Applied Biosystems 3130/3130*xl* Genetic Analyzers

Site Preparation Guide

Applied Biosystems | HITACHI

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Preface

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Purpose of This Guide

The *Applied Biosystems 3130/3130xl Genetic Analyzers Site Preparation Guide* provides the information you need to fully prepare your site for the arrival and installation of the instrument. Complete preparation helps ensure a smooth installation process, as well as correct and safe instrument operation.

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 Applied Biosystems 3130/3130*xl* Genetic Analyzers.

Text Convention

This guide uses the following convention:

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

Before analyzing, *always* prepare fresh matrix.

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 of the user attention words appear below:

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

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

Safety Alert Words

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

How to Obtain More Information

Related Documentation

The following related documents are shipped with the system:

- ***Applied Biosystems 3730/3730xl DNA Analyzers and Applied Biosystems 3130/3130xl Genetic Analyzers AB Navigator Software Administrator Guide*** (PN 4359472) - Contains information and procedures for the administrator maintaining the computer system and software files of the Applied Biosystems 3130/3130*xl* Genetic Analyzers.
- ***Applied Biosystems 3130/3130xl Genetic Analyzers Getting Started Guide*** (PN 4352715) - Contains procedures and information to start a run using the instrument system.
- ***Applied Biosystems 3130/3130xl Genetic Analyzers Maintenance, Troubleshooting, and Reference Guide (***PN 4352716) - Contains information on maintaining the instrument and computer system, troubleshooting tables to diagnose performance failures, and advanced reference content.
- ***Applied Biosystems 3130/3130xl Genetic Analyzers Quick Reference Card*** (PN 4362825) - Contains a flowchart on how to run the samples and instrument, a table of maintenance tasks, and a Data Collection software reference guide.

Note: For additional documentation, see "How to Obtain Support" on page vi.

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

How to Obtain Support

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

At the 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 Support page provides access to worldwide telephone and fax numbers to contact Applied Biosystems Technical Support and Sales facilities.

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 at points in the document where you need to be aware of relevant hazards. Each alert word–**IMPORTANT, CAUTION, WARNING, DANGER**–implies a particular level of observation or action, as defined below:

Definitions

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.

– 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. This signal word is to be limited to the most extreme situations.

Except for IMPORTANTs, each safety alert word in an Applied Biosystems document appears with an open triangle figure that contains a hazard symbol. *These hazard symbols are identical to the hazard icons that are affixed to Applied Biosystems instruments* (see "Safety Symbols" on page ix).

Examples

The following examples show the use of safety alert words:

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 on Instruments

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.

Symbol	Description
	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.
CAUTION Hazardous waste. Refer to MSDS(s) and local regulations for handling and disposal.	**ATTENTION** Déchets dangereux. Lire les fiches techniques de sûreté de matériels et la régulation locale associées à la manipulation et l'élimination des déchets.
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.

English	Francais
DANGER Class 3B laser radiation present when open and interlock defeated. Avoid direct exposure to laser beam.	**DANGER** Class 3B rayonnement laser en cas d'ouverture et d'une neutralisation des dispositifs de sécurité. Eviter toute exposition directe avec le faisceau.
DANGER Class 3B laser radiation when open. Avoid direct exposure to laser beam.	**DANGER** Class 3B rayonnement laser en cas d'ouverture. Eviter toute exposition directe avec le faisceau.
DANGER Class 2 (II) laser radiation present when open and interlock defeated. Do not stare directly into the beam	**DANGER** de Class 2 (II) rayonnement laser en cas d'ouverture et d'une neutralisation des dispositifs de securite. Eviter toute exposition directe avec le faisceau.
DANGER Class 2 (II) laser radiation present when open. Do not stare directly into the beam.	**DANGER** de Class 2 (II) rayonnement laser 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 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). See "About MSDSs" on page xiii.

Cleaning or Decontaminating the Instrument

CAUTION Before using a cleaning or decontamination method other than those recommended by the manufacturer, verify with the manufacturer that the proposed method will not damage the equipment.

