

<b>Bauer Core Standard Protocol</b>		
Title: Filling Plates with the MultiDrop or MultiDrop Micro		
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## 1. Purpose

This protocol provides instructions for using the MultiDrop or MultiDrop Micro to fill microtiter plates (96 or 384 well plates). Both systems use peristaltic pumps to deliver liquid to the plates. The MultiDrop can dispense in increments of 5 $\mu$ l and the MultiDrop Micro can dispense in increments of 1 $\mu$ l.

## 2. Materials

- 2.1. Microtiter Plate (96 or 384 well).
- 2.2. Liquid to dispense in a bottle, beaker or falcon tube.

## 3. Instrumentation

- 3.1. MultiDrop or MultiDrop Micro (made by Thermo, formerly LabSystems).
- 3.2. Cassette (Head) for the MultiDrop or MultiDrop Micro, autoclaved if desired.

## 4. Reagent preparation

none

## 5. Procedure

- 5.1. Setup
  - 5.1.1. Plug in the instrument.
  - 5.1.2. Attach the proper cassette (head) for the instrument you are using.
    - 5.1.2.1. Position the tips so they point down over the reservoir.
    - 5.1.2.2. Slide the tabs on the tip portion of the head into the slots on the lower part of the rotor.
    - 5.1.2.3. Wrap the tubing around the rotor.
    - 5.1.2.4. Slide the tabs on the upper part of the cassette into the slots on the upper part of the rotor.
    - 5.1.2.5. Pull the rotor cover over the rotor.
  - 5.1.3. Place a plate on the plate adapter
    - 5.1.3.1. Make sure the correct adapter is in place, and change if needed.
      - The 11mm plate adapter should be used for low profile plates.
      - The 15mm pate adapter should be used for normal plates.

- 5.1.3.2. Adjust the two clips as needed to hold the plate snugly in place.
- 5.1.4. Turn the power on.
- 5.1.5. Put the end of the tubing into a container of your dispensing liquid.
- 5.1.6. Hit Prime until the liquid has filled the tubing and comes out the tips.
  - 5.1.6.1. Empty the reservoir if needed, but remember to replace it.
- 5.1.7. Set the dispensing parameters.
  - 5.1.7.1. Select the plate type (96 or 384 well).
  - 5.1.7.2. Select the number of columns of the plate to fill.
  - 5.1.7.3. Select the volume to dispense.
- 5.1.8. Test the system by dispensing into a test plate of the type that will be used.
  - 5.1.8. Place the plate on the plate adapter and hit Start to fill the plate
- 5.2. Fill Plates.
  - 5.2.1. Place each plate to be filled on the plate adapter and hit start.
- 5.3. Clean up.
  - 5.3.1. If a reagent other than water has been used, flush the system with water.
    - 5.3.1.1. Place the end of the tubing into water and hit Prime.
  - 5.3.2. Hit Prime to empty the tubing of all liquid.
  - 5.3.3. Remove the cassette, wrap it in paper towel and foil and autoclave it.