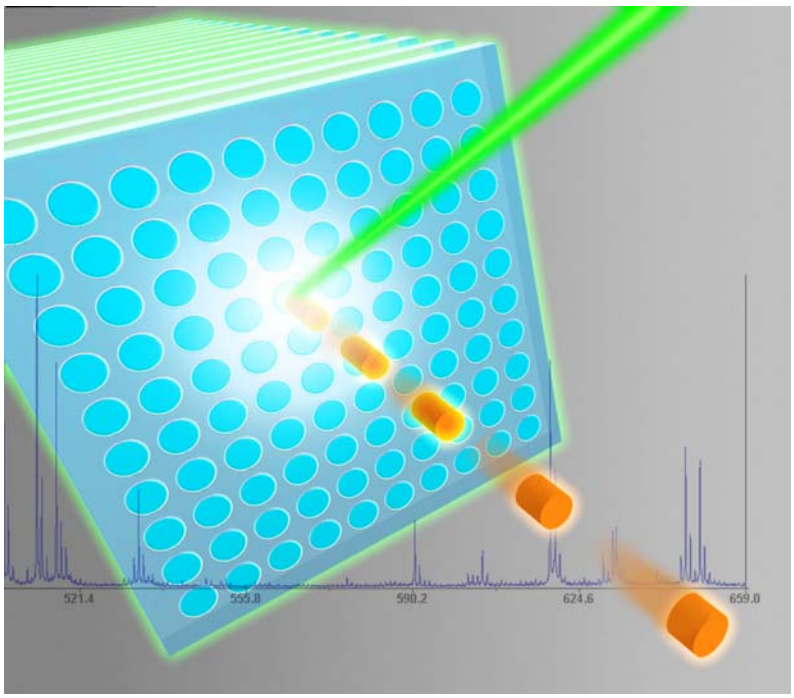

Applied Biosystems 4700 Proteomics Analyzer

With TOF/TOF™ Optics

Site Preparation Guide

Version 2.0 Software

Applied Biosystems

For Research Use Only. Not for use in diagnostic procedures.

The 4700 Proteomics Analyzer and its use is covered by one or more of the following U.S. Patents: 5,625,184; 5,627,369; 5,760,393; 6,002,127; 6,057,543; 6,281,493, and 6,348,688. Additional U.S. and foreign patents are pending.

TRADEMARKS:

Part Number 4342386 Rev. A1
12/2002

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Preface

How to Use This Guide

Purpose of This Guide

The *Applied Biosystems 4700 Proteomics Analyzer Site Preparation Guide* provides the information you need to fully prepare your site for the arrival and installation of the 4700 Proteomics Analyzer.

Audience

This guide is intended for the personnel who will schedule, manage, and perform the tasks required to prepare your site for installation of the 4700 Proteomics Analyzer.

User Attention Words

Two user-attention words appear in Applied Biosystems user documentation. Each word implies a particular level of observation or action, as described below:

Note: Provides information that may be of interest or help but is not critical to the use of the product.

IMPORTANT! Provides information that is necessary for proper instrument operation, accurate chemistry kit use, or safe use of a chemical.

Examples

Note: The size of the column affects the run time.

Note: The Calibrate function is also available in the Control Console.

IMPORTANT! To verify your client connection to the database, you need a valid Oracle user ID and password.

IMPORTANT! You need to create a separate Sample Entry spreadsheet for each 96-well microtiter plate.

Safety Alert Words

Safety alert words also appear in user documentation. For more information, see "Safety Alert Words" on page viii.

Text Conventions

Italic text indicates new or important words and is also used for emphasis.

For example:

Before analyzing, *always* prepare fresh matrix.

How to Obtain Services and Support

To contact Applied Biosystems Technical Support from North America by telephone, call **1.800.899.5858**.

For the latest services and support information for all locations, go to **http://www.appliedbiosystems.com**, then click the link for **Services and Support**.

At the Services and Support page, you can:

- Search through frequently asked questions (FAQs)
- Submit a question directly to Technical Support
- Order Applied Biosystems user documents, MSDSs, certificates of analysis, and other related documents
- Download PDF documents
- Obtain information about customer training
- Download software updates and patches

In addition, the Services and Support page provides access to worldwide telephone and fax numbers to contact Applied Biosystems Technical Support and Sales facilities.

How to Obtain More Information

Related Documentation

The following related documents are shipped with the 4700 Proteomics Analyzer:

- *4700 Proteomics Analyzer with TOF/TOF™ Optics Reference Guide* – Describes the 4700 Proteomics Analyzer hardware and software and provides information on preparing, maintaining, and troubleshooting the system.
- *4700 Proteomics Analyzer with TOF/TOF™ Optics Getting Started Guide* – Provides brief, step-by-step procedures for preparing and analyzing a sample. It is designed to help you quickly learn to use the 4700 Proteomics Analyzer.
- *4700 Proteomics Analyzer with TOF/TOF™ Optics Online Help* – Describes the 4700 Proteomics Analyzer software and provides procedures for common tasks.
- *4700 Proteomics Analyzer with TOF/TOF™ Optics Mass Standards Kit Operating Instructions* – Describes how to test the 4700 mass spectrometer functionality, optimize instrument parameters, and calibrate the mass scale.
- *4700 Proteomics Analyzer with TOF/TOF™ Optics Quick Card* – Provides abbreviated, but key information for 4700 Proteomics Analyzer users.

Portable document format (PDF) versions of this guide, the *4700 Proteomics Analyzer Reference Guide, the 4700 Proteomics Analyzer Getting Started Guide,* and the *4700 Proteomics Analyzer Quick Card* are also available on the 4700 Proteomics Analyzer software installation CD.

Note: For additional documentation, see “How to Obtain Services and Support.”.

Send Us Your Comments

Applied Biosystems welcomes your comments and suggestions for improving its user documents. You can e-mail your comments to:

techpubs@appliedbiosystems.com

Safety and EMC Compliance Information

This section includes the following topics:

Safety Conventions Used in This Document

Safety Alert Words

Four safety alert words appear in Applied Biosystems user documentation. Each word implies a particular level of observation or action, as described below:

IMPORTANT! Indicates information that is necessary for proper instrument operation, accurate chemistry kit use, or safe use of a chemical.

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices, damage to an instrument, or loss of data.

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

Examples

Examples of the safety alert words appear below:

IMPORTANT! You must create a separate a Sample Entry Spreadsheet for each 96-well microtiter plate.

The lamp is extremely hot. Do not touch the lamp until it has cooled to room temperature.

CHEMICAL HAZARD. Formamide. Exposure causes eye, skin, and respiratory tract irritation. It is a possible developmental and birth defect hazard. Read the MSDS and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

ELECTRICAL HAZARD. Failure to ground the instrument properly can lead to an electrical shock. Ground the instrument according to the provided instructions.

Symbols on Instruments

Electrical Symbols

The following table describes the electrical symbols that may be displayed on Applied Biosystems instruments.

Symbol	Description
	Indicates the **On** position of the main power switch.
	Indicates the **Off** position of the main power switch.

	Indicates the **On/Off** position of a push-push main power switch.
	Indicates a terminal that may be connected to the signal ground reference of another instrument. This is not a protected ground terminal.
	Indicates a protective grounding terminal that must be connected to earth ground before any other electrical connections are made to the instrument.
	Indicates a terminal that can receive or supply alternating current or voltage.
	Indicates a terminal that can receive or supply alternating or direct current or voltage.

Safety Symbols

The following table describes the safety *s*ymbols that may be displayed on Applied Biosystems instruments. Each symbol may appear by itself or in combination with text that explains the relevant hazard (see "Safety Labels on Instruments" on page x). These safety symbols may also appear next to DANGERS, WARNINGS, and CAUTIONS that occur in the text of this and other product-support documents.

