

Table 4.1
Preventive Maintenance – Biology

Laboratory Equipment Preventive Maintenance

Instrument/ Analysis	Activity	Frequency
<i>Ammonia</i>	Inspect tubes and color wheel for damage or contamination. Replace reagents prior to expiration.	Before each use As needed
<i>Autoclave</i>	Clean interior. Check pressure/temperature during operation. Clean chamber, drain strainer. Flush generator. Replace paper on QC data printer.	Daily With each use Daily Weekly As needed
<i>Balance</i>	Clean and adjust (preventive maintenance contract).	Annually
<i>Bead Beater</i>	Inspect parts for wear and tear. Clean with soap and water in case of reagent spill.	Before and after each use As needed
<i>Centrifuges</i>	Clean after each use; clean rotor with soap and water in case of reagent spill.	With each use
<i>Conductivity</i>	Probes checked for: breaks or damage. Meters checked for: proper calibration. Probe cleaned by strong detergent soaking.	Before each use As needed
<i>Multisizer 4E Cell Counter</i>	Clean and adjust (maintenance contract). Flush with Isoton solution.	Annually After each use
<i>Dissolved Oxygen</i>	Probes checked for membrane damage; proper filling solution (no bubbles); uncorroded anode and electrode; condition of leads. Meters checked for: proper calibration.	Before each use
<i>Fluorometer</i>	Instrument checked for proper calibration.	Before each use
<i>Formalin Recycler</i>	Maintenance performed under contract. Routine cleaning cycle based on number of cycles run.	Per Contract As needed
<i>Freezer</i>	Temperature checked for proper level.	Daily
<i>Incubator</i>	Temperature checked for proper level. Clean interior.	Daily* Monthly
<i>Microscope</i>	Maintenance performed under contract.	Annually

Laboratory Equipment Preventive Maintenance

Instrument/ Analysis	Activity	Frequency
<i>Sartorius Cubis® II balance with Ingenix® Suite software</i>	Pipette calibration system. Clean and adjust (preventive maintenance contract)	Before each use As needed Annually
<i>pH</i>	Probes checked for breaks or damage; proper filling solution level. Meters checked for proper calibration.	Before each use
<i>Quanti-Tray Sealer</i>	Clean interior. Check sealing performance.	Monthly Monthly
<i>QuantStudio 3 qPCR machine</i>	Dye and ROI/Uniformity plate calibration. Maintenance performed under contract. Background calibration.	24 months Per Contract Every 18 months or as needed
<i>Refrigerator</i>	Temperature checked for proper level.	Daily
<i>Salinity</i>	Probes checked for: breaks or damage. Meters checked for: proper calibration. Probe cleaned by strong detergent soaking.	Before each use As needed
<i>Spectrophotometer</i>	Instrument maintenance performed. Instrument performance verification performed. Instrument checked for proper calibration.	Annually Annually Before each use
<i>Temperature (thermistor)</i>	Probes checked for: condition of leads. Meters checked for: proper calibration.	Before each use Annually
<i>Turbidity</i>	Meter checked for proper calibration.	Before each use
<i>Water Bath</i>	Clean interior and change water. Check for proper temperature.	Monthly Daily*
<i>UV Sterilization Lamp</i>	Clean interior. Check for 99% reduction in plate count after 2-minute sterilization or bulb output using UV meter.	Quarterly Quarterly
*Twice a day at least four hours apart for Microbiology equipment when samples are incubating.		