

Standard operating procedure

DropBot

PURPOSE

To outline the safety measures and proper operating procedures for operating a DropBot digital microfluidic automation system.

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

No specialized PPE is required for operating a DropBot. PPE is dependent on what the DropBot is being used for and can be found in the SOP for the particular assay or the reagent MSDSs.

PROCEDURE

A. PRE-OPERATIONAL SAFETY CHECKS

1. Ensure that there is no damage to power supply cable, USB cable or any cables connecting to external amplifier if one is used.
2. Ensure area around DropBot is clean and dry.
3. If using external amplifier system do not turn on the external amplifier until MicroDrop is fully loaded.

B. STANDARD OPERATION AND SAFETY CHECKS

1. Start MicroDrop control software.
2. Turn on external amplifier if present.
3. Input device in to device holder and engage pogo pins. If the system has a ground clip attach it to the top plate of your device.
4. Load saved device file and protocol in MicroDrop or click on Real Time mode to work without protocol.
5. Press play on protocol and follow steps shown in protocol.
6. Do not touch pogo-pins while Real Time Mode is on or a protocol is running as there may be high voltage on any of the pins.

C. ENDING OPERATION AND CLEANING UP

1. Turn off external amplifier if present.
2. Shut down MicroDrop control software.

WARNINGS AND PRECAUTIONS

A. HIGH VOLTAGE:

1. Never touch pogo-pins when Real Time Mode is on or a protocol is active.
2. Do not leave DropBot unattended with high voltage engaged or amplifier on.
3. Do not input device in to DropBot while high voltage is engaged.