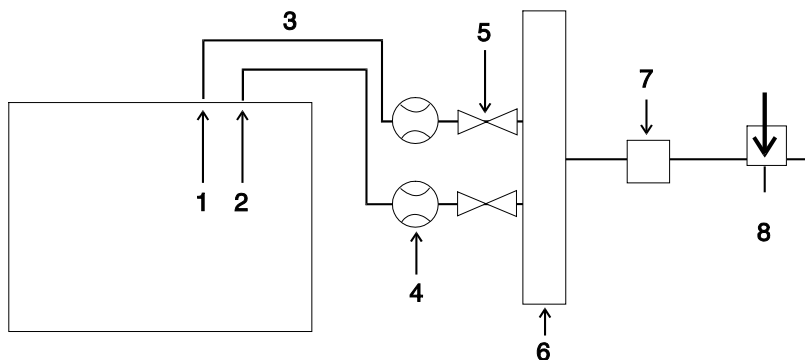


Figure 1. The position of flow meters when purging with nitrogen

- | | | |
|-----------------------|---------------------------|-------------|
| 1. Instrument | 2. Sample compartment | 3. Tubing |
| 4. Flow meters | 5. Shut-off valves | 6. Manifold |
| 7. Pressure regulator | 8. Nitrogen control valve | |

NOTE

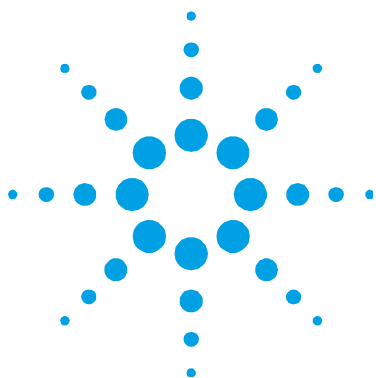
The sample compartment of the Cary 100/300 instruments can be purged if the optional Extended Sample Compartment is fitted. Refer to the Extended Sample Compartment section of the Cary WinUV Help for specifications and instructions for use.



After the gas requirements have been met, check the checklist box: *A nitrogen gas supply for optics path purging is ready (Cary 100/300 needs the Extended Sample Compartment option).*

Optional Nitrogen Supply

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6. Equipment On Site

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Insurance

As the carrier's liability ceases when the equipment is delivered, Agilent recommends that the instrument owner arranges separate insurance to cover transportation from the delivery point to the installation site. The delivery point will vary according to the carrier, the shipping method and in some cases the terms of sale. Some carriers will deliver only to their own distribution centre, while others may deliver to your off-loading bay. Very few carriers will deliver to the actual installation site.

In-house transit routes

In-house transit routes must be carefully considered. Vertical, horizontal and turning clearances should be calculated from the shipping carton dimensions of the spectrophotometer, which is the largest unit in any system configuration.

Table 5. Shipping weights and dimensions

| System unit | Weight (kg, lb) | Width (cm, in.) | Depth (cm, in.) | Height (cm, in.) |
|----------------------|-----------------|-----------------|-----------------|------------------|
| Cary 100/300 | 75, 165 | 86, 34 | 77, 30 | 65, 26 |
| Cary 4000/5000/6000i | 141, 310 | 142, 56 | 80, 31 | 67, 26 |
| Printer (typical) | 7.5, 17 | 58, 23 | 55, 22 | 41, 17 |
| Computer (typical) | 34, 75 | 122, 48 | 60, 24 | 58, 23 |

Inspecting for transit damage

Transit damage can be obvious or concealed and in either case will be admitted by the carrier only if it is reported within the terms of the carrier's agreement. For any claims against damage in transit, the following general rules apply:

- Before accepting delivery, you must inspect the packages for signs of obvious damage. The nature of any obvious damage must be noted on the carrier's waybill, which then must be countersigned by a representative of the carrier.
- Within the time limit stated in the terms and conditions of carriage, a further inspection must be made for concealed damage. If any damage is found at this stage, the carrier must be notified in writing. You must retain all packaging material for subsequent inspection by a representative of the carrier.
- A copy of any damage report must be forwarded to the Agilent sales office dealing with the supply of your equipment.