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 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 Material Safety Data Sheets (MSDS) 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. Wear appropriate personal protective equipment when handling chemicals (for example, safety glasses, gloves, or 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, fume hood). For additional safety guidelines, consult the MSDS.
- Check regularly for chemical leaks or spills. If a leak or spill occurs, follow the manufacturer's cleanup procedures as recommended on the MSDS.
- Comply with all local, state/provincial, 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 Material Safety Data Sheets (MSDSs) provided by the manufacturers of the chemicals in the waste container before you store, handle, or dispose of chemical waste.
- Provide primary and secondary waste containers. (A primary waste container holds the immediate waste. A secondary container contains spills or leaks from the primary container. Both containers must be compatible with the waste material and meet federal, state, and local requirements for container storage.)
- Minimize contact with chemicals. Wear appropriate personal protective equipment when handling chemicals (for example, safety glasses, gloves, or 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, fume hood).For additional safety guidelines, consult the MSDS.
- Handle chemical wastes in a fume hood.
- After emptying the waste container, seal it with the cap provided.

- Dispose of the contents of the waste tray and waste bottle in accordance with good laboratory practices and local, state/provincial, 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

Shock Hazards

ELECTRICAL SHOCK HAZARD. Severe electrical shock can result from operating the 3130/3130*xl* instrument without its instrument panels in place. Do not remove instrument panels. High-voltage contacts are exposed when instrument panels are removed from the instrument.

Fuses

ELECTRICAL SHOCK HAZARD. Improper fuses or high-voltage supply can damage the instrument wiring system and cause a fire. Before turning on the instrument, verify that the fuses are properly installed and that the instrument voltage matches the power supply in your laboratory.

FIRE HAZARD. For continued protection against the risk of fire, replace fuses only with fuses of the type and rating specified for 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 3130/3130*xl* instrument system has an installation (overvoltage) category of II, and is classified as portable equipment

Physical Hazard Safety

Moving Parts

PHYSICAL INJURY HAZARD. Moving parts can crush and cut. Keep hands clear of moving parts while operating the instrument. Disconnect power before servicing the instrument.

Solvents and Pressurized Fluids

PHYSICAL INJURY HAZARD. Always wear eye protection when working with solvents or any pressurized fluids.

Biological Hazard Safety

General Biohazard

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 these 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, Bloodborne Pathogens (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 Applied Biosystems 3130/3130*xl* Genetic Analyzers use an Argon 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 3B laser.

The Applied Biosystems 3130/3130*xl* Genetic Analyzers has been tested to and complies with 21 CFR, 1040.10 and 1040.11, as applicable."

The Applied Biosystems 3130/3130*xl* Genetic Analyzers have been tested to and comply 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 3B 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.

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.

To minimize musculoskeletal and repetitive motion risks:

- 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

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 61010-1:2001, "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 according to the instructions in this chapter. To ensure that you complete all site preparation tasks, 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.
   - 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 Chemistry Installation Kit as soon as you receive it.

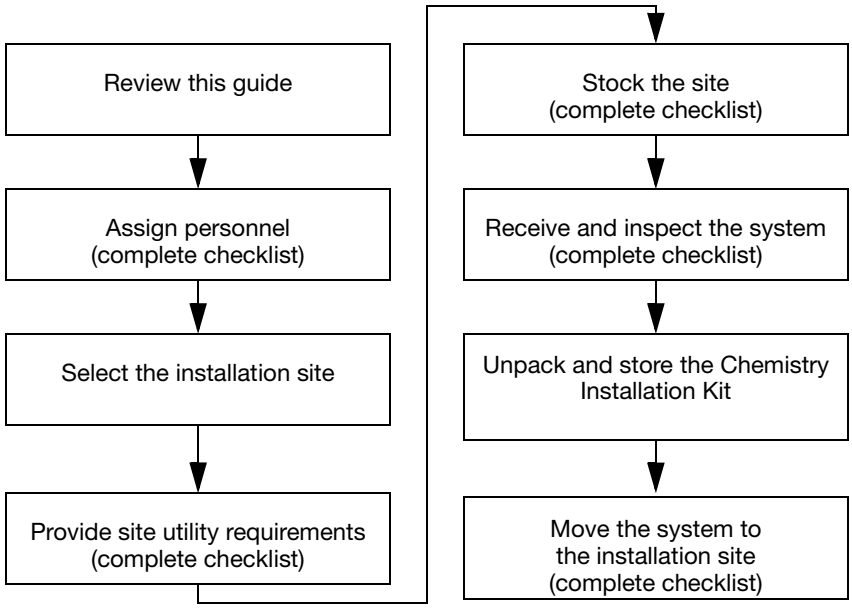

Figure 1-1 Site preparation tasks and their suggested sequence

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 Assignments

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. • Schedules the installation and informs personnel of the installation date. • Ensures that the site is clear of unnecessary material on the installation day. • Is available throughout installation. • Receives and inspects the system. • Stores the Chemistry Installation Kit.
Laboratory Safety Representative	• Reviews the site preparation guide for safety information. • Ensures that the required safety practices and equipment are in place. • Is 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 installation requirements are met for: – Space at the installation site – Building clearances – Temperature and humidity – Ventilation and waste collection – Electrical supply – Computer – Safety and installation materials • If possible, move the crated system to the site before the installation date. • Be available throughout installation. • Ensure that at least two people are available to help the Applied Biosystems service representative move and position the system.

