

NextSeq 500 and NextSeq 550 Sequencing Systems

Site Prep Guide

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Introduction

This guide provides specifications and guidelines for preparing your site for installation and operation of the Illumina® NextSeq™ 500 and NextSeq 550 systems:

- ▶ Laboratory space requirements
- ▶ Electrical requirements
- ▶ Environmental constraints
- ▶ Computing requirements
- ▶ User-supplied consumables and equipment

Safety Considerations

See the *NextSeq System Safety and Compliance Guide (document # 15046564)* for important information about safety considerations.

Additional Resources

The following documentation is available for download from the Illumina website.

Resource	Description
<i>NextSeq System Safety and Compliance Guide (document # 15046564)</i>	Provides information about operational safety considerations, compliance statements, and instrument labeling.
<i>RFID Reader Module Compliance Guide (document # 100000002699)</i>	Provides information about the RFID reader in the instrument, compliance certifications, and safety considerations.
<i>Denaturing and Diluting Libraries for the NextSeq System (document # 15048776)</i>	Provides instructions for denaturing and diluting prepared libraries for a sequencing run, and preparing an optional PhiX control. This step applies to most library types.
<i>NextSeq Custom Primers Guide (document # 15057456)</i>	Provides information about using custom sequencing primers in place of Illumina sequencing primers.
<i>NextSeq 500 System Guide (document # 15046563) or NextSeq 550 System Guide (document # 15069765)</i>	Provides an overview of instrument components, instructions for operating the instrument, and maintenance and troubleshooting procedures.
<i>BaseSpace help (help.basespace.illumina.com)</i>	Provides information about using BaseSpace™ Sequence Hub and available analysis options.
<i>Local Run Manager Software Guide (document # 100000002702)</i>	Provides an overview of the Local Run Manager software and instructions for using software features.

Visit the [NextSeq support pages](#) on the Illumina website for access to documentation, software downloads, online training, and frequently asked questions.

Delivery and Installation

An authorized service provider delivers the system, uncrates components, and places the instrument on the lab bench. Make sure that the lab space and bench are ready before delivery.

**CAUTION**

Only authorized personnel can uncrate, install, or move the instrument. Mishandling of the instrument can affect the alignment or damage instrument components.

An Illumina representative installs and prepares the instrument. When connecting the instrument to a data management system or remote network location, make sure that the path for data storage is selected before the date of installation. The Illumina representative can test the data transfer process during installation.

Access to instrument USB ports is required for installation, maintenance, and service.

**CAUTION**

After your Illumina representative has installed and prepared the instrument, **do not** relocate the instrument. Moving the instrument improperly can affect the optical alignment and compromise data integrity. If you have to relocate the instrument, contact your Illumina representative.

Crated Dimensions and Contents

The NextSeq system is shipped in one crate. Use the following dimensions to determine the minimum door width required to accommodate the shipping container.

Measurement	Crated Dimensions
Height	97 cm (38 in)
Width	90 cm (35.5 in)
Depth	90 cm (35.5 in)
Weight	151.5 kg (334 lb)

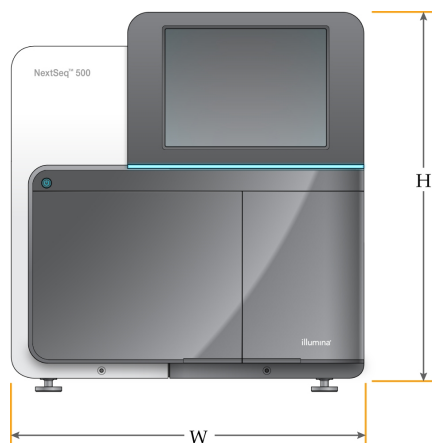
The crate contains the instrument along with the following components:

- ▶ Spent reagents bottle
- ▶ Reagent wash cartridge and buffer wash cartridge
- ▶ BeadChip adapter
- ▶ Power cord
- ▶ *NextSeq 500 System Guide (document # 15046563) or NextSeq 550 System Guide (document # 15069765)*
- ▶ *NextSeq System Safety and Compliance Guide (document # 15046564)*
- ▶ *RFID Reader - Model # TR-001-44 User Guide (document # 15041950)*
- ▶ Accessories kit, which contains the following components:
 - ▶ Keyboard and mouse
 - ▶ Network cable, shielded CAT 5e

Laboratory Requirements

This section provides specifications and requirements for setting up your lab space. For more information, see [Environmental Considerations on page 1](#).