Symbol	Description
	Indicates that you should consult the manual for further information and to proceed with appropriate caution.
	Indicates the presence of an electrical shock hazard and to proceed with appropriate caution.
	Indicates the presence of a hot surface or other high-temperature hazard and to proceed with appropriate caution.
	Indicates the presence of a laser inside the instrument and to proceed with appropriate caution.
	Indicates the presence of moving parts and to proceed with appropriate caution.

Safety Labels on Instruments

The following CAUTION, WARNING, and DANGER statements may be displayed on Applied Biosystems instruments in combination with the safety symbols described in the preceding section.

English	Francais
CAUTION Hazardous chemicals. Read the Material Safety Data Sheets (MSDSs) before handling.	**ATTENTION** Produits chimiques dangeureux. Lire les fiches techniques de sûreté de matériels avant la manipulation des produits.
CAUTION Hazardous waste. Read the waste profile (if any) in the site preparation guide for this instrument before handling or disposal.	**ATTENTION** Déchets dangereux. Lire les renseignements sur les déchets avant de les manipuler ou de les éliminer.
WARNING Hot lamp.	**AVERTISSEMENT** Lampe brûlante.
WARNING Hot. Replace lamp with an Applied Biosystems lamp.	**AVERTISSEMENT** Composants brûlants. Remplacer la lampe par une lampe Applied Biosystems.
CAUTION Hot surface.	**ATTENTION** Surface brûlante.
DANGER High voltage.	**DANGER** Haute tension.
WARNING To reduce the chance of electrical shock, do not remove covers that require tool access. No user-serviceable parts are inside. Refer servicing to Applied Biosystems qualified service personnel.	**AVERTISSEMENT** Pour éviter les risques d'électrocution, ne pas retirer les capots dont l'ouverture nécessite l'utilisation d'outils. L'instrument ne contient aucune pièce réparable par l'utilisateur. Toute intervention doit être effectuée par le personnel de service qualifié de Applied Biosystems.
DANGER Laser radiation present when open and interlock defeated. Avoid direct exposure to laser beam.	**DANGER** Rayonnement laser en cas d'ouverture et d'une neutralisation des dispositifs de sécurité. Eviter toute exposition directe avec le faisceau.
DANGER Laser radiation when open. Avoid direct exposure to laser beam.	**DANGER** Rayonnement laser en cas d'ouverture. Eviter toute exposition directe avec le faisceau.
DANGER Class II laser radiation present when open and interlock defeated. Do not stare directly into the beam	**DANGER** de Class II Rayonnement laser en cas d'ouverture et d'une neutralisation des dispositifs de securite. Eviter toute exposition directe avec le faisceau.
DANGER Class II laser radiation present when open. Do not stare directly into the beam.	**DANGER** de Class II Rayonnement laser en cas d'ouverture. Eviter toute exposition directe avec le faisceau.
DANGER Class II LED when open and interlock defeated. Do not stare directly into the beam.	**DANGER** de Class II LED en cas d'ouverture et d'une neutralisation des dispositifs de securite. Eviter toute exposition directe avec le faisceau.

English	Francais
DANGER Class II LED when open. Do not stare directly into the beam.	**DANGER** de Class II LED en cas d'ouverture. Eviter toute exposition directe avec le faisceau.
CAUTION Moving parts.	**ATTENTION** Parties mobiles.

General Instrument Safety

WARNING **PHYSICAL INJURY HAZARD.** Use this product only as specified in this document. Using this instrument in a manner not specified by Applied Biosystems may result in personal injury or damage to the instrument.

Moving and Lifting the Instrument

CAUTION **PHYSICAL INJURY HAZARD.** The instrument is to be moved and positioned only by the personnel or vendor specified in the applicable site preparation guide. If you decide to lift or move the instrument after it has been installed, do not attempt to lift or move the instrument without the assistance of others, the use of appropriate moving equipment, and proper lifting techniques. Improper lifting can cause painful and permanent back injury. Depending on the weight, moving or lifting an instrument may require two or more persons.

Moving and Lifting Stand-Alone Computers and Monitors

WARNING Do not attempt to lift or move the computer or the monitor without the assistance of others. Depending on the weight of the computer and/or the monitor, moving them may require two or more people.

Things to consider before lifting the computer and/or the monitor:

- Make sure that you have a secure, comfortable grip on the computer or the monitor when lifting.
- Make sure that the path from where the object is to where it is being moved is clear of obstructions.
- Do not lift an object and twist your torso at the same time.
- Keep your spine in a good neutral position while lifting with your legs.
- Participants should coordinate lift and move intentions with each other before actually lifting and carrying.
- Instead of lifting the object from the packing box, carefully tilt the box on its side and hold it stationary while someone slides the contents out of the box.

Operating the Instrument

Ensure that anyone who operates the instrument has:

- Received instructions in both general safety practices for laboratories and specific safety practices for the instrument.
- Read and understood all applicable Material Safety Data Sheets (MSDSs).

WARNING **PHYSICAL INJURY HAZARD.** Use this instrument as specified by Applied Biosystems. Using this instrument in a manner not specified by Applied Biosystems may result in personal injury or damage to the instrument.

Chemical Safety

Chemical Hazard Warning

WARNING **CHEMICAL HAZARD.** Before handling any chemicals, refer to the Material Safety Data Sheet (MSDS) provided by the manufacturer, and observe all relevant precautions.

WARNING **CHEMICAL HAZARD.** All chemicals in the instrument, including liquid in the lines, are potentially hazardous. Always determine what

chemicals have been used in the instrument before changing reagents or instrument components. Wear appropriate eyewear, protective clothing, and gloves when working on the instrument.

WARNING **CHEMICAL HAZARD.** Four-liter reagent and waste bottles can crack and leak. Each 4-liter bottle should be secured in a low-density polyethylene safety container with the cover fastened and the handles locked in the upright position. Wear appropriate eyewear, clothing, and gloves when handling reagent and waste bottles.

WARNING **CHEMICAL STORAGE HAZARD**. Never collect or store waste in a glass container because of the risk of breaking or shattering. Reagent and waste bottles can crack and leak. Each waste bottle should be secured in a low-density polyethylene safety container with the cover fastened and the handles locked in the upright position. Wear appropriate eyewear, clothing, and gloves when handling reagent and waste bottles.

About MSDSs

Chemical manufacturers supply current Material Safety Data Sheets (MSDSs) with shipments of hazardous chemicals to *new* customers. They also provide MSDSs with the first shipment of a hazardous chemical to a customer after an MSDS has been updated. MSDSs provide the safety information you need to store, handle, transport, and dispose of the chemicals safely.

Each time you receive a new MSDS packaged with a hazardous chemical, be sure to replace the appropriate MSDS in your files.

Obtaining MSDSs

You can obtain from Applied Biosystems the MSDS for any chemical supplied by Applied Biosystems. This service is free and available 24 hours a day.

To obtain MSDSs:

1. Go to **https://docs.appliedbiosystems.com/msdssearch.html**
2. In the Search field, type in the chemical name, part number, or other information that appears in the MSDS of interest. select the language of your choice, then click **Search**.
3. Find the document of interest, right-click the document title, then select any of the following:
   - **Open** – To view the document
   - **Print Target** – To print the document
   - **Save Target As** – To download a PDF version of the document to a destination that you choose
4. To have a copy of a document sent by fax or e-mail, select **Fax** or **Email** to the left of the document title in the Search Results page, then click **RETRIEVE DOCUMENTS** at the end of the document list.
5. After you enter the required information, click **View/Deliver Selected Documents Now**.