Table 1-1 Suggested Personnel Assignments

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, supplies additional cables. • Is 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.

Selecting the Site

When deciding where to install the instrument, you need to consider the following requirements:

- **Space –** See "Space Requirements" on page 1-6.
- **Environmental –** See "Environmental Requirements" on page 1-8.
  - **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.
  - **Ventilation** – You must be able to comply with local, state/provincial, or national air quality regulations while venting the exhaust from this instrument. See "Ventilation Requirements" on page 1-8.
  - **Temperature and humidity** – The site must maintain adequate temperature and humidity levels. See "Temperature and Humidity Requirements" on page 1-8.
- **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 1-10.
- **Computer**
  - **Network access** – If the system is to be connected to a local area network (LAN), the system computer requires an active, dedicated network connection that is near the computer. See "Network Requirements" on page 1-11.
  - **Printer Access** – See "Printer Requirements" on page 1-11.
- **Electrical power quick disconnect** – See "Electrical Requirements" on page 1-10.
  - **Network Access** –See "Network Requirements" on page 1-11, if the system will be connected to a local area network (LAN).
- **Safety and materials**– 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. See "Stocking the Site" on page 1-11.

IMPORTANT! The site must not be designated BioSafety Level 3 (BSL-3) or BioSafety Level 4 (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 Applied Biosystems 3130 and 3130*xl* Genetic Analyzers includes the:

- 3130 or 3130*xl* Genetic Analyzer
- Computer CPU, monitor, keyboard, and mouse

Layout Requirements

A typical layout and some basic layout considerations for a 3130/3130*xl* Genetic Analyzer are shown in Figure 1-2.