Instrument Dimensions



Measurement	Instrument Dimensions (Installed)
Height	58.5 cm (23 in)
Width	53.4 cm (21 in)
Depth	63.5 cm (25 in)
Weight	83 kg (183 lb)

Placement Requirements

Position the instrument to allow proper ventilation, access to the power switch and power outlet, and access for servicing the instrument.

- ▶ Make sure that you can reach around the left-side of the instrument to access the power switch on the back panel.
- ▶ Position the instrument so that personnel can quickly disconnect the power cord from the outlet.
- ▶ Make sure that the instrument is accessible from all sides.

Access	Minimum Clearance
Sides	Allow at least 61 cm (24 in) on each side of the instrument.
Rear	Allow at least 10.2 cm (4 in) behind the instrument.
Top	Allow at least 61 cm (24 in) above the instrument.



CAUTION

Moving the instrument improperly can affect the optical alignment and compromise data integrity. If you have to relocate the instrument, contact your Illumina representative.

Lab Bench Guidelines

The instrument includes precision optical elements. Place the instrument on a sturdy lab bench away from sources of vibration.

Width	Height	Depth	Casters
122 cm (48 in)	91.4 cm (36 in)	76.2 cm (30 in)	Optional

For North American customers, Illumina recommends the following lab bench: Bench-Tek Solutions (www.bench-tek.com), part # BT40CR-3048BS-PS.

Vibration Guidelines

Use the following guidelines to minimize vibrations during sequencing runs and ensure optimal performance:

- ▶ Place the instrument on a sturdy lab bench.
- ▶ Do not place other equipment on the bench that can produce vibrations, such as a shaker, vortexer, centrifuge, or instruments with heavy fans.
- ▶ Do not place objects on top of the instrument.
- ▶ When the instrument is sequencing, do not open the reagent compartment door, buffer compartment door, right service panel, or flow cell door.

Lab Setup for PCR Procedures

Some library prep methods require the polymerase chain reaction (PCR) process.

Establish dedicated areas and lab procedures to prevent PCR product contamination before you begin work in the lab. PCR products can contaminate reagents, instruments, and samples, delaying normal operations and causing inaccurate results.

Pre-PCR and Post-PCR Areas

Use the following guidelines to avoid cross-contamination.

- ▶ Establish a pre-PCR area for pre-PCR processes.
- ▶ Establish a post-PCR area for processing PCR products.
- ▶ Do not use the same sink to wash pre-PCR and post-PCR materials.
- ▶ Do not use the same water purification system for pre-PCR and post-PCR areas.
- ▶ Store supplies used for pre-PCR protocols in the pre-PCR area. Transfer them to the post-PCR area as needed.

Dedicate Equipment and Supplies

- ▶ Do not share equipment and supplies between pre-PCR and post-PCR processes. Dedicate a separate set of equipment and supplies in each area.
- ▶ Establish dedicated storage areas for consumables used in each area.

Required Storage for Sequencing Consumables

Item (1 per run)	Storage Requirement
Reagent cartridge	-25°C to -15°C
Buffer cartridge	15°C to 30°C
HT1	-25°C to -15°C
Flow cell cartridge	2°C to 8°C*

*Shipped at room temperature for NextSeq v2.5 Reagents kits

Electrical Requirements

Power Specifications

Type	Specification
Line Voltage	100–240 Volts AC @ 50/60 Hz
Power Supply Rating	600 Watts, maximum

Receptacles

Your facility must be wired with the following equipment:

- ▶ **For 100–120 Volts AC**—A 15 amp grounded, dedicated line with proper voltage and electrical ground is required. North America and Japan—Receptacle: NEMA 5-15
- ▶ **For 220–240 Volts AC**—A 10 amp grounded line with proper voltage and electrical ground is required. If the voltage fluctuates more than 10%, a power line regulator is required.

Protective Earth



The instrument has a connection to protective earth through the enclosure. The safety ground on the power cord returns protective earth to a safe reference. The protective earth connection on the power cord must be in good working condition when using this device.

Power Cords

The instrument is equipped with an international standard IEC 60320 C14 receptacle and is shipped with a region-specific power cord.

Hazardous voltages are removed from the instrument only when the power cord is disconnected from the AC power source.