Chemical Safety Guidelines

To minimize the hazards of chemicals:

- Read and understand the MSDSs provided by the chemical manufacturer before you store, handle, or work with any chemicals or hazardous materials. See "About MSDSs" on page xiii.
- Minimize contact with chemicals. When handling chemicals, wear appropriate personal protective equipment such as safety glasses, gloves, and protective clothing. For additional safety guidelines, consult the MSDS.
- Minimize the inhalation of chemicals. Do not leave chemical containers open. Use only with adequate ventilation (for example, a fume hood). For additional safety guidelines, consult the MSDS.
- Check regularly for chemical leaks or spills. If a leak or spill occurs, follow the cleanup procedures recommended in the MSDS.
- Comply with all local, state/provincial, and/or national laws and regulations related to chemical storage, handling, and disposal.

Chemical Waste Safety

Chemical Waste Hazard

CAUTION HAZARDOUS WASTE. Refer to Material Safety Data Sheets and local regulations for handling and disposal.

WARNING CHEMICAL WASTE HAZARD. Wastes produced by Applied Biosystems instruments are potentially hazardous and can cause injury, illness, or death.

WARNING CHEMICAL STORAGE HAZARD. Never collect or store waste in a glass container because of the risk of breaking or shattering. Reagent and waste bottles can crack and leak. Each waste bottle should be secured in a low-density polyethylene safety container with the cover fastened and the handles locked in the upright position. Wear appropriate eyewear, clothing, and gloves when handling reagent and waste bottles.

Chemical Waste Safety Guidelines

To minimize the hazards of chemical waste:

- Read and understand the MSDSs for the chemicals in a waste container before you store, handle, or dispose of chemical waste.
- Provide primary and secondary waste containers
- Minimize contact with and inhalation of chemical waste. When handling chemicals, wear appropriate personal protective equipment such as safety glasses, gloves, and protective clothing.
- Handle chemical wastes in a fume hood.
- After you empty a chemical waste container, seal it with the cap provided.
- Dispose of the contents of a waste container in accordance with good laboratory practices and local, state/provincial, and/or national environmental and health regulations.

Waste Disposal

If potentially hazardous waste is generated when you operate the instrument, you must:

- Characterize (by analysis if necessary) the waste generated by the particular applications, reagents, and substrates used in your laboratory.
- Ensure the health and safety of all personnel in your laboratory.
- Ensure that the instrument waste is stored, transferred, transported, and disposed of according to all local, state/provincial, and/or national regulations.

IMPORTANT! Radioactive or biohazardous materials may require special handling, and disposal limitations may apply.

Electrical Safety

ELECTRICAL SHOCK HAZARD. Severe electrical shock can result from operating the 4700 Proteomics Analyzer without its instrument panels in place. Do not remove instrument panels. High-voltage contacts are exposed when instrument panels are removed from the instrument.

Power

ELECTRICAL HAZARD. Grounding circuit continuity is vital for the safe operation of equipment. Never operate equipment with the grounding conductor disconnected.

ELECTRICAL HAZARD. Use properly configured and approved line cords for the voltage supply in your facility.

ELECTRICAL HAZARD. Plug the system into a properly grounded receptacle with adequate current capacity.

Overvoltage Rating

The 4700 Proteomics Analyzer system has an installation (overvoltage) category of II, and is classified as portable equipment

Physical Hazard Safety

Compressed Gases

PHYSICAL HAZARD. **Nonflammable compressed gas (such as nitrogen and other gases used as collision gas).** Contents are under pressure. Receive proper training on the handling of compressed gases before use. Exposure to rapidly expanding gas may cause frostbite. High concentrations of vapors in the immediate area can displace oxygen and cause asphyxiation. Use only in areas with adequate ventilation. Read the MSDS, and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

EXPLOSION HAZARD. Pressurized gas cylinders are potentially explosive and can cause severe injury if not handled properly. Always cap the gas cylinder when it is not in use and attach it firmly to the wall or gas cylinder cart with approved brackets or chains.

Biological Hazard Safety

General Biohazard 11/20/02

BIOHAZARD. Biological samples such as tissues, body fluids, and blood of humans and other animals have the potential to transmit infectious diseases. Follow all applicable local, state/provincial, and/or national regulations. Wear appropriate protective eyewear, clothing, and gloves. Read and follow the guidelines in the following publications:

- U.S. Department of Health and Human Services guidelines published in *Biosafety in Microbiological and Biomedical Laboratories* (stock no. 017-040-00547-4; **http://bmbl.od.nih.gov**)
- Occupational Safety and Health Standards, Toxic and Hazardous Substances (29 CFR §1910.1030; **http://www.access.gpo.gov/ nara/cfr/waisidx_01/ 29cfr1910a_01.html**).

Additional information about biohazard guidelines is available at: **http://www.cdc.gov**

Laser Safety

Laser Classification

The 4700 Proteomics Analyzer uses a diode pumped solid state YAG laser. Under normal operating conditions, the instrument laser is categorized as a Class I laser. When safety interlocks are disabled during certain servicing procedures, the laser can cause permanent eye damage, and, therefore, is classified under those conditions as a Class IIIb laser.

The 4700 Proteomics Analyzer has been tested to and complies with the "Radiation Control for Health and Safety Act of 1968 Performance Standard CFR 1040."

The 4700 Proteomics Analyzer has been tested to and complies with standard EN60825-1, "Radiation Safety of Laser Products, Equipment Classification, Requirements, and User's Guide."

The 4700 Proteomics Analyzer has been tested to and complies with standard EN60825-1, "Radiation Safety of Laser Products, Equipment Classification, Requirements, and User's Guide."

Laser Safety Requirements

To ensure safe laser operation:

- The system must be installed and maintained by an Applied Biosystems Technical Representative.
- All instrument panels must be in place on the instrument while the instrument is operating. When all panels are installed, there is no detectable radiation present. If any panel is removed when the laser is operating (during service with safety interlocks disabled), you may be exposed to laser emissions in excess of the Class I rating.
- Do not remove safety labels or disable safety interlocks.

Additional Laser Safety Information

Refer to the user documentation provided with the laser for additional information on government and industry safety regulations.

LASER HAZARD. Lasers can burn the retina causing permanent blind spots. Never look directly into the laser beam. Remove jewelry and other items that can reflect the beam into your eyes. Do not remove the instrument top or front panels. Wear proper eye protection and post a laser warning sign at the entrance to the laboratory if the top or front panels are removed for service.

LASER BURN HAZARD. An overheated laser can cause severe burns if it comes in contact with the skin. DO NOT operate the laser when it cannot be cooled by its cooling fan. Always wear appropriate laser safety goggles.

Bar Code Scanner Laser Safety

Laser Classification

The bar code scanner included with the 4700 Proteomics Analyzer is categorized as a Class II laser.

Laser Safety Requirements

Class II lasers are low-power, visible-light lasers that can damage the eyes. Never look directly into the laser beam. The scanner is designed to prevent human access to harmful levels of laser light during normal operation, user maintenance, or during prescribed service operations.

LASER HAZARD. Class II lasers can cause damage to eyes. Avoid looking into a Class II laser beam or pointing a Class II laser beam into another person's eyes.

Workstation Safety

Correct ergonomic configuration of your workstation can reduce or prevent effects such as fatigue, pain, and strain. Minimize or eliminate these effects by configuring your workstation to promote neutral or relaxed working positions.

MUSCULOSKELETAL AND REPETITIVE MOTION HAZARD. These hazards are caused by potential risk factors that include but are not limited to repetitive motion, awkward posture, forceful exertion, holding static unhealthy positions, contact pressure, and other workstation environmental factors.

- Use equipment that comfortably supports you in neutral working positions and allows adequate accessibility to the keyboard, monitor, and mouse.
- Position the keyboard, mouse, and monitor to promote relaxed body and head postures.