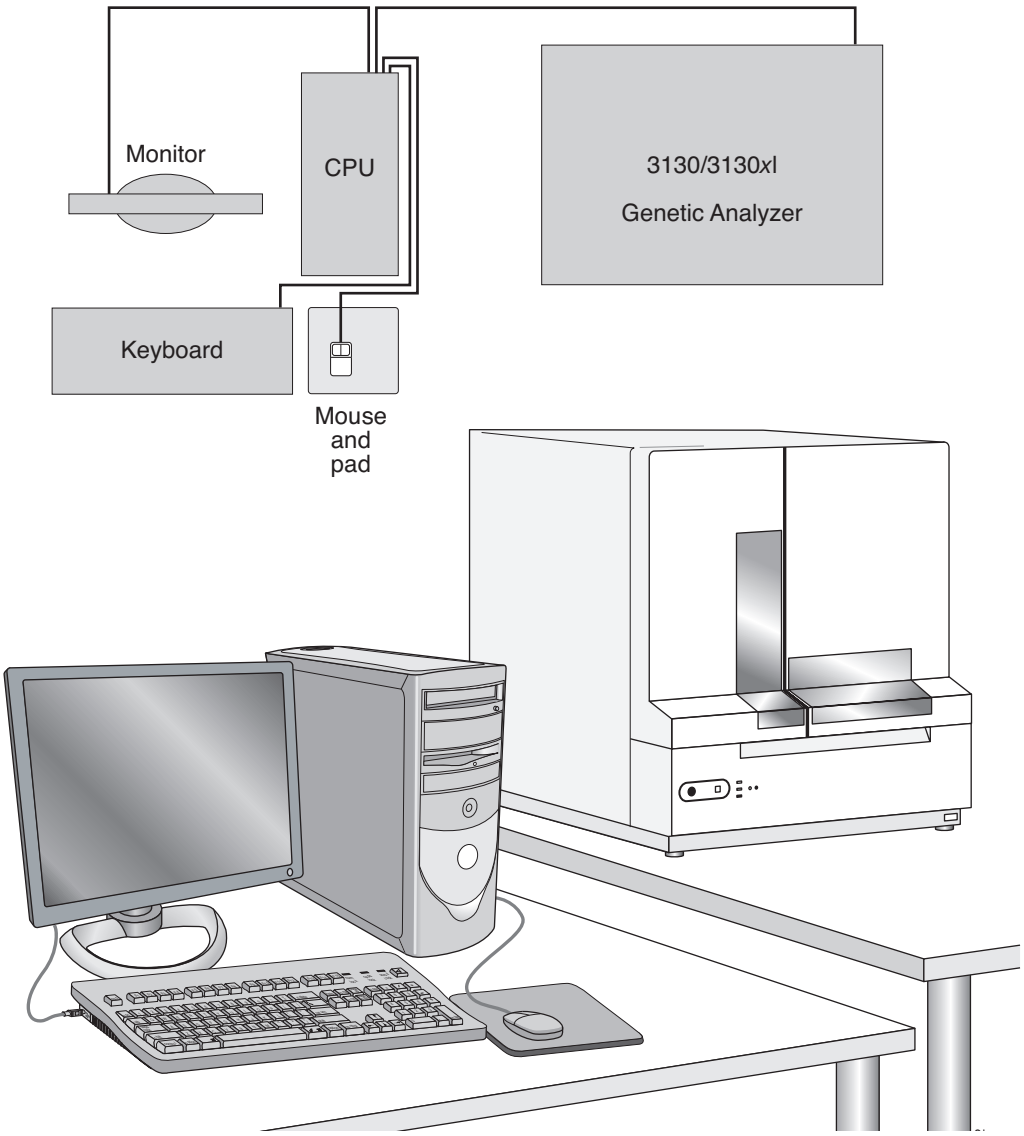

Figure 1-2 Layout requirements *(not to scale)*

Ethernet Cable Connection

The location of the ethernet cable used to communicate with the computer is shown in the figure below.

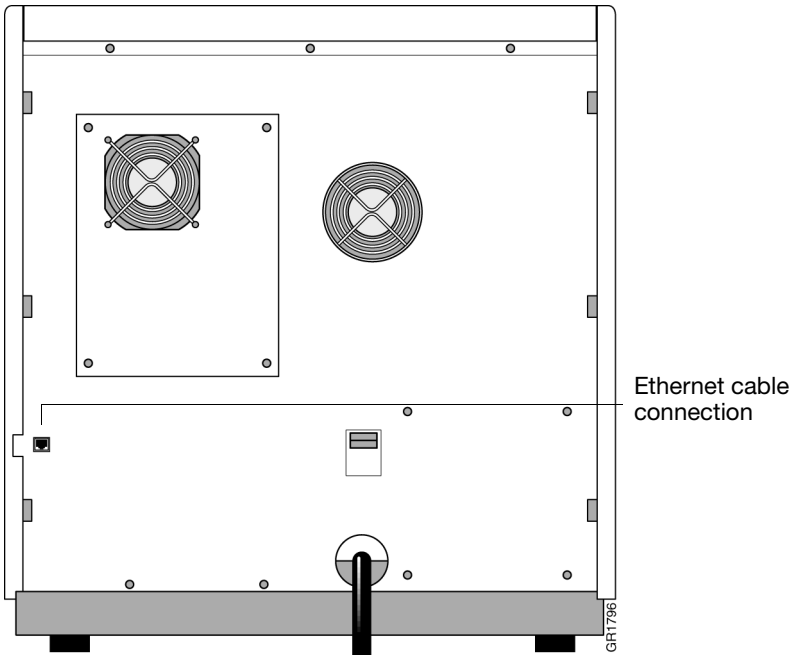

Figure 1-3 Instrument back view

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.

Table 1-2 Dimensions of the System Components

Component	Width	Depth	Height	Weight
3130/3130*xl* Genetic Analyzer, crated	94 cm (37 in.)	70 cm (27.5 in.)	105 cm (41.5 in.)	142 kg (313 lbs)
3130/3130*xl* Genetic Analyzer, uncrated	74 cm (29.2 in.)	54.8 cm (21.6 in.)	81 cm (32 in.)	120 kg (265 lbs)
Computer CPU	21 cm (58.5 in.)	44 cm (17.4 in.)	44 cm (17.4 in.)	10 kg (25 lbs)
Monitor	42 cm (16.6 in.)	53 cm (20.9 in.)	44 cm (17.4 in.)	18 kg (40 lbs)

Clearances

Required clearances for the 3130 and 3130*xl* Genetic Analyzers are summarized below.

Table 1-3 The 3130 and 3130*xl* Instruments With All Required Clearances:

Width	Depth	Height
148.6 cm (58.5 in.)	67 cm (26.4 in.)	111 cm (44 in.)

Environmental Requirements

Altitude

The Applied Biosystems 3130 and 3130*xl* Genetic Analyzers are designed for indoor use only and for altitudes not exceeding 2000 m (6500 feet) above sea level.