To obtain equivalent receptacles or power cords that comply with local standards, consult a third-party supplier such as Interpower Corporation (www.interpower.com).



CAUTION

Never use an extension cord to connect the instrument to a power supply.

Fuses

The instrument contains no user-replaceable fuses.

Uninterruptible Power Supply

A user-supplied uninterruptible power supply (UPS) is highly recommended. Illumina is not responsible for runs affected by interrupted power regardless of whether the instrument is connected to a UPS. Standard generator-backed power is often *not* uninterruptible and a brief power outage is typical before power resumes.

The following table lists region-specific recommendations.

Specification	APC Smart UPS 1500 VA LCD 100 V Part # SMT1500J (Japan)	APC Smart UPS 1500 VA LCD 120 V Part # SMT1500C (North America)	APC Smart UPS 1500 VA LCD 230 V Part # SMT1500IC (International)
Maximum Output Capacity	980 W / 1200 VA	1000 W / 1440 VA	1000 W / 1500 VA
Input Voltage (nominal)	100 VAC	120 VAC	230 VAC
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Connection	NEMA 5-15P	NEMA 5-15P	IEC-320 C14 Schuko CEE7/EU1-16P British BS1363A
Dimensions (H x W x D)	22.5 cm x 17.2 cm x 43.9 cm	21.9 cm x 17.1 cm x 43.9 cm (8.6 in x 6.7 in x 17.3 in)	21.9 cm x 17.1 cm x 43.9 cm
Weight	26 kg	24.6 kg (54.2 lbs)	24.1 kg
Typical Run Time (350 W)	41 minutes	41 minutes	41 minutes

To obtain an equivalent UPS that complies with local standards for facilities outside the referenced regions, consult a third-party supplier such as Interpower Corporation (www.interpower.com).

Environmental Considerations

Element	Specification
Temperature	Maintain a lab temperature of 19°C to 25°C (22°C ±3°C). This temperature is the operating temperature of the instrument. During a run, do not allow the ambient temperature to vary more than ±2°C.
Humidity	Maintain a noncondensing relative humidity between 20–80%.
Elevation	Locate the instrument at an altitude below 2000 meters (6500 feet).
Air Quality	Operate the instrument in an indoor environment with air particulate cleanliness levels per ISO 14644-1 Class 9 (ordinary room / laboratory air), or better. Keep the instrument away from sources of dust.
Ventilation	Consult your facilities department for ventilation requirements based on the instrument heat output specifications.
Vibration	Limit the continuous vibration of the lab floor to ISO office level. During a sequencing run, do not exceed ISO operating room limits. Avoid intermittent shocks or disturbances near the instrument.

Heat Output

Measured Power	Thermal Output
600 Watts	2048 BTU/hour

Noise Output

Noise Output (dB)	Distance from Instrument
≤ 70 dB	1 meter (3.3 feet)

A measurement of ≤ 70 dB is within the level of a normal conversation at a distance of approximately 1 meter (3.3 feet).

Network and Computer Security

The following sections provide guidelines for maintaining network and computer security. For information on recommended configurations, see *Operating System Configurations* on page 12.

Antivirus Software

An antivirus software of your choice is highly recommended to protect the instrument control computer against viruses.

To avoid data loss or interruptions, configure the antivirus software as follows:

- ▶ Set for manual scans. Do not enable automatic scans.
- ▶ Perform manual scans only when the instrument is not in use.
- ▶ Set updates to download without user authorization, but not install.
- ▶ Do not update during instrument operation. Update only when the instrument is not running and when it is safe to reboot the instrument computer.
- ▶ Do not reboot the computer automatically upon update.
- ▶ Exclude the application directory and data drive from any real-time file system protection. Apply this setting to the C:\Illumina directory and the D:\ drive.
- ▶ Windows Defender is off by default. Keep it off. This Windows product can affect the computer resources used by Illumina software.

Network Considerations

The NextSeq system is designed for use with a network, regardless of whether runs are connected to BaseSpace Sequence Hub or performed in manual run mode.

Performing a run in manual mode requires a network connection to transfer run data to a network location. Do not save run data to the local hard drive on the NextSeq system. The hard drive is intended for temporary storage before data are transferred automatically. Any data saved on the hard drive beyond the current run fills the hard drive and prevents subsequent runs until space is made available.