Safety and Electromagnetic Compatibility (EMC) Standards

This section provides information on:

- U.S. and Canadian Safety Standards
- Canadian EMC Standard
- European Safety and EMC Standards
- Australian EMC Standards

U.S. and Canadian Safety Standards

This instrument has been tested to and complies with standard UL 3101-1, "Safety Requirements for Electrical Equipment for Laboratory Use, Part 1: General Requirements."

This instrument has been tested to and complies with standard CSA 1010.1, "Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements."

Canadian EMC Standard

This instrument has been tested to and complies with ICES-001, Issue 3: Industrial, Scientific, and Medical Radio Frequency Generators.

European Safety and EMC Standards

Safety

This instrument meets European requirements for safety (Low Voltage Directive 73/23/EEC). This instrument has been tested to and complies with standards EN 61010-1, "Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use, Part 1: General Requirements" and EN 61010-2-010, "Particular Requirements for Laboratory Equipment for the Heating of Materials."

EMC

This instrument meets European requirements for emission and immunity (EMC Directive 89/336/EEC). This instrument has been tested to and complies with standard EN 61326 (Group 1, Class B), "Electrical Equipment for Measurement, Control and Laboratory Use – EMC Requirements."

Australian EMC Standards

This instrument has been tested to and complies with standard AS/NZS 2064, "Limits and Methods Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical (ISM) Radio-frequency Equipment."

Site Preparation Tasks 1

This chapter includes the following sections:

Overview

Before an Applied Biosystems service representative arrives to install the system, you need to fully prepare your site for the installation. To ensure that you complete all site preparations, checklists are provided in Chapter 2, "Checklists."

IMPORTANT! If site preparation tasks are not complete when the Applied Biosystems service representative arrives, the scheduled installation may be postponed.

Site Preparation Schedule

To minimize the time between the shipment arrival and system installation:

1. Complete the site preparation tasks (Chapter 1).
2. Fill out the corresponding checklists (Chapter 2).
3. Schedule installation before the system shipment arrives.
4. Verify (by telephone) with an Applied Biosystems service representative who will contact you that:
   - All checklists are complete.
   - The purchase order is complete and that you have considered all components and options in preparing the site.

Site Preparation Process

The general site preparation tasks and a suggested sequence for completing the tasks are summarized in Figure 1-1. The sequence can vary, but always:

- Review this guide first.
- Unpack and store the Mass Standards Kit as soon as you receive it.

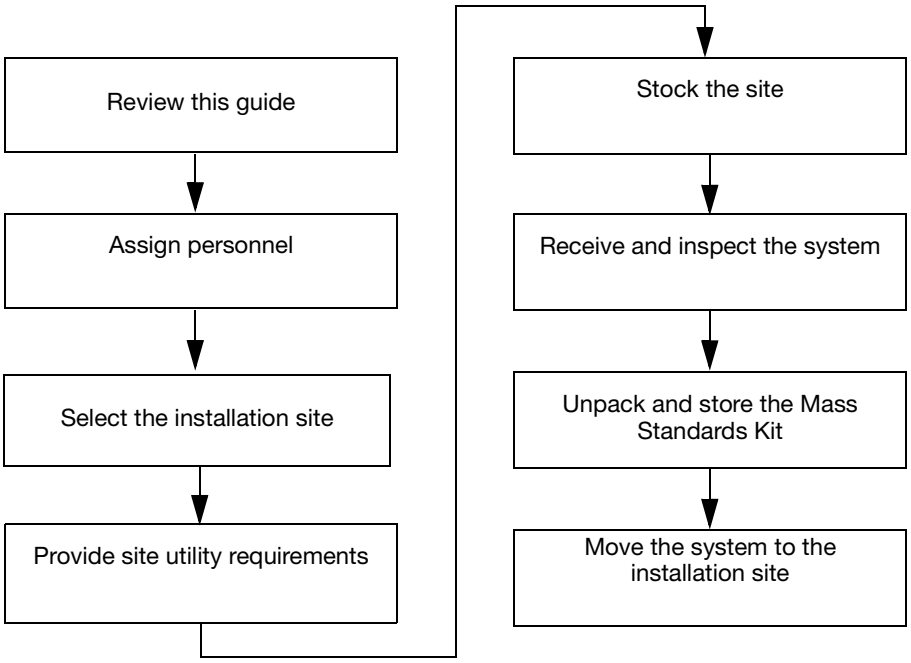

Figure 1-1 Site Preparation Tasks and Their Suggested Sequence

Assigning Personnel

Table 1-1 summarizes specific site preparation tasks and suggests the personnel to accomplish the tasks. Use the table to help schedule and manage the site preparation process.

Table 1-1 Suggested Personnel Tasks

Personnel	Tasks
Site Preparation/ Installation Coordinator	• Reviews the site preparation guide for safety information and system requirements. • Coordinates personnel and tasks. • Orders required materials. • Chooses the site. • Reviews checklists with applicable personnel, then with the Applied Biosystems service representative to verify the site is properly prepared. • Receives and inspects the system. • Stores the Mass Standards Kit. • Schedules the installation and informs personnel of the installation date. • Ensures that the site is clear of unnecessary material on the installation day. • Will be available throughout installation.
Laboratory Safety Representative	• Reviews the site preparation guide for safety information. • Ensures that the required safety practices and equipment are in place. • Will be available throughout unpacking and setup.
Laboratory Personnel	• Review safety information. • Ensure that all customer-provided materials for installation are present at the site • Primary users (responsible for training other users) will be available during the installation for several hours of training.
Facilities Personnel	• Ensure that the following installation requirements are met: – Space at the installation site – Building clearances – Temperature and humidity – Ventilation and waste collection – Electrical – Computer • If possible, move the crated system to the site before the installation date. • Will be available throughout installation. • At least two people will be available to help the Applied Biosystems service representative move and position the system.

Table 1-1 Suggested Personnel Tasks

Personnel	Tasks
Network or IT Specialist (if the system will be connected to a network)	• Ensures that one active, tested local area network (LAN) connection is in place before the scheduled installation date. • Ensures that network hardware is compatible with an RJ45-type connector. • If necessary, will supply additional cables. • Will be available during installation to connect the system to the network. **CAUTION** Do *not* attempt to connect the system components to the network before the Applied Biosystems service representative arrives. • If applicable, provides and installs a network or dedicated printer. • If applicable, ensures that any customer-supplied computer for the optional 4700 Explorer™ Software – Remote Access Client meets the minimum hardware and software requirements.

Selecting the Site

Overview

When deciding where to install the instrument, keep in mind the following requirements:

- **Space –** The site must have space sufficient to accommodate the layout and the clearances specified in "Space Requirements" on page 1-6.
- **Environment –** You need to provide the conditions specified in "Environmental Requirements" on page 1-9.
  - **Altitude** – This system is designed for indoor use only and for altitudes not exceeding 2000 m (6500 feet) above sea level.
  - **Pollution rating** – The system has a pollution degree rating of 2 and may be installed in an environment that has nonconductive pollutants only (see "Environmental Requirements" on page 1-9).
  - **Magnetic fields** – Magnetic fields greater than 500 milligauss may affect the system operation or performance (see "Environmental Requirements" on page 1-9).
  - **Temperature and humidity** – The site must be maintained at the temperature and humidity levels specified in "Temperature and Humidity Requirements" on page 1-9.
- **Ventilation** – You need to comply with local, state/provincial, or national air-quality regulations while venting exhaust from the instrument (see "Ventilation and Waste Collection Requirements" on page 1-9).
- **Electrical power quick disconnect** – In case of emergency, you must be able to immediately disconnect the main power supply to the instrument (see "Electrical Requirements" on page 1-11).
- **Computer Requirements**
  - **Network access** – If the system will be connected to a local area network (LAN), you need to have an active, dedicated network connection that is near the 4700 computer (see "Network Requirements" on page 1-12).

