



# Intermountain Forensics

SOP #

MNT-200

Revision #

01

Forensic DNA Technical Leader Approval

Issue Date

05/21/20

General Maintenance

## 1. Purpose

To describe the general maintenance of the Laboratory and the instruments used within.

## 2. Summary

The Laboratory and the instruments used require maintenance to assure proper function, accuracy, and cleanliness. Decontamination, Calibration, and individual instrument maintenance is addressed. Maintenance schedule is listed for each instrument/duty.

## 3. Procedure

### Laboratory Maintenance

1. Decontamination
  - a. Workspace
    - i. Wipe with 20% bleach before and after use. Includes bench top, pipettes, computer mouse and keyboard, etc.
  - b. Centrifuges
    - i. Wipe inner surface and lid with 20% bleach followed by ethanol daily or as needed.
  - c. Thermomixer
    - i. Wipe surface and lid with 20% bleach followed by ethanol daily or as needed.
  - d. Lab Rooms
    - i. General area of rooms are wiped with 20% bleach monthly or as needed including.
    - ii. Floors are cleaned monthly or as needed.
2. Calibration
  - a. Pipettes
    - i. Clean and recalibrate pipettes annually or as needed.
    - ii. Accuracy can be checked by weighing water: 1mL=1g.
      1. Low, mid, high
        - a. 10: 1ul, 5ul, 10ul
        - b. 100: 10ul, 50ul, 100ul
        - c. 1,000: 100ul, 500ul, 1,000ul
      2. Repeat 3 times.
      3. 5% deviation is allowed.
  - b. Thermomixers
    - i. Check temperature calibration annually or as needed.
    - ii. Refer to instrument Instruction Manual for Calibration protocol.
  - c. Refrigerator/Freezer
    - i. Temperatures can be checked at <https://temperaturestick.com/sensors/dashboard>.
    - ii. Refrigerator temperature range should be between 32°F (0°C) and 46.4°F (8°C).
    - iii. Freezer should not go higher than 32°F (0°C).
    - iv. Set alerts to notify [info@intermountainforensics.com](mailto:info@intermountainforensics.com) of any violations.
      1. An alert is sent to [info@intermountainforensics.com](mailto:info@intermountainforensics.com) when a reading is out of range.
3. General Housekeeping
  - a. Admin Area
    - i. Clean as necessary.

### Instrument Maintenance

Instrument maintenance procedures are provided by the instrument manufacturer. Refer to each instrument maintenance Standard Operating Procedure.

4. QIAcube Connect
  - a. MNT-205 Qiagen QIAcube Connect Maintenance



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- i. Run Daily Maintenance protocol at the end of each day
  - ii. Run Monthly Maintenance protocol each month
  - iii. Perform Periodic maintenance as needed
5. EZ1 Advanced XL
- a. MNT-201 Qiagen EZ1 Advanced XL Instrument Maintenance
    - i. Clean trays and piercing unit after each run
    - ii. Wipe O-rings and Perform UV each day
    - iii. Grease O-rings weekly
6. Quant Studio 5
- a. MNT-204 ABI Quant Studio 5 Maintenance
    - i. Decontaminate wells quarterly or as needed
7. Thermal Cycler(s)
- a. MNT-202 ProFlex Thermal Cycler Maintenance
    - i. Decontaminate wells quarterly or as needed
  - b. MNT-206 Benchmark Thermal Cycler Maintenance
    - i. Decontaminate wells quarterly or as needed
8. 3500 Genetic Analyzer
- a. MNT-203 ABI 3500 Genetic Analyzer Maintenance
    - i. Check dashboard before each run
    - ii. Weekly
      - 1. Check Stored Capillary Arrays
      - 2. Run Wash Pump and Channels wizard
      - 3. Restart computer and instrument
    - iii. Monthly
      - 1. Flush the Pump Trap
      - 2. Empty the condensation container and water trap waste container
      - 3. Run Performance check
      - 4. Clean the Autosampler and Drip Tray
      - 5. Check Disk Space
      - 6. Defragment the Hard Drive

#### 4. References

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N/A

#### 5. Definitions

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N/A