An internet connection is required for the following operations:

- ▶ Connect to Illumina BaseSpace Sequence Hub.
- ▶ Install updates to the NextSeq Control Software (NCS) from the system interface.
- ▶ Upload instrument health data.
- ▶ [Optional] Remote assistance from Illumina Technical Support.

Network Connections

Use the following recommendations to install and configure a network connection:

- ▶ Use a dedicated 1 gigabit connection between the instrument and your data management system. This connection can be made directly or through a network switch.
- ▶ Required bandwidth for a connection is:
 - ▶ 50 Mb/s/instrument for internal network uploads.

- ▶ [Optional] 200 Mb/s/system for BaseSpace Sequence Hub network uploads.
- ▶ [Optional] 5 Mb/s/system for Health Data uploads.
- ▶ Switches must be managed.
- ▶ Network equipment such as switches must have a minimum of 1 gigabit per second.
- ▶ Calculate the total capacity of the workload on each network switch. The number of connected instruments and ancillary equipment such as a printer can impact capacity.

Use the following recommendations to install and configure a network connection:

- ▶ If possible, isolate sequencing traffic from other network traffic.
- ▶ Cables must be CAT 5e or better. A shielded CAT 5e network cable of 3 meters (9.8 feet) in length is provided with the instrument for network connections.
- ▶ If you are using BaseSpace Sequence Hub, use a minimum network connection of 10 Mb/s.

Network Support

Illumina does not install or provide technical support for network connections.

Review network maintenance activities for potential compatibility risks with the Illumina system, including the following risks:

- ▶ **Removal of the Group Policy Objects (GPOs)**—GPOs can affect the operating system (OS) of connected Illumina resources. OS changes can disrupt the proprietary software in Illumina systems. Illumina instruments have been tested and verified to operate correctly. After connecting to domain GPOs, some settings might affect the instrument software. If the instrument software operates incorrectly, consult your facility IT administrator about possible GPO interference.
- ▶ **Activation of Windows Defender**—Windows Defender can affect the OS resources used by Illumina software. Install antivirus software to protect the instrument control computer. See [Antivirus Software on page 9](#).
- ▶ **Changes to the privileges of preconfigured users**—Maintain existing privileges for preconfigured users. Make preconfigured users unavailable as needed.
- ▶ **Potential IP address conflicts**—The NextSeq has fixed internal IP addresses, which can cause system failure in the case of conflicts.
- ▶ **Server Message Block (SMB) file sharing protocol**—SMB v1 is disabled by default on Windows 10 systems. To enable, contact Illumina Technical Support.

Internal Connections

Connection	Value	Purpose
Domain	localhost:*	All ports for localhost-to-localhost communication, which are needed for interprocess communication.
IP Address	192.168.113.*:* (or */*)	Allow all ports. Communication link with firmware on the network card. The following IP address must be reserved. 192.168.113.3 If using a proxy server, you must reserve 192.168.113.5 and 192.168.113.2 For more information, contact Illumina Technical Support.

Connection	Value	Purpose
Port	80 443	Local Run Manager
Port	8081	Real-Time Analysis
	8080	NextSeq Control Software (NCS)
	29644	Universal Copy Service (UCS)

Outbound Connections

Connection	Value	Purpose
Domain	s3-external-1.amazonaws.com s3.amazonaws.com *.basespace.illumina.com	BaseSpace Sequence Hub or Illumina Proactive
Port	443	BaseSpace Sequence Hub or Illumina Proactive configuration
	80	BaseSpace Sequence Hub or Illumina Proactive configuration data upload
	8080	Software updates

BaseSpace Sequence Hub Domains

The following domains provide access from Universal Copy Service to BaseSpace Sequence Hub and Illumina Proactive. Some Enterprise addresses include a user-defined domain field. This custom field is reserved with {domain}.

