**Equipment Name: Life Technologies Ion Personal Genome Machine (PGM) System**

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

| Requirement: | Requirement Met? | Comments |
| --- | --- | --- |
| Electrical; instrument requirementsIon PGM Sequencer:[ ]  Voltage: 110/120 VAC (220/240 VAC)[ ]  Current: 9 A (max)[ ]  Frequency: 50/60 HzIon Torrent Server:[ ]  Voltage: 110/120 VAC (220/240 VAC)[ ]  Current: 11 A (max)[ ]  Frequency: 50/60 HzIon OneTouch 2:[ ]  Voltage: 110/120 VAC (220/240 VAC)[ ]  Current: 5.5 A (max)[ ]  Frequency: 50/60 HzIon OneTouch ES:[ ]  Voltage: 110/120 VAC (220/240 VAC)[ ]  Current: 375 mA (160 mA) (max)[ ]  Frequency: 50/60 HzIon Chef System:[ ]  Voltage: 100-240 VAC[ ]  Current: 14 A (max)[ ]  Frequency: 50/60 Hz | Yes [ ]  No [ ]  |  |
| Electrical; additional requirements[ ]  Receptacle: 2-prong with ground pin[ ]  Main AC line voltage tolerances must be up to +/- 10% of nominal voltage[ ]  If supplied power cords are not suitable for installation, ensure all power cords used are:* Max 10 ft. length
* Grounding type
* Capable with the power supply receptacles used to connect to main power
* UL compliant
 | Yes [ ]  No [ ]  |  |
| Wattage[ ]  Ion PGM Sequencer: 200-300 Watts[ ]  Ion Torrent Server: 1100 Watts[ ]  Ion Chef System: 1350 Watts | Yes [ ]  No [ ]  |  |
| Power Protection[ ]  Adequate to provide protection (e.g. UPS) | Yes [ ]  No [ ]  |  |
| Water[ ]  Access to 18 Megohm laboratory grade water | Yes [ ]  No [ ]  |  |
| GasNitrogen gas cylinder located within 10 ft. of the instrument and chained to a wall/bench:Yes [ ]  No [ ]  ONE of the following required:[ ]  A pressurized house line[ ]  Size 1-A nitrogen gas cylinder that holds approximately 7.2m3 of gas when fullALL of the following required:[ ]  2-gauge regulator with a Compressed Gas Association (CGA) 580-cylinder adaptor on the inlet side and a Swagelok (or equivalent) end-fitting that accepts 0.25in (6.35mm) outer diameter tubing[ ]  The secondary gauge must allow regulation between 25-45psi via CGA 580-cylinder adaptor with a needle type shut-off valve on the exit side [ ]  The needle valves should have a Swagelok (or equivalent) end-fittings ready for connection to a 0.25in (6.35mm) outer diameter tubing[ ]  Pre-purified nitrogen of 99.998% (grade 4.8) or greater purity | Yes [ ]  No [ ]  |  |
| Waste[ ]  Plastic consumables* Refer to local regulations for diposal

[ ]  Chemical waste* Refer to SDS for checmical waste disposal instructions
 | Yes [ ]  No [ ]  |  |
| Ventilation[ ]  Ion OneTouch2 Instrument:20in(50 cm) [ ]  Ion PGM Sequencer: 4in(10 cm)[ ]  Minimum airflow: 6-10 air changes/hour | Yes [ ]  No [ ]  |  |
| Operating Temperature Range[ ]  15-30˚C[ ]  Ion Chef Sytem: 20-25˚C, less than 2˚C fluctuation over a two-hour period Note: Verify with facilities that the temperature range is maintained 24 hours a day, 7 days a week; monitor prior to instrument arrival. | Yes [ ]  No [ ]  |  |
| Operating Humidity Range[ ]  10%-90%, relative humidity[ ]  Ion Chef System: 40%-60%, non-condensing | Yes [ ]  No [ ]  |  |
| Elevation[ ]  Between sea level and 2,000 meters (6,500 feet) above sea level | Yes [ ]  No [ ]  |  |
| Vibration Specifications[ ]  Dedicated and sturdy lab bench [ ]  No equipment that causes vibrations such as freezers, shaker, vortexer, centrifuge, heavy fans, shearing instruments, etc. on same bench or in contact with bench Note: Equipment is sensitive to vibrations. | Yes [ ]  No [ ]  |  |
| Network Connections[ ]  Ion Torrent Server is directly connected to the Ion PGM Sequencer via standard Category 6 Ethernet cable [ ]  Room must have at least one active network jack[ ]  A dynamic or static IP address must be reserved for the Ion Torrent Server[ ]  The Ion Torrent Server must have outbound internet access and be behind an appropriately configured firewall in order to receive full technical support* Software updates are retrieved by access through HTTP/port-80
* Timely support is retrieved by access through HTTPS/port-443 and SSH/port-22