  Note: If the 4700 system will be connected to a GPS Explorer™ Workstation or to a computer running optional 4700 Explorer™ Software – Remote Access Client, the GPS Explorer™ Workstation and/or the Remote Access Client computer must be connected to a LAN with access to the 4700 computer.

  – **Printer Access –** The system requires access to a network or dedicated printer (see "Printer Requirements" on page 1-13).
- **Safety** – The site must have specific safety practices and policies in place to protect laboratory personnel from potential hazards. Applicable safety procedures must be followed at all times.
- **BioSafety Levels** – The site must not be designated BioSafety Level 3 (BSL 3) or BSL 4. Applied Biosystems does not install, service, or repair Applied Biosystems instruments in areas designated BSL-3 or BSL-4.

Space Requirements

System Components

The 4700 Proteomics Analyzer (Figure 1-2) includes the:

- 4700 Proteomics Analyzer mass spectrometer
- Computer monitor, keyboard, mouse, and control pad
- Computer desk
- Optional handheld barcode reader

Figure 1-2 4700 Proteomics Analyzer

Inlet and Outlet Connections

Refer to Figure 1-3 for the location of gas and vacuum exhaust connections.

Layout Requirements

A typical layout and some basic layout considerations for the 4700 Proteomics Analyzer are shown in Figure 1-3. For details on the 4700 Proteomics Analyzer space requirements, see Figure 1-4 on page 1-8.

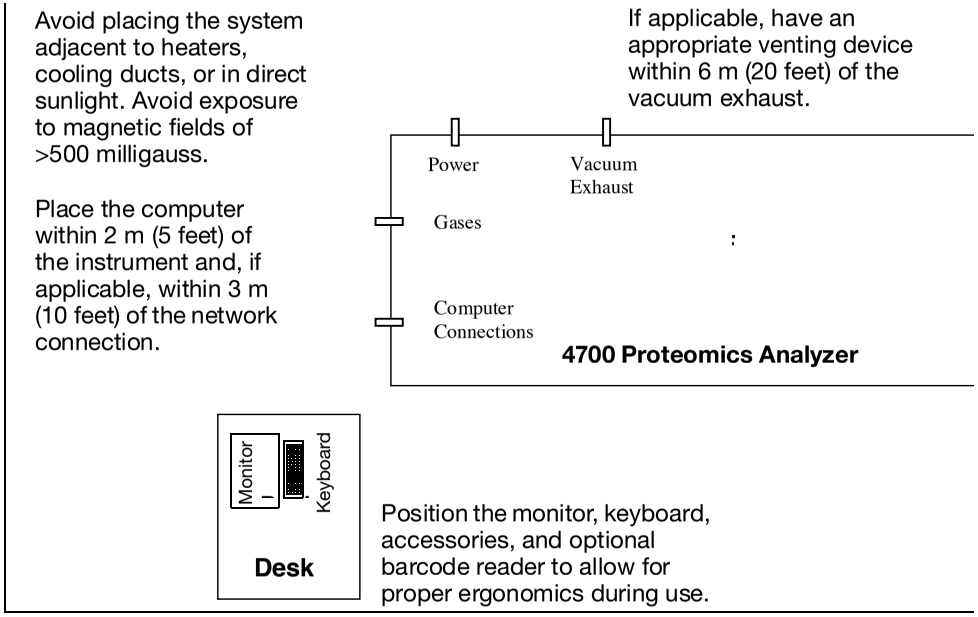

Figure 1-3 Layout Requirements (*Not to Scale*)

Dimensions and Weights

The dimensions and weights of the system components are indicated below. Ensure that the installation site (floor space and/or bench space) can accommodate the dimensions and is able to support the weights.

Component	Width	Depth	Height	Weight
Mass spectrometer	237 cm (94 inches)	85 cm (34 inches)	128 cm (51 inches)	~816 kg (1800 pounds)
Desk for monitor, keyboard, and optional barcode reader	95 cm (37 inches)	95 cm (37 inches)	89 cm (35 inches)	18 kg (40 pounds)
Monitor	416 mm (16.4 inches)	208 mm (8.2 inches)	452 mm (17.2 inches)	7 kg (15.4 pounds)
Keyboard	46 cm (18 inches)	17 cm (6.7 inches)	5 cm (2 inches)	1.4 kg (3 pounds)
Optional Handheld Barcode Reader				

Clearances

Required clearances for the 4700 Proteomics Analyzer are summarized below and illustrated in Figure 1-4.

- **Clearance on all sides** – At least 15 cm (6 in.) of clearance for ventilation, service access, and cable routing. Allow space for the Applied Biosystems service representative to move the instrument for easy access to the back and sides.
- **Vertical clearance** – At least 76 cm (30 in.) of unobstructed vertical clearance above the top of the mass spectrometer to allow the top to be lifted during service.