Instance	Address
US Enterprise	{domain}.basespace.illumina.com
	{domain}.api.basespace.illumina.com
	basespace-data-east.s3-external-1.amazonaws.com
	basespace-data-east.s3.amazonaws.com
	instruments.sh.basespace.illumina.com
EU Enterprise	{domain}.euc1.sh.basespace.illumina.com
	{domain}.api.euc1.sh.basespace.illumina.com
	euc1-prd-seq-hub-data-bucket.s3.eu-central-1.amazonaws.com
	instruments.sh.basespace.illumina.com
AUS Enterprise	{domain}.aps2.sh.basespace.illumina.com
	{domain}.api.aps2.sh.basespace.illumina.com
	instruments.sh.basespace.illumina.com
	aps2-sh-prd-seq-hub-data-bucket.s3.ap-southeast-2.amazonaws.com
US Basic and Professional	basespace.illumina.com
	api.basespace.illumina.com
	basespace-data-east.s3-external-1.amazonaws.com
	basespace-data-east.s3.amazonaws.com
	instruments.sh.basespace.illumina.com

Instance	Address
EU Basic and Professional	euc1.sh.basespace.illumina.com
	api.euc1.sh.basespace.illumina.com
	euc1-prd-seq-hub-data-bucket.s3.eu-central-1.amazonaws.com
	instruments.sh.basespace.illumina.com
AUS Basic and Professional	aps2.sh.basespace.illumina.com
	api.aps2.sh.basespace.illumina.com
	instruments.sh.basespace.illumina.com
	aps2-sh-prd-seq-hub-data-bucket.s3.ap-southeast-2.amazonaws.com
GC Basic and Professional	cnn1.sh.basespace.illumina.com.cn
	api.cnn1.sh.basespace.illumina.com.cn
	instruments.sh.basespace.illumina.com.cn
	cn-sh-cnn1-prod-seq-hub-data-bucket.s3.cn-north-1.amazonaws.com.cn

Operating System Configurations

Illumina instruments are tested and verified to operate within specifications before shipping. After installation, changes to settings can create performance or security risks.

The following configuration recommendations mitigate performance and security risks for the operating system:

- ▶ Configure a password that is at least 10 characters, and use local ID policies for additional guidance. ***Keep a record of the password.***
 - ▶ Illumina does not keep customer login credentials, and unknown passwords cannot be reset.
 - ▶ An unknown password requires that an Illumina representative restore the factory default, which removes all data from the system and extends the necessary support time.
- ▶ When connecting to a domain with Group Policy Objects (GPOs), some settings might affect the operating system or instrument software. If the instrument software operates incorrectly, consult your facility IT administrator about possible GPO interference.
- ▶ Use the Windows firewall or a network firewall (hardware or software) and disable the Remote Desktop Protocol (RDP).
- ▶ Maintain administrative privileges for users. Illumina instrument software is configured to allow user permissions when the instrument is shipped.
- ▶ The system has fixed internal IP addresses, which it uses to communicate with the hardware components. If these IP addresses are amended, or if the method of assigning the IP addresses is changed, then hardware errors can occur (including total loss of functionality).
- ▶ The control computer is designed to operate Illumina sequencing systems. Web browsing, checking email, reviewing documents, and other nonsequencing activity creates quality and security problems.

Services

NCS and Local Run Manager software utilize the following services:

- ▶ Analysis Service
- ▶ Job Service
- ▶ Universal Copy Service

By default, the services use the same credentials as those for logon to the NextSeq. To change credentials in Local Run Manager, see Specify Service Account Settings in *Local Run Manager Software Guide (document # 100000002702)*.

Drive Mapping

Do not share any drives or folders from the instrument.

Map drives to Samba / Common Internet File System (CIFS) / Network File System (NFS) on other devices.

In the control software, use the full UNC path for run output.

Windows Updates

The instrument must be idle when updates are applied as some updates require a full system reboot. General and feature updates can put the system operating environment at risk and are not supported.

If security updates are not possible, alternatives to turning on Windows Update include the following:

- ▶ Host-based firewall and network isolation (virtual LAN).
- ▶ Network isolation of network attached storage (NAS), which still allows for data to sync to the network.
- ▶ Local USB storage.
- ▶ Avoiding improper use of the control computer and ensuring the appropriate permission-based controls.

For more information on Windows Update alternatives, contact Illumina Technical Support.

Third-party Software

Illumina supports only the software provided at installation.

Chrome, Java, Box, and other third-party software are untested and can interfere with performance and security. For example, RoboCopy interrupts streaming performed by the control software suite. The interruption can cause corrupt and missing sequencing data.

User Behavior

The instrument control computer is designed to operate Illumina sequencing systems. Do not consider it a general-purpose computer. For quality and security reasons, do not use the control computer for web browsing, checking email, reviewing documents, or other unnecessary activity. These activities can result in degraded performance or loss of data.