Temperature and Humidity Requirements

Ensure that the site is working under acceptable range conditions.

Table 1-4 Acceptable Temperature and Humidity Range

Condition	Acceptable Range
Temperature	15 to 30 °C (59 to 86 °F) Maximum change of less than 2 °C (3.6 °F) per 24 hours
Humidity	20 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.

Pollution

The Applied Biosystems 3130 and 3130*xl* Genetic Analyzers have a pollution degree rating of 2 and may be installed in an environment that has nonconductive pollutants only.

Ventilation Requirements

Venting Hot-Air-Only Exhaust

In the case of hot-air exhaust (no fumes or vapors), venting can be directly into the laboratory air space only if the room ventilation system can maintain room temperature with the additional thermal input from the instrument.

The maximum thermal output of the 3130 and 3130*xl* instruments is 6800 Btu/h (~2000 W). Consult your facilities department to determine if the laboratory ventilation system can maintain room temperature with this level of thermal output. If it can maintain room temperature during instrument operation, the hot-air exhaust port can be vented directly to room air.

Venting the Hot-Air-Only Exhaust Line

If the room ventilation system cannot maintain room temperature because of the heat exhaust from the instrument, install flexible duct (elephant trunk) from the instrument to a venting device such as a fume hood or fume duct.

The two heat-venting fans at the back of the instrument are the chassis vent and the laser vent. A connector with an outer diameter of 12.7 cm (5.0 in.) is provided to connect the laser vent to a flexible duct.

Connecting the Flexible Duct

- Use the shortest possible length and straightest possible run of flexible duct.
- Make sure the flexible duct does not have low points that can trap residue or condensation.
- Keep the flexible duct away from sources of potential damage, such as from contact with heat or flame, or rubbing against other objects.

Venting Devices

Fixed Fume Duct Guidelines

Follow these guidelines for fume duct operation and maintenance:

- Operate the duct system whenever the instrument power is on.
- Do not connect the instrument to a duct or a system that purifies/filters air and returns it to the room.
- Locate the fume duct exhaust outlet away from air currents generated by air conditioning ducts, fans, windows, doors, and moving equipment and persons.
- Place the exhaust tubing as far into the fume duct as possible.
- 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.

Fume Hood Guidelines

Follow these guidelines for fume hoods:

- Operate the fume hood whenever the instrument power is on.
- 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 gaseous waste cannot be drawn back into the building.
- 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.

Electrical Requirements

Disconnecting Power

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

Power Connectors and Receptacles

The 3130 and 3130*xl* instruments are shipped to customers in North American with 2.5-kVA power connectors. These connectors require NEMA L6-30R electrical receptacles (standard 30 A wall receptacles) with proper grounding. Do not use extension cords.

WARNING **ELECTRICAL SHOCK HAZARD.** Severe electrical shock, which could cause physical injury or death, can result from servicing an instrument when electrical power is present. To avoid electrical shock, disconnect power to the instrument, unplug the power cord, and wait at least 1 minute before working on the instrument.

System Electrical Requirements

The 3130 and 3130*xl* instruments can be configured for operating voltages of 200 to 229 and 230 to 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 1-5 provides electrical specifications for the 3130 and 3130*xl* instruments. For all indicated input voltages, a 30 A circuit is required.

Table 1-5 Electrical Specifications, North America

Input Voltage (VAC)	Frequency (Hz)	Maximum Current (A)
200 to 229	60 ± 10%	11.2
	50 ± 10%	
230 to 240	60 ± 10%	
	50 ± 10%	

Power Connectors and Receptacles, Outside North America

IMPORTANT! In Japan, the unit must have a dedicated 200-volt outlet. The unit will not operate properly with a 100-volt outlet.

Table 1-6 Electrical specifications, outside North America

Location	Input Voltage (VAC)	Frequency (Hz)	Maximum Current (A)
Japan	200 to 229 230 to 240	50/60 ± 10%	11.2
Europe		50 ± 10%	
Australia		50 ± 10%	

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.

Computer Requirements

Antivirus Software Requirements

The integrated computer provided by Applied Biosystems features the Microsoft Windows® XP operating system with Service Pack 1.

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 Do not install on the computer additional software, other than antivirus software. Changes to the configured software could void the instrument warranty and cause the system to be nonoperational.

Network Requirements

Applied Biosystems will supply and install, but not support or connect, a network card or install network connections. Customers must make arrangements with their own network administration to have this done during or immediately after installation of the instrument.