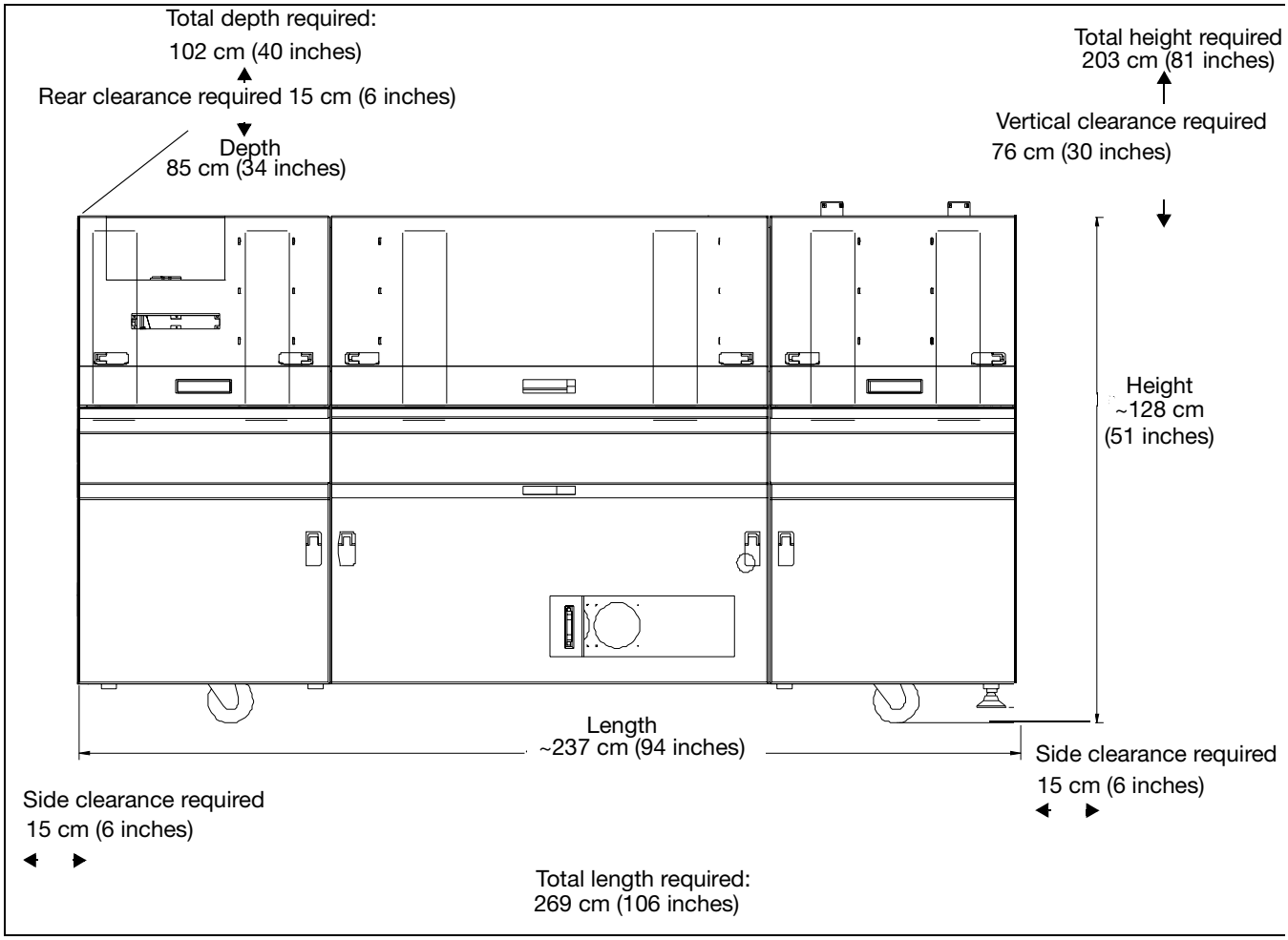

Figure 1-4 Space Requirements *(Not to Scale)*

Environmental Requirements

Altitude

The 4700 Proteomics Analyzer is for indoor use only and for altitudes not exceeding 2000 m (6500 ft) above sea level.

Temperature and Humidity Requirements

Ensure that the site is maintained under the following conditions:

Condition	Acceptable Range
Temperature	20 to 25 °C (68 to 77 °F) Maximum change of less than 2 °C (3.6 °F) per 24 hours
Humidity	30 to 80% relative humidity, noncondensing

Avoid placing the system adjacent to heaters, cooling ducts, or in direct sunlight. Fluctuations between day and night temperatures can cause system instability.

Heat Production

Ensure that your laboratory ventilation system can handle the total maximum thermal output of the 4700 Proteomics Analyzer, about 4,000 Btu/h (1200 W). Consult your facilities department regarding ventilation requirements for this level of heat production.

Pollution

The 4700 Proteomics Analyzer has a pollution degree rating of 2 and may be installed in an environment that has nonconductive pollutants only.

Ventilation and Waste Collection Requirements

System Pump Exhaust

The 4700 Proteomics Analyzer can be vented to remove vapors from the vacuum pump, such as when operating in a clean-room environment. While venting the exhaust from this instrument, be sure to comply with local, state/provincial, or national regulations.

If you vent the pump exhaust, the supplied polypropylene vent line must be connected from the 4700 Proteomics Analyzer pump exhaust outlet to a fume hood or fume duct see “Venting Device Guidelines” on page 1-10.

Connecting the tubing requires that the:

- Shortest and straightest possible run of 1/4-inch i.d. flexible tubing be used.
- Flexible tubing have no low points, which can accumulate residue or condensation.
- Flexible tubing be kept away from sources of potential damage, such as heat, flame, or points of contact with other objects.
- The open end of the flexible tubing not face oncoming air movement through the venting device.

Venting Device Guidelines

Fixed Fume Duct Guidelines

Follow these guidelines for fume duct operation and maintenance:

- Operate the duct system whenever the instrument power is on.
- Use a duct system constructed of polyvinylidene fluoride (PVDF) tubing or other materials compatible with the waste material being generated.
- Locate the fume duct exhaust outlet where waste cannot be drawn back into the building.
- Place the exhaust tubing as far into the hood or canopy as possible.
- Use a straight-upward run of no more than 4.5 m (15 ft) of polypropylene tubing.
- Securely fasten tubing with polypropylene or PTFE fasteners, not brass (brass corrodes).
- Maintain negative pressure in the duct.
- Do not connect the instrument to a duct or a system that purifies/filters air and returns it to the room.
- Do not allow the duct system to come into contact with strong oxidizers, bases, or other chemicals that are incompatible with the vented waste.

Fume Hood Guidelines

Follow these guidelines for fume hoods:

- Operate the fume hood whenever the instrument power is on.
- Use a fume hood that is constructed of materials that are compatible with the waste materials/chemicals being generated or exhausted.
- Locate the fume hood away from air currents generated by air conditioning ducts, fans, windows, doors, and moving equipment and persons.
- Locate the fume hood exhaust outlet where waste cannot be drawn back into the building.
- Do not connect the instrument to a ductless hood or a system that purifies/filters air and returns it to the room.
- Affix a sign or label to indicate the position of the fume hood sash that produces an average of 30 linear m/min (100 linear ft/min) face-level velocity of airflow. The minimum velocity at any point in the hood is 24 linear m/min (80 linear ft/min), and the maximum velocity is 38 linear m/min (125 linear ft/min).
- Ensure that the fume hood meets all local, state/provincial, or national safety requirements.
- Have a safety professional or mechanical ventilation expert check and record air velocity at least once a year.
- Inspect and maintain the exhaust system, including fans and motors, at least once a year.

Waste Ventilation Warnings

CHEMICAL WASTE HAZARD. Waste produced by Applied Biosystems instruments can be hazardous and can cause injury, illness, or death.

- Operate a vented instrument only if it is connected in accordance with all requirements.

- Connect waste fume exhaust lines so that they lead to the fume hood or fume duct in a straight and upward direction. Low points allow condensation to collect, preventing flow through the instrument.
- Operate the venting devices such as fume hoods or fume ducts whenever the instrument power is on, waste is in the waste container, or reagents are on the instrument.
- Handle all liquid, solid, and gaseous waste as potentially hazardous.
- See the MSDSs provided by the manufacturers of chemicals used at your site for more information.
- Always mix and prepare hazardous materials beneath an operating fume hood.
- Dispose of waste in accordance with all local, state/provincial, or national health and safety regulations and laws.
- Venting hazardous waste may require local, state/provincial, or national air permits.

Electrical Requirements

Disconnecting Power

In case of emergency, you must be able to immediately disconnect the main power supply to the instrument.

Power Connectors and Receptacles

The 4700 Proteomics Analyzer is shipped to customers in North American with NEMA 520-P power connectors. These connectors require NEMA 520-R electrical receptacles (standard 20 A wall receptacles) with proper grounding. Do not use extension cords.

System Electrical Requirements

The 4700 Proteomics Analyzer can be configured for operating voltages between 100 and 240 VAC at 50 or 60 Hz. During installation, the Applied Biosystems service representative configures the system for the proper input voltage.

CAUTION Do not unpack or plug in any components until the Applied Biosystems service representative has configured the system for the proper operating voltage.

Table 1-2 provides electrical specifications for the 4700 Proteomics Analyzer. For all indicated input voltages, a 15 A circuit is required.

Table 1-2 Electrical Specifications

Input Voltage (VAC)	Frequency (Hz)	Nominal Current Draw (A)	Power (W)
100	60	9.00	900
	50	10.00	1000
120	60	8.00	960
	50	9.00	1080
220	60	4.00	880
	50	5.00	1100

Table 1-2 Electrical Specifications

Input Voltage (VAC)	Frequency (Hz)	Nominal Current Draw (A)	Power (W)
240	60	4.00	960
	50	5.00	1200

At 110 V, the computer monitor has a nominal current draw of 2 A; at 240 V, the current draw is 1 A.

Power Line Regulator

In areas where the supplied power is subject to voltage fluctuations exceeding ±10% of the nominal value, a power line regulator may be required. High or low voltages can have adverse effects on the electronic components of the instrument.

UPS

To maintain 4700 system power during power outages, a pure sine-wave UPS (uninterruptible power supply) is recommended. Applied Biosystems has tested the 4700 system using a pure sine-wave UPS with a 7200 VA rating. This UPS supplied 30 minutes of system power (laser firing, High Voltage on, MSMS mode) with approximately 25% of UPS battery power remaining.