Data Output and Storage

Storage Requirements for BaseSpace Sequence Hub

Illumina recommends uploading data to BaseSpace Sequence Hub. Based on run size, BaseSpace Sequence Hub requires the following storage per run:

Table 1 NextSeq 500/550 System Performance Parameters

Flow Cell Configuration	Read Length	Output	Required Input
High output flow cell, up to 400 M single reads and up to 800 M paired-end reads.	2 x 150 bp	100–120 Gb	100 ng–1 µg with TruSeq Library Prep Kits
	2 x 75 bp	50–60 Gb	
	1 x 75 bp	25–30 Gb	
Mid-output flow cell, up to 130 M single reads and up to 260 M paired-end reads.	2 x 150 bp	32–39 Gb	
	2 x 75 bp	16–19 Gb	

User-Supplied Consumables and Equipment

The following consumables and equipment are used on the NextSeq system. For more information, see the *NextSeq 500 System Guide (document # 15046563)* or *NextSeq 550 System Guide (document # 15069765)*.

Consumables for Sequencing

Consumable	Supplier	Purpose
1 N NaOH (sodium hydroxide)	General lab supplier	Library denaturation, diluted to 0.2 N
10 mM Tris-HCl, pH 8.5	General lab supplier	Diluting libraries and an optional PhiX control before denaturation
200 mM Tris-HCl, pH 7.0	General lab supplier	Neutralizing libraries and an optional PhiX control after denaturation
Alcohol wipes, 70% Isopropyl or Ethanol, 70%	VWR, catalog # 95041-714 (or equivalent) General lab supplier	Flow cell cleaning and general purpose
Lab tissue, low-lint	VWR, catalog # 21905-026 (or equivalent)	Flow cell cleaning

Consumables for Maintenance and Troubleshooting

Consumable	Supplier	Purpose
NaOCl, 5% (sodium hypochlorite)	Sigma-Aldrich, catalog # 239305 (or laboratory-grade equivalent)	Washing the instrument using the manual post-run wash; diluted to 0.12%
Tween 20	Sigma-Aldrich, catalog # P7949	Washing the instrument using manual wash options; diluted to 0.05%
Water, laboratory-grade	General lab supplier	Washing the instrument (manual wash)
Reagent or spectrophotometric-grade methanol or isopropyl alcohol (99%), 100 ml bottle	General lab supplier	Cleaning optics components periodically and support the objective cleaning cartridge
Air filter	Illumina, catalog # 20022240	For instruments with an air filter accessible from the rear panel. Cleaning the air the instrument takes in for cooling.

Guidelines for Laboratory-Grade Water

Always use laboratory-grade water or deionized water to perform instrument procedures. Never use tap water. Use only the following grades of water or equivalents:

- ▶ Deionized water
- ▶ Illumina PW1
- ▶ 18 Megohms (M Ω) water
- ▶ Milli-Q water
- ▶ Super-Q water
- ▶ Molecular biology grade water

Equipment

Item	Source	Purpose
Freezer, -25°C to -15°C, frost-free	General lab supplier	Storing the cartridge.
Ice bucket	General lab supplier	Setting aside libraries.
Refrigerator, 2°C to 8°C	General lab supplier	Storing the flow cell.