LAN Connection

If the 3130/3130*xl* instrument will be connected to a LAN, 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.

Printer Requirements

The 31303130*xl* instruments can use a network or dedicated printer. The printer and any necessary print drivers must be available before the scheduled installation.

Stocking the Site

Safety Practices and Equipment

IMPORTANT! The site must not be designated BioSafety Level 3 (BSL-3) or BioSafety Level 4 (BSL-4). Applied Biosystems does not install, service, or repair Applied Biosystems instruments in areas designated BSL-3 or BSL-4.

IMPORTANT! 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 appropriate 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:

- 1.5-mL and 0.2-mL tubes and microtiter plates
- Benchtop microcentrifuge for 1.5-mL and 0.2-mL tubes and microtiter plates
- Ice bucket and wet ice
- Heat block or water bath at 95 °C
- Lint-free tissues
- Safety glasses, lab coats, chemical-resistant, disposable gloves (powder-free)
- Three sizes of micropipettors and plugged tips
  - 1- to 10-µL
  - 10- to 100-µL
  - 100- to 1,000-µL
- Timer
- Vortex mixer
- Water, deionized

Materials for Routine Operation

Additional supplies and consumables are necessary for routine operation of the 3130 and 3130*xl* instruments. Before the system is installed, contact the Applied Biosystems sales representative to order these additional supplies.

Receiving and Inspecting the System

Shipped Contents

The 3130 or 3130*xl* instrument shipment includes the:

- 3130 Genetic Analyzer or 3130*xl* Genetic Analyzer in one crate
- Packing kit in one box
- Collection Software Kit in one box
- Autosampler Plate Kit 96 and/or Autosampler Plate Kit 384 in one or two boxes
- Two Capillary Arrays in two boxes
- The computer, monitor, keyboard, mouse, and control pad in two boxes
- The printer (optional) in one box
- Sequencing Analysis Software Module and/or GeneMapper® Software Module in one or two boxes

  IMPORTANT! These software module kits contain the chemistry installation kits. See "Unpacking and Storing the Chemical Installation Kit" below.

IMPORTANT! Except for the Software Module Kit(s), do *not* unpack the 3130 or 3130*xl* instrument 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 Chemical Installation Kit

The Chemistry Installation Kit is boxed separately from the instrument. When you receive the shipment, unpack the Chemistry Installation Kit immediately. Store the components as specified in "Storing the Reagents" below.

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.

Storing the Reagents

Use the following tables when storing reagents for the Applied Biosystems 3130 or 3130*xl* Genetic Analyzer.

Table 1-7 Sequencing Chemistry Installation Kits

Part Number	Name	Qty	Storage Temp. (°C)	3130 Kit (PN 4361059))	3130*xl* Kit (PN 4361060)
4336974	3100/3130 BigDye® Terminator v3.1 Matrix Standards	1	4	√	√
4352759	3130 POP-7™ polymer	2	4	√	√
4336697	5X Sequencing Buffer, Small	1	4	√	√
402824	10X Buffer with EDTA	1	4	√	√
4336915	BigDye® Terminator v3.1 Cycle Sequencing Ready Reaction (RR-24) This is a sample kit used by Field Application Specialists for customer training.	1	–20	√	√
4336935	BigDye® Terminator v3.1 Cycle Sequencing Standard Kit	2	–20	√	√
4311320	Hi-Di™ formamide	1	–20	√	√
4333464	3130 and 3100-*Avant* Capillary Array 4 x 36 cm	1	—	√	—
4315931	3130*xl* and 3100 Capillary Array 4 x 36 cm	1	—	—	√

Table 1-8 Fragment Analysis Chemistry Installation Kits

Part Number	Name	Qty	Storage Temp. (°C)	3130 Kit (PN 4361062)	3130*xl* Kit (PN 4361058)
4345833	3130/3130*xl* Matrix Standard Set DS-33[a]	1	4	√	√
4330397	3100/3130 GeneScan™ Installation Standard DS-33[a]	1	4	√	√
4352759	3130 POP-7™ polymer	2	4	√	√
4311320	Hi-Di™ formamide	1	–20	√	√
402824	10X Buffer with EDTA	1	4	√	√
4333464	3130 and 3100-*Avant* Capillary Array 4 x 36 cm	1	—	√	—
4315931	3130*xl* and 3100 Capillary Array 4 x 36 cm	1	—	—	√

a. Use DS-33 only to qualify 3130 and 3130*xl* instruments with GeneMapper software.