Computer Requirements

Antivirus Software Requirements

The integrated computer provided by Applied Biosystems features Microsoft® Windows® 2000 operating system with Service Pack 3 and Internet Explorer 6.0.

No antivirus software is provided because customer preferences and network requirements differ. Therefore, you need to install antivirus software of your own choice to protect the computer against viruses.

CAUTION Other than antivirus software, do not install additional software on the 4700 Proteomics Analyzer computer. Changes to the configured software could void the instrument warranty and cause the system to be nonoperational.

Network Requirements

LAN Connection

If the 4700 Proteomics Analyzer will be connected to a LAN (required if connecting to a GPS Explorer™ Workstation or to a computer running optional 4700 Explorer™ Software – Remote Access Client), an active, tested LAN connection must be in place before the scheduled installation date. Due to differences in network connections, the Applied Biosystems service representative cannot configure the system to access a specific network.

Network Cables

The computer is factory configured for the TCP/IP protocol and includes a fast Ethernet® adapter (10/100baseT) with an RJ45-type connector and one 3-m (10-ft) Ethernet cable.

If the LAN connector is more than 3 m (10 ft) from the 4700 Proteomics Analyzer, you need to supply a Category 5 RJ45 cable of the required length.

Printer Requirements

The 4700 Proteomics Analyzer can use a network or dedicated printer. The printer and any necessary print drivers must be available before the scheduled installation.

Optional Remote Computer Requirements

If you are installing optional 4700 Explorer™ Software – Remote Access Client on a computer that you are providing, the computer must meet the following minimum requirements:

- Single processor, 850 Mhz
- 256 MB RAM
- 20 GB of free disk space
- 100 Mb/s Ethernet interface
- Windows 2000 Professional with Service Pack 3
- Internet Explorer 6.0 with Service Pack 1
- Microsoft Office 2000
- LAN connection to the 4700 Proteomics Analyzer

Stocking the Site

Safety Practices and Equipment

A safety representative from your facility must ensure that:

- All applicable safety practices and policies to protect laboratory personnel from potential hazards are established and are followed by personnel.
- All applicable safety devices and equipment are available

The safety protection and equipment that must be available at the installation site includes:

- Protection from any sources of hazardous chemicals, radiation (for example, lasers, radioisotopes, radioactive wastes, and contaminated equipment) and potentially infectious biological material that may be present in the area where the Applied Biosystems service representative will be working.
- Appropriate fire extinguisher
  - You are responsible for providing an appropriate fire extinguisher for use on or near Applied Biosystems equipment.
  - The types and sizes of fire extinguishers shall be suitable for use on electrical and chemical fires as specified in current codes, regulations, and/or standards, and with approval of the Fire Marshall or other authority having jurisdiction.

  - The installation of apprropriate fire extinguishers shall be in addition to other fire-protection systems and not as a substitute or alternative to them.
- Eyewash
- Safety shower
- Eye and hand protection
- Adequate ventilation, including vent line/fume hood, if applicable
- Biohazard waste container, if applicable
- First-aid equipment
- Spill cleanup equipment
- Applicable MSDSs

Materials for Installation

You need to provide the following materials for the installation:

- Safety glasses, lab coats, chemical-resistant, disposable gloves (powder-free)
- Glassware washing solution
- Lint-free tissues
- Methanol or isopropanol, HPLC-grade or better
- DI Water
- Four sizes of micropipettors and tips
  - 0.5 to 2.5-µL range
  - 1- to 10-µL range
  - 10- to 100-µL range
  - 100- to 1,000-µL range
- Mini vortexer, centrifuge, and sample tubes

Materials for Pressurized Gas Operation

CID Operation

The 4700 Proteomics Analyzer has three inlets to accommodate collision-induced dissociation (CID) system gases and one inlet for ambient air. Installation is performed with ambient air. If you plan to use gases other than ambient air for CID gas, you must supply:

- **Collision gas** – The optional gases can include compressed air, argon, helium, nitrogen, or xenon. A small cylinder of gas may provide many months of CID operation.

- **Appropriate regulators and valves** – The pressure regulator must accommodate 1 to 5 psi (70 to 300 mbar).

WARNING **EXPLOSION HAZARD**. Pressurized gas cylinders are potentially explosive. Always cap the gas cylinder when it is not in use and attach it firmly to the wall or gas cylinder cart with approved brackets or chains.

WARNING **PHYSICAL HAZARD**. **Nonflammable compressed gases (Compressed Air, Argon, Helium, Nitrogen, Xenon).** Contents are under pressure. Receive proper training on the handling of compressed gases before use. Exposure to rapidly expanding gas may cause frostbite. High concentrations of vapors in the immediate area can displace oxygen and cause asphyxiation. Use only in areas with adequate ventilation. Read the MSDS and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

The 4700 Proteomics Analyzer includes:

- **Tubing for external gas connections –** 7.6 m (25 feet) of 1/8-inch OD, 1/16-inch ID.
- **A male Swagelok fitting for pressure regulator connection –** 1/4-inch NPT to 1/8-inch.

Materials for Routine Operation

Additional supplies and consumables are necessary for routine operation of the 4700 Proteomics Analyzer. Before the system is installed, contact the Applied Biosystems sales representative to order these additional supplies.

Receiving and Inspecting the System

Shipped Contents

The 4700 Proteomics Analyzer shipment includes the:

- 4700 Proteomics Analyzer mass spectrometer
- Accessories (if ordered)
- Computer monitor
- Computer keyboard, mouse, and control pad
- 4700 Explorer™ software
- Computer desk (shipped separately)
- Mass Standards Kit
- Optional Handheld Barcode Reader
- Optional 4700 Explorer™ Software – Remote Access Client
- Optional MS Blast software

IMPORTANT! Except for the Mass Standards Kit, do *not* unpack 4700 Proteomics Analyzer crates or computer boxes. This protects you from liability if any damage occurred during shipping.

Shipping List

Verify that the items shown on the shipping list are the same items that were ordered.

Inspecting Crates for Damage

Carefully inspect the boxes and report any damage to the Applied Biosystems service representative. Record any damage or mishandling on the shipping documents. Also, contact Applied Biosystems if the tip or shock indicators on the crates show evidence that the shipment was mishandled during transit.

Unpacking and Storing the Mass Standards Kit

The Mass Standards Kit is boxed separately from the instrument components. When you receive the shipment, unpack the Mass Standards Kit immediately. Store the components as specified in the instructions included with the kit.

WARNING **CHEMICAL HAZARD.** Some chemicals used with Applied Biosystems instruments are potentially hazardous and can cause injury, illness, or death. Read and understand the Material Safety Data Sheets (MSDSs) provided by the chemical manufacturer before you store, handle, work with, or dispose of any chemicals or hazardous materials.

Moving the Crated Instrument to the Laboratory

Moving Schedule

Before the date of installation:

- Clear the installation site of all unnecessary materials.
- If possible, move the crated and boxed equipment (but not the crated mass spectrometer) from the receiving area to the installation site.

Required Building Clearances

The largest crate included with the 4700 Proteomics Analyzer shipment contains the mass spectrometer. Verify that the building clearances allow passage of the following crate dimensions:

Crate Dimension	Minimum Building Clearance
Height	168 cm (66 in.)
Length	264 cm (104 in.)
Depth	109 cm (43 in.)

Instrument Weight

The 4700 Proteomics Analyzer weighs approximately 816 kg (1800 lbs).

WARNING **PHYSICAL INJURY HAZARD**. Do not attempt to lift the crated mass spectrometer. The mass spectrometer is mounted on wheels. After the Applied Biosystems service representative uncrates the mass spectrometer, it can be pushed from location to location.