Revision History

Document	Date	Description of Change
Document # 15045113 v05	March 2020	Updated and added BSSH domains. Added Tris-Cl 10 mM to the list of user-supplied consumables. Removed reference to the Illumina Security Best Practices guide. Updated title to specify Next Seq 500 and NextSeq 550.
Document # 15045113 v04	June 2019	Updated internal connections information for Windows 10 and Local Run Manager software. Added recommendation to leave Windows Defender disabled. Added BaseSpace Sequence Hub Domain addresses. Added information on services required for NCS and Local Run Manager. Added network support information for Server Message Block (SMB) v1. Added data output and storage information. For internal connections, Rich Communication Services (RCS) port 8090 changes to Universal Copy Service (UCS) port 29644.
Document # 15045113 v03	December 2018	Added Reagent or Spectrophotometric-grade Methanol or Isopropyl Alcohol (99%) to the list of required user-supplied consumables for instrument maintenance. For instruments with an air filter, added air filter to the list of required user-supplied consumables for instrument maintenance. In the Windows Updates section, updated the following information: <ul style="list-style-type: none"> • Configure Automatic Updates in Windows to apply critical security updates only. • Feature updates, as well as general updates, can put the system operating environment at risk and are not supported. Removed Windows Firewall as an element that can affect OS resources used by Illumina software. Added the requirement that access to instrument USB ports is required for installation, maintenance, and service. Updated instrument receptacle to IEC 60320 C14. Increased noise output to ≤ 70 dB. Updated BaseSpace references to BaseSpace Sequence Hub. Updated the outbound connections for BaseSpace and Compass to BaseSpace Sequence Hub and Illumina Proactive. Updated air quality specification to ISO 14644-1 Class 9. Added vibration specifications. Updated specification recommendations for UPS units.
Document # 15045113 v02	May 2018	Updated storage/shipping information on the Required Storage for Sequencing Consumables topic to account for NextSeq v2.5 Reagent Kits shipping flow cells at ambient temperatures. NextSeq v2.5 flow cells continue to require previous storage conditions. Added HT1 storage requirements to the Required Storage for Sequencing Consumables topic.
Document # 15045113 v01	October 2015	Specified that an equivalent to the recommended supplier of NaOCl is a laboratory-grade equivalent. Corrected table heading from power consumption to power supply rating. Removed Live Help from the list of purposes for an internet connection. This feature was removed from the control software.

Document	Date	Description of Change
15045113 G	May 2015	Updated list of Additional Resources to remove the kit reference guides. See the NextSeq 500 System Guide (document # 15046563) or NextSeq 550 System Guide (document # 15069765) for preparation instructions and see the NextSeq Kit support page on the Illumina website for information about kit contents and compatibility.
15045113 F	March 2015	Updated user-supplied consumables to specify consumables required for sequencing and consumables required for instrument maintenance. Changed the title of the guide to specify the NextSeq system. This guide applies to the NextSeq 500 and the NextSeq 550.
15045113 E	February 2015	Updated user-supplied consumables to specify uses of NaOCl for manual wash options introduced in NCS v1.4. Updated network considerations to specify that a 10 Mbps network connection is recommended for using BaseSpace.
15045113 D	August 2014	Corrected network cable size from CAT6 to CAT 5E. Added antivirus software recommendation. Added compatibility recommendations for network maintenance activities. Updated VWR catalog # for alcohol wipes to 95041-714. Updated SDS link to support.illumina.com/sds.html . Added <i>NextSeq Custom Primers Guide</i> (document # 15057456) to Additional Resources.
15045113 C	May 2014	Updated network connections to emphasize that the instrument is designed for use with a network, even when running in standalone mode. Specified a minimum connection of 10 Mbps.
15045113 B	February 2014	Updated user-supplied consumables list to specify 3%–6% sodium hypochlorite and list a supplier catalog number.
15045113 A	January 2014	Initial release.

Technical Assistance

For technical assistance, contact Illumina Technical Support.

Website: www.illumina.com
 Email: techsupport@illumina.com

Illumina Customer Support Telephone Numbers

Region	Toll Free	Regional
North America	+1.800.809.4566	
Australia	+1.800.775.688	
Austria	+43 800006249	+43 19286540
Belgium	+32 80077160	+32 34002973
China	400.066.5835	
Denmark	+45 80820183	+45 89871156
Finland	+358 800918363	+358 974790110
France	+33 805102193	+33 170770446
Germany	+49 8001014940	+49 8938035677
Hong Kong, China	800960230	
Ireland	+353 1800936608	+353 016950506
Italy	+39 800985513	+39 236003759
Japan	0800.111.5011	
Netherlands	+31 8000222493	+31 207132960
New Zealand	0800.451.650	
Norway	+47 800 16836	+47 21939693
Singapore	+1.800.579.2745	
South Korea	+82 80 234 5300	
Spain	+34 911899417	+34 800300143
Sweden	+46 850619671	+46 200883979
Switzerland	+41 565800000	+41 800200442
Taiwan, China	00806651752	
United Kingdom	+44 8000126019	+44 2073057197
Other countries	+44.1799.534000	

Safety data sheets (SDSs)—Available on the Illumina website at support.illumina.com/sds.html.

Product documentation—Available for download from support.illumina.com.



Illumina
5200 Illumina Way
San Diego, California 92122 U.S.A.
+1.800.809.ILMN (4566)
+1.858.202.4566 (outside North America)
techsupport@illumina.com
www.illumina.com

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