[ ]  If applicable, the Ion Chef System must be connected to the Torrent Server either using a category 6 Ethernet cable or indirectly via LAN network that has been configured to permit HTTP-443, SSH-22, and FTP-20/21 traffic. | Yes [ ]  No [ ]  | If No, explain: |
| External Data StorageYes [ ]  No [ ]  Note: to request SciComp storage:* Go to [http://info.biotech.cdc.gov/](http://info.biotech.cdc.gov/%22%20%5Co%20%22WEBSite%3A%20Office%20of%20Advanced%20Molecular%20Detection%20%28OAMD%29%20%20Scientific%20Computing%20and%20Bioinformatics%20Support%20%28SCBS%29)
* Click on “Support”
* Click on “Sequencer Storage Request”
* Complete form and submit
 | Yes [ ]  No [ ]  | If Yes, specify (e.g. SciComp):If No, explain: |
| Door/Elevator/Access Point ClearanceMaximum Crated Dimensions and Weight* Height: 28.3 in
* Depth (front to back): 34.0 in
* Width (side to side): 34.0 in
* Weight: 295

Dimensions of Crated System Components*(Height x Depth x Width, Weight)** Ion PGM Sequencer:

26.5 x 26.0 x 29.5 in, 95 lbs.* Ion Torrent Server:

28.3 x 27.8 x 13.5 in, 66 lbs.* Ion OneTouch 2:

18.0 x 18.0 x 21.0 in, 44 lbs.* Ion OneTouch ES Instrument:

14.5 x 14.5 x 17.5 in, 13 lbs.* Ion Chef System:

28.0 x 34.0 x 34.0 in, 295 lbs. | Yes [ ]  No [ ]  |  |
| Operating Clearance; instrument dimensionsDimensions of System Components*(Height x Depth x Width, Weight)** Ion PGM Sequencer:

21x20x24 in, 65 lbs* Ion Torrent Server:

22.3x21.2x8.5 in, 55 lbs* Ion OneTouch 2:

12x16x14 in, 37.5 lbs* Ion OneTouch ES:

9.5x16x11 in, 12 lbs* Ion Chef System:

22.1(33 open)x27.6x28.1 in, 150 lbs | Yes [ ]  No [ ]  |  |
| Operating Clearance; individual clearance requirementsIon PGM Sequencer:* Back Clearance: 4 in
* Side Clearance: 4 in (left) 8 in (right)
* Top Clearance: 12 in
* Front Clearance: 12 in from front edge of bench to sequencer bezel, 8 in from bench to conical tubes, 36 in of aisle space

Ion Torrent Server:* Back Clearance: 24 in
* Side Clearance: 2 in (each side)
* Top Clearance: 2 in
* Front Clearance: 12 in

Ion OneTouch 2:* Back Clearance: 4 in
* Side Clearance: 4 in (each side)
* Top Clearance: 12 in
* Front Clearance: 12 in

Ion OneTouch ES:* Back Clearance: 12 in
* Side Clearance: 12 in (each side)
* Top Clearance: 12 in
* Front Clearance: 12 in

Ion Chef System: * Back: 4 in
* Side: 4 in (each side)
* Top: 14 in
* Front: 6.7 in
 | Yes [ ]  No [ ]  |  |
| Location Conducive to Lab Workflow[ ]  All Ion System components are located in the post-PCR room or area; sequencer and server (and Chef, if applicable) are ideally on a separate bench from all other equipment, including the OneTouch2 system | Yes [ ]  No [ ]  |  |
| Documentation[ ]  Training Documents[ ]  Equipment Maintenance Documents[ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Yes [ ]  No [ ]  |  |
| Ancillary equipment requiredAccess to, or acquisition of, the following:[ ]  Automated Liquid Handler (optional)[ ]  Thermocycler[ ]  Instrument for sizing, quantitation, and quality check of DNA (e.g. Bioanalyzer, Qubit)[ ]  Instrument for shearing DNA (e.g. Covaris) (optional depending on library prep method)[ ]  Benchtop centrifuge, plate centrifuge[ ]  Other: ­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Yes [ ]  No [ ]  |  |
| Other Requirement(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_[ ]  N/A | Yes [ ]  No [ ]  |  |

**\*References:** Ion PGM System Site Preparation Guide Publication # MAN0007516 Rev. A0 2017, Ion Chef System Site Preparation Guide MAN0007956)

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

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

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

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