Moving and Lifting the Instrument

CAUTION **PHYSICAL INJURY HAZARD.** The instrument is to be moved and positioned only by the Applied Biosystems service representative. If you decide to lift or move the instrument after it has been installed, do not attempt to lift or move the instrument without the assistance of others, the use of appropriate moving equipment, and proper lifting techniques. Improper lifting can cause painful and permanent back injury. Depending on the weight, moving or lifting an instrument may require two or more persons.

CAUTION Do not tip the 4700 Proteomics Analyzer on end. Tipping damages the mass spectrometer hardware and electronics.

During Installation

After the system is uncrated (with assistance from people at your site), it takes several hours for the Applied Biosystems service representative to set up the 4700 Proteomics Analyzer system and check its operation.

CAUTION While the instrument is being installed, avoid exposure to hazards that may be associated with the installation process.

When the 4700 Proteomics Analyzer reaches proper vacuum, the Applied Biosystems service representative returns to perform installation qualification tests.

Operator Training

During and/or after installation, the Applied Biosystems service representative reviews data and provides some basic operator training. For additional training and reference information, see the user documents provided with the instrument.

Checklists 2

This chapter includes the following:

Overview

Before using the checklists, read all previous sections in this guide.

Use the checklists in this chapter to ensure that you have made all preparations for installing the system. An Applied Biosystems service representative will contact you to verify that all checklists are complete before setting up the installation date.

Personnel Checklist

Date each item below after verifying its completion. For more information, see "Assigning Personnel" on page 1-3.

Date Verified	Designated Personnel
	Site Preparation/Installation coordinator.
	Laboratory safety representative.
	Primary users to be trained during installation and to subsequently train other users.
	Facilities personnel (one or more people) to provide temperature and humidity control, ventilation and waste collection needs, and electrical requirements. At least two people to help the service representative move and position the instrument, if applicable.
	Network or IT specialist.

Space and Layout Checklist

Date each item below after verifying its completion. For more information, see “Space Requirements” on page 1-6.

Date Verified	Requirements
	Location is away from: • Heating or cooling ducts • Direct sunlight • Magnetic fields greater than 500 mG
	If venting pump exhaust, an appropriate venting device such as a fume hood is within 6 m (20 feet) of the exhaust outlet.
	Space for the computer desk is within 2 m (6 feet) of the 4700 Proteomics Analyzer and within 3 m (10 feet) of a network connector.
	Computer workspace allows for proper ergonomics during use.
	Location accommodates the dimensions and weights specified in “Space Requirements” on page 1-6.
	Location meets the requirements specified in “Clearances” on page 1-8.

Environmental Checklist

Date each item below after verifying its completion.

Date Verified	Requirement
	The altitude does not exceed 2000 m (6500 feet).
	The conditions specified in “Temperature and Humidity Requirements” on page 1-9 have been met.
	Your laboratory ventilation system can handle the total maximum thermal output of approximately 4,000 Btu/h (1200 W).
	Only nonconductive pollutants, if any, are present.

Ventilation and Waste Collection Checklist

Date each item below after verifying its completion.

Date Verified	Requirement
	Materials are available for connecting the instrument pump exhaust to the venting device through a vent line, as described in "System Pump Exhaust" on page 1-9.
	The venting device such as a fume hood or duct meets the specifications indicated in "Venting Device Guidelines" on page 1-10.

Electrical Checklist

Date each item after verifying its completion. For more information, see "Electrical Requirements" on page 1-11.

Date Verified	Requirement
	The main power supply to the instrument can be immediately disconnected.
	Appropriate grounded power receptacles are available (see "Electrical Requirements" on page 1-11).
	If necessary, a power line regulator or UPS is provided for the system (see "Power Line Regulator" and "UPS" on page 1-12).

Computer Checklist

Date each item after verifying its completion. For more information, see "Computer Requirements" on page 1-12.

Date Verified	Requirement
	Antivirus Software
	Appropriate antivirus software is available for loading on the system computer.
	Networking
	One active, tested LAN connection is available.
	Network hardware is compatible with an RJ45-type connector. See "Network Requirements" on page 1-12.
	If the network connection is more than 3 m (10 feet) from the system, a Category 5 RJ45 cable of the required length is available.

Printer	
	A network printer or a dedicated printer and necessary print drivers are available.
Optional Remote Computer	
	If you plan to install optional 4700 Explorer™ Software – Remote Access Client on a computer, the computer meets the requirements in “Optional Remote Computer Requirements” on page 1-13.

Safety Checklist

Date each item below after verifying its completion. For more information, see “Safety Practices and Equipment” on page 1-13.

Date Verified	Requirement
	Safety practices and policies to protect laboratory personnel from potential hazards are in place and are followed.
	Protection from any sources of hazardous chemicals, radiation (for example, lasers, radioisotopes, radioactive wastes, and contaminated equipment), and potentially infectious biological material is in place.
	Appropriate fire extinguisher.
	Eye and hand protection.
	Eyewash.
	Safety shower.
	Vent lines/fume hood, if applicable.
	Biohazard waste container, if applicable.
	First-aid equipment.
	Spill cleanup equipment.
	MSDSs readily available.

Materials Checklist

Date each item below after verifying its completion. For more information, see "Stocking the Site" on page 1-13.

Date Verified	Requirement
	Materials for General Installation
	Safety glasses and lab coats
	Chemical-resistant disposable gloves (powder free)
	Glassware washing solution
	Lint-free tissues
	Methanol or isopropanol, HPLC-grade or better
	DI Water
	Four sizes of micropipettors and tips: • 0.5- to 2.5-µL range • 1- to 10-µL range • 10- to 100-µL range • 100- to 1,000-µL range
	A mini vortexer, centrifuge, and sample tubes
	Materials for Pressurized Gas Operation
	Alternate gas supply for CID is available. (See "Materials for Pressurized Gas Operation" on page 1-14.)
	Pressure regulators and valves that conform to specifications are available "Materials for Pressurized Gas Operation" on page 1-14.
	Materials for Routine Operation
	Materials for routine operation (needed for operation after installation) are available or have been ordered (see "Materials for Routine Operation" on page 1-15).

System Receipt and Inspection Checklist

Date each item below after verifying its completion. For more information, see "Receiving and Inspecting the System" on page 1-16.

Date Verified	Action
	Verified that items on the packing list are those that were ordered. Otherwise, reported to the Applied Biosystems service representative discrepancies in the packing list.
	Opened and stored the Mass Standards Kit components as specified in the kit operating instructions.
	Received the system and inspected the crates and boxes for mishandling or damage. **IMPORTANT!** Except for the Mass Standards Kit, do not open any crates or boxes.
	Reported to the Applied Biosystems service representative: • Any damage to the crates or boxes • Tip indicators or shock indicators that show evidence of mishandling during transit

Moving the Crated Instrument Checklist

Date each item below after verifying its completion. For more information, see "Moving the Crated Instrument to the Laboratory" on page 1-16

Date Verified	Item
	The measured building clearances can accommodate the mass spectrometer crate dimensions (see "Clearances" on page 1-8). If the crate dimensions exceed building clearances, contact the Applied Biosystems service representative. Do not unpack the crate without authorization.
	If possible, moved all the *crated* equipment, excluding the crated mass spectrometer, to the laboratory before the date of the scheduled installation. **WARNING** **PHYSICAL INJURY HAZARD**. Do not attempt to lift or move any boxed or crated items unless you have received related training. Incorrect lifting can cause painful and sometimes permanent back injury. Use proper lifting techniques when lifting or moving items. No attempt should be made to lift the instrument.
	Cleared the installation site of all unnecessary materials.

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Headquarters
850 Lincoln Centre Drive
Foster City, CA 94404 USA
Phone: +1 650.638.5800
Toll Free (In North America): +1 800.345.5224
Fax: +1 650.638.5884

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