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| --- |
| ***Insert Laboratory Specific Name Here*** |
| **NextSeq 500 Pre-Installation Checklist** |

**Equipment Name: Illumina NextSeq 500**

Before purchasing equipment, verify that the following requirements are, or can be, met:

| Requirement | Requirement Met? | Comments |
| --- | --- | --- |
| Electrical  100-240 VAC at 50/60 Hz. An electrical ground is required. If the voltage fluctuates more than 10%, a power line regulator is required  NEMA 5-15P Input Connection | Yes  No  Yes  No |  |
| Wattage  Power Supply Rating 600 Watts, maximum | Yes  No |  |
| Required Power Protection  Uninterrupted Power Supply  (APC Smart-UPS 1500 VA LCD 120V US Part# SMT1500C, recommended, other similar UPS acceptable) | Yes  No |  |
| Water  Access to one of the following types of laboratory grade water:  Deionized Water  Illumina PW1  18 Megohm water  Milli-Q water  Super-Q water  Molecular biology-grade water | Yes  No |  |
| Waste  Reference SOP:  “Illumina NextSeq 500 Waste Disposal Procedure” | Yes  No |  |
| Ventilation  Sufficient for NextSeq thermal output of 2048 BTU/h  Note: Position the instrument to allow proper ventilation and access for servicing. | Yes  No |  |
| Operating Temperature Range  19˚-25˚C  Note: Verify with facilities that the temperature range is maintained 24 hours a day, 7 days a week; monitor prior to instrument arrival. During a run, do not allow the ambient temperature to vary more than ±2°C. | Yes  No |  |
| Operating Humidity Range  20–80%, noncondensing | Yes  No |  |
| Elevation  Below 2,000 meters (6,500 feet) | Yes  No |  |
| Air Quality  Indoor Environment, maintain air particulate cleanliness levels per ISO 14644-1 Class 9 (ordinary room air), or better | Yes  No |  |
| Vibration Specifications  During sequencing runs, use the following best practices to minimize continuous and intermittent vibrations and ensure optimal performance:   * Limit environment vibration   + Dedicated, sturdy, and immobilized lab bench away from sources of vibration (i.e., no shaker, vortex, centrifuge, etc. on the same bench) * Keep the clearance area free of clutter * When the instrument is sequencing, do not open the reagent compartment door, buffer compartment door, right service panel, or flow cell door * Do not place objects on top of the instrument   Note: Equipment is sensitive to vibrations | Yes  No |  |
| Network Connections  Yes  No  Note: Use a 1 gigabit connection between the instrument and your data management system. This connection can be made directly or through a network switch. Upon connection to a network, configure Windows Update so that the NextSeq does not automatically update. Illumina recommends waiting one month after a Windows release before allowing an update. | Yes  No | If No, explain how data will be transferred: |
| External Data Storage  Yes  No | Yes  No | If Yes, specify:  If No, explain: |
| Door/Elevator/Access Point Clearance for Delivery  Crated Dimensions and Weight   * Height: 38 in * Width (side to side): 35.5 in * Depth (front to back): 35.5 in * Weight: 334 lbs | Yes  No |  |
| Lab Bench Requirements   * The instrument includes precision optical elements. Place the instrument on a sturdy and level lab bench away from vibration | Yes  No |  |
| Operating Clearance  Instrument Dimensions   * Height: 23 in * Width (side to side): 21 in * Depth (front to back): 25 in * Weight: 183 lbs.   Clearance Requirements   * Back Clearance: 4 in * Side Clearance: 24 in (each side) * Top Clearance: 24 in * Usage Access: The power switch is on the left side, back panel of instrument. Position the instrument so that the power cord is accessible and can be easily disconnected from the outlet. | Yes  No |  |
| Storage Requirements for NextSeq Sequencing Consumables  Reagent Cartridge   * Storage Temp: -25°C to -15°C   Buffer Cartridge   * Storage Temp: 15°C to 30°C   HT1   * Storage Temp: -25°C to -15°C   Flow Cell Cartridge   * Storage Temp: 2°C to 8°C | Yes  No  Yes  No  Yes  No  Yes  No |  |
| Dedicated Physically Separate Areas  (If using NextSeq for sequencing PCR amplicons)  Dedicated physically separate pre-PCR laboratory space where pre-PCR processes are performed (DNA extraction, quantification, and normalization  Dedicated physically separate post-PCR laboratory space and equipment (pipettes, incubators, heat blocks, etc.) for generation and manipulation of post-PCR products for where PCR products are made and processed  Dedicate separate full sets of equipment and supplies (pipettes, incubator, heat block, vortexer, centrifuge, etc.) to pre-PCR and post-PCR lab processes. Do not share equipment and supplies between processes  Dedicated separate storage areas (freezers and refrigerators) for pre-PCR and post-PCR reagents and consumables  Note: Do not use the same sink to wash pre-PCR and post-PCR materials. Do not share water purification systems for pre-PCR and post-PCR processes. Store all supplies used in pre-PCR protocols in the pre-PCR area, and transfer to the post-PCR area as needed. | Yes  No  N/A |  |
| Documentation  Training Documents  Equipment Maintenance Documents  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Yes  No |  |
| Ancillary equipment required  Access to or acquisition of the following:  Thermocycler  Instrument for flourometric based quantitation (e.g., Qubit)  Instrument for sizing, quantitation, and quality check of DNA (optional) (e.g., Bioanalyzer, TapeStation)  Instrument for shearing DNA (e.g., Covaris) (optional depending on library prep method)  Automated Liquid Handler (optional)  Other: ­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Yes  No |  |
| Other Requirement(s)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    N/A | Yes  No |  |

**\*References:**

NextSeq 500 and NextSeq 550 Sequencing System; Site Prep Guide Doc # 100000035337 v07 March 2019

NextSeq 500 and NextSeq 550 Waste Disposal Standard Operating Procedure

**Completed By (print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Completed By (signature): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Approved By (print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Approved By (signature): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**