Table 1-9 Combined Sequencing and Fragment Analysis Chemistry Installation Kits

Part Number	Name	Qty	Storage Temp. (°C)	3130 Kit (PN 4361063)	3130*xl* Kit (PN 4361061)
4336974	3100/3130 BigDye® Terminator v3.1 Matrix Standards	1	4	√	√
4345833	3130/3130*xl* Matrix Standard Set DS-33[a]	1	4	√	√
4330397	3100/3130 GeneScan™ Installation Standard DS-33[a]	1	4	√	√
4352759	3130 POP-7™ polymer	2	4	√	√
4336697	5× Sequencing Buffer, Small	1	4	√	√
402824	10× Buffer with EDTA	1	4	√	√
4336915	BigDye® Terminator v3.1 Cycle Sequencing Ready Reaction (RR-24) This is a sample kit used by Field Application Specialists for customer training.	1	–20	√	√
4336935	BigDye® Terminator v3.1 Cycle Sequencing Standard Kit	2	–20	√	√
4311320	Hi-Di™ formamide	1	–20	√	√
4333464	3130 and 3100-*Avant* Capillary Array 4 x 36 cm	2	–	√	—
4315931	3130*xl* and 3100 Capillary Array 4 x 36 cm	2	—	—	√

a. Use DS-33 only to qualify 3130 and 3130xl instruments with GeneMapper software.

Table 1-10 HID Chemistry Installation Kits

Part Number	Name	Qty	Storage Temp. (°C)	3130 Kit (PN 4361064)	3130*xl* Kit (PN 4361065)
4345831	3100/3130 Matrix Standard Set DS-32	1	4	√	√
4345833	3130/3130*xl* Matrix Standard Set DS-33[a]	1	4	√	√
4330397	3100/3130 GeneScan™ Installation Standard DS-33[a]	1	4	√	√
4352755	3130 POP-4™ polymer	2	4	√	√
4311320	Hi-Di™ formamide	1	–20	√	√
402824	10X Buffer with EDTA	1	4	√	√
4333464	3130 and 3100-*Avant* Capillary Array 4 x 36 cm	1	—	√	—
4315931	3130*xl* and 3100 Capillary Array 4 x 36 cm	1	—	—	√

a. Use DS-33 only to qualify 3130 and 3130*xl* instruments with GeneMapper software.

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 3130 or 3130*xl* instrument from the receiving area to the installation site.
- If possible, move the other crated and boxed equipment from the shipping area to the installation site.

Required Building Clearances

The largest crate included with the instrument shipment contains the 3130 or 3130*xl* instrument. To move the crate to the installation site, verify that the building clearances allow passage of the following crate dimensions:

Table 1-11 Clearance Dimensions

Crate Dimension	Minimum Building Clearance
Height	105 cm (41.5 in.)
Length	94 cm (37 in.)
Depth	70 cm (27.5 in.)

Instrument Weight

The 3130 or 3130*xl* instrument weighs approximately 142 kg (313 lbs).

WARNING **PHYSICAL INJURY HAZARD**. Do not attempt to lift the crated 3130 or 3130*xl* instrument.

Moving and Lifting the Instrument

At least three people are needed to help the service engineer place the instrument onto the laboratory bench. Do not unpack or move the instrument before the service engineer arrives to install it.

WARNING **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.

WARNING Do not tip the 3130 or 3130*xl* instrument on end. Tipping damages the 3130 or 3130*xl* instrument hardware and electronics.

During Installation

After the system is uncrated, it takes about 16 hours for the Applied Biosystems service representative to set up the 3130 or 3130*xl* instrument and check its operation.

CAUTION While the 3130 or 3130*xl* instrument is being installed, avoid exposure to hazards that may be associated with the installation process.

When the 3130 or 3130*xl* instrument reaches proper operating status, 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
	Laboratory personnel: • To ensure that customer-supplied materials are on hand • Primary users to be trained during installation and to subsequently train other users
	Facilities personnel: • To provide installation requirements for environmental, electrical, and computer site-preparation requirements • Three people to help the service representative move and position the instrument, if applicable
	Network or IT specialist (only if the system will be connected to a network)

Site, 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
	Space for the computer desk is within 3.7 m (12 ft.) of the 3130 or 3130*xl* instrument.
	Computer workspace allows for proper ergonomics during use.
	Location accommodates the dimensions and weights specified in "Dimensions and Weights" on page 1-7.
	Location meets the requirements specified in "Clearances" on page 1-7.
	If venting hot air exhaust, use the shortest possible length and straightest possible run of flexible duct.