WARNING



Heavy Weight Hazard

As many of the packages are heavy, use mechanical lifting devices when possible to avoid the chance of injury to personnel or accidental damage to the equipment. If manual lifting is unavoidable, always use two or more people to handle packages and lift equipment into position. Never attempt to lift the packages alone.

NOTE

Do not unpack the instrument. Your Agilent representative will do this for you.

After accepting delivery, take the equipment to the installation site.

Agilent instruments are inherently robust, and the packaging is designed to prevent internal damage. However, the contents form part of a precision measuring system and all packages should be handled with care. In transit, sharp jolts must be avoided and the packages should not be inverted or tilted unnecessarily. Markings on the shipping cartons generally indicate which side of the package should be kept on top.

WARNING**Heavy Weight Hazard**

Many of the packages are large and heavy. To avoid the chance of injury to personnel or accidental damage to the equipment, always use two or more people when handling the packages or lifting equipment into position. Never attempt to lift the packages alone.

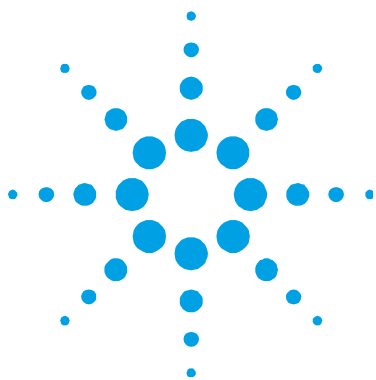
All shipping packages should be together for the Agilent service personnel prior to installation. Compare all packages to the shipping list. Do not discard any packaging components or filler materials.



After the requirements have been met, check the checklist box: *The Cary instrument and accessories are on site and packages have been inspected.*

Equipment On Site

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7. Computer System Requirements

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| Interconnecting cables | 35 |
| Setting up your computer | 35 |

Recommended configuration

The Cary spectrophotometers were evaluated under Agilent's ISO9001 procedures using Cary WinUV software and a desktop computer. We strongly recommend a computer configuration that matches the system that was used during evaluations:

| HP Z210 SFF Workstation | HP ProBook 6360b |
|--|--|
| Intel Xeon E3-1225 3.1 6M 4C 95W GT2 CPU | Intel Core i5-2520M (2.50 GHz/3 MB) |
| HP 4GB (2x2GB) DDR3-1333 nECC RAM | 2 GB 1333 MHz DDR3 SDRAM, 1 DIMM |
| HP 250GB SATA 6Gb/s 7200 1st HDD | 320 GB 7200 2.5" Hard Drive |
| Intel HD Graphics P3000 | 13.3 LED HD Anti-glare Screen |
| HP Z210 SFF 240W 90% Efficient Chassis | UMA, DVD±RW |
| HP 16X DVD+-RW SuperMulti SATA 1st Drive | Centrino a/b/g/n 2x2, BT, Wireless LAN |
| HP Single Unit (SFF) Packaging | TPM+FS Security |
| MS Windows 7 Professional 32-Bit OS | MS Windows 7 Professional 32-Bit OS |
| HP Energy Star 5.0 Enabled Configuration | 6-cell (55 WHr) Li-Ion Battery |
| HP No Keyboard Option | 720p HD Webcam |
| HP USB Optical Scroll Mouse | - |
| HP Serial Port Adapter Kit | - |
| HP Z210 Localization Kit | - |
| SFF SATA HDD2 Cable | - |

Computer System Requirements

Agilent can supply a computer for the Cary WinUV software in the recommended configuration. The computer will be formatted, partitioned and loaded with its operating system and in some cases, the Cary WinUV software. Computers ordered from Agilent will come with the software installed. All software disks and manuals will be supplied.

NOTE

Computers supplied with Letter of Credit orders will be an international brand and will be the recommended configuration or better.

Better computer components, for example, processor type, amount of memory, screen size and resolution, operating system version, and so on, can be substituted for those listed above.

Recommended printer

You can use any printer supported by your Microsoft Windows operating system.

IEEE 488.2 interface

The Cary instruments require a GPIB-USB-HS converter to be attached to the computer. One will usually be included in your instrument order as a separate line item:

- GPIB-USB-HS converter

NOTE

The NI (National Instruments) AT-GPIB card will not work with the Cary WinUV software.