Utilities Checklist

Date each item below after verifying its completion.

Date Verified	Requirement
	Heat Production Ventilation
	The ventilation system can handle the maximum thermal output of the system, as specified in "Venting Hot-Air-Only Exhaust" on page 1-8.
	Temperature and Humidity
	The conditions specified in "Temperature and Humidity Requirements" on page 1-8 are met.
	Electrical
	Main power supply to the instrument can be immediately disconnected.
	Appropriate grounded power receptacles are present. See "Electrical Requirements" on page 1-10.
	The electrical receptacle is located within 3 m (10 ft) of the back of the instrument. Do not use extension cords.
	There are standard outlets on a dedicated circuit separate from the instrument for the computer and monitor.

Environmental Checklist

Date Verified	Requirement
	The altitude does not exceed 2000 m (6500 feet).
	The conditions specified in "Temperature and Humidity Requirements" on page 1-8 have been met.
	Only nonconductive pollutants, if any, are present.

Ventilation and Waste Collection Checklist

Date each item below after verifying its completion.

Date Verified	Requirement
	Instrument Hot-Air Exhaust Venting
	One of the following conditions exists: • Facilities personnel have certified that the normal room ventilation system can maintain room temperature if the maximum thermal output of the system (specified in "Venting Hot-Air-Only Exhaust" on page 1-8) is vented directly into the room air. • A suitable venting device such as a fume hood or fume duct is available to vent the hot air exhaust from the instrument space.
	Materials are available for connecting the instrument to the venting device through a vent line, as described in "Venting Hot-Air-Only Exhaust" on page 1-8.

Electrical Checklist

Date each item after verifying its completion. For more information, see "Electrical Requirements" on page 1-10.

Date Verified	Requirement
	The main power supply cord to the instrument can be immediately disconnected.
	Appropriate grounded power receptacles are available (see "Electrical Requirements" on page 1-10).

Computer Checklist

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

Date Verified	Requirement
	Antivirus Software
	Appropriate antivirus software is available for loading on the system computer.
	Networking (If the system will be connected to a network)
	One active, tested LAN connection is available.
	Network hardware is compatible with an RJ45-type connector. See "Network Requirements" on page 1-11.
	Printer
	A network printer or a dedicated printer and necessary print drivers are available.

Safety Checklist

Date each item below after verifying its completion. For more information, see "Safety Practices and Equipment" on page 1-11.

Date Verified	Requirement
	The site is not designated BioSafety level 3 (BSL-3) or BioSafety level 4 (BSL-4).
	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.
	Eyewash.
	Safety shower.
	Adequate ventilation.
	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 1-11.

Date Verified	Requirement Item
	Materials for General Installation
	1.5-mL and 0.2-mL tubes and microtiter plates
	Benchtop microcentrifuge for 1.5-mL and 0.2-mL tubes and microtiter plates
	Chemical-resistant disposable gloves (powder-free)
	Heat block or water bath at 95 °C
	Ice bucket and wet ice
	Lint-free tissues
	Safety glasses and lab coats
	Three sizes of micropipettors and plugged tips: • 1- to 10-µL range • 10- to 100-µL range • 100- to 1,000-µL range
	Timer
	Vortex mixer
	Water, deionized
	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 1-12).

System Receipt and Inspection Checklist

Date each item below after verifying its completion. For more information, see "Receiving and Inspecting the System" on page 1-13.

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 Chemical Installation Kit components as specified in "Storing the Reagents" on page 1-14.
	Received the system and inspected the crates and boxes for mishandling or damage. **IMPORTANT!** Except for the Chemical Installation 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 "Storing the Reagents" on page 1-14.

Date Verified	Item
	The measured building clearances can accommodate the 3130 or 3130*xl* instrument crate dimensions (see "Clearances" on page 1-7). 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 3130 or 3130*xl* instrument, 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.

iScience. To better understand the complex interaction of biological systems, life scientists are developing revolutionary approaches to discovery that unite technology, informatics, and traditional laboratory research. In partnership with our customers, Applied Biosystems provides the innovative products, services, and knowledge resources that make this new, **Integrated Science** possible.

Worldwide Sales and Support
Applied Biosystems vast distribution and service network, composed of highly trained support and applications personnel, reaches 150 countries on six continents. For sales office locations and technical support, please call our local office or refer to our Web site at **www.appliedbiosystems.com**.

Applera is committed to providing the world's leading technology and information for life scientists. Applera Corporation consists of the Applied Biosystems and Celera Genomics businesses.

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