The NI PCI-IEEE card will not work when purchasing the HP Compaq 8000 Elite Small Form Factor Desktop or the HP Z210 SFF workstation.

Interconnecting cables

The monitor, printer keyboard and spectrophotometer are connected to the computer via cables that plug into the back of the computer. The spectrophotometer is connected via a USB-GPIB-HS converter provided with the instrument. Consult your monitor, printer and keyboard manuals for details of their individual cabling requirements.



After the computer requirements have been met, enter the computer type and then check the checklist box: *The computer meets requirements.*

Setting up your computer

When setting up your own computer for use with the Cary WinUV software, ensure that:

- Windows 7 Pro 32-bit or Windows XP Service Pack 3 is installed and all devices such as sound card and CD-ROM are working.
- Microsoft Internet Explorer version 6* or later has been installed.
- You have set your computer screen desktop area resolution to at least 800 x 600 pixels and have set the color palette to at least High Color.

Computer System Requirements

- At least 1GB RAM
- At least 10 GB free space on hard drive
- Video card supporting 800 x 600 pixel resolution, high color (16 bit) mode (or better)
- Super VGA screen (or better)
- 20 x CD drive
- 16 bit sound card
- Windows® 101 key keyboard
- Microsoft® or compatible mouse
- RS232 serial port
- One comm port if using the Agilent SPS 3 Sample Preparation System in conjunction with the Internal Routine Sampler
- Two comm ports if using the Agilent SPS 3 Sample Preparation System in conjunction with the External Sipper accessory

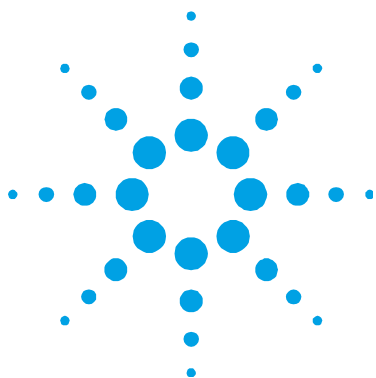
* The Cary WinUV software uses functionality provided by Microsoft Internet Explorer version 6.0 or greater. You do not need to use this as your Web browser. If your company rules prevent the installation of Internet Explorer, you can use another browser, with some loss in functionality.

NOTE

The Agilent representative will install the Cary WinUV software if the computer was not purchased from Agilent. However, installation of a Windows operating system is not included as part of the standard instrument installation.



After the operating system installation requirements have been met, check the checklist box: *The Microsoft Windows operating system is installed.*



8. Operator Training

If the Cary instrument is installed by Agilent field service, the Agilent representative will demonstrate the basic operating procedures while conducting the installation performance tests during the installation procedure. The representative however, is not necessarily experienced in complex analytical routines and is not authorized to conduct extensive training.

To ensure that your operators benefit the most from witnessing the installation performance tests, operator training should be completed before your equipment is installed. It is strongly recommended that you take advantage of the special training courses that are conducted at various locations by the Agilent customer support and sales organization.

In some areas it may be possible to arrange for operator training to be carried out after the installation, using your own instrument. To investigate this possibility, contact your local Agilent sales and service office.

The initial software installation and elementary performance tests will take around thirty minutes. There is then a period of two hours that must be allowed for warm-up before the detailed instrument tests for conformance to specification can be carried out, and during this time the representative will demonstrate some of the basic system operating procedures.

Detailed tests verifying the instrument is performing to specification are automated and take around one hour to complete.

Operator Training

NOTE

You must have a working knowledge of the computer operating system, as this type of instruction is not provided by Agilent. The literature supplied with the spectrophotometer provides step-by-step instructions for setting up the system and detailed operating instructions for the analysis procedures — it does not include instructions for operation of the computer.



If operator training is required, check the checklist box: *Operator training is required.*

In This Book

The manual describes the following:

- Introduction
- Safety Practices and Hazards
- Work Area
- Electrical Specifications
- Optional Nitrogen Supply
- Equipment On Site
- Computer System Requirements
- Operator Training

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