



Care and Use of the (VP 195B1-96) 96 Channel Dispenser

Initial Setup

Setting Plate Height

1. Use allen wrench provided to loosen the Loading Bar Stop Set Screw.
2. Insert the style of 96 well plate you plan to use. Raise the Loading Bar and position the metal dispense tubes a ~2 millimeters above the bottom of the wells. If performing low volume dispensing into a dry plate it may be necessary to position the dispense tubes 0.5-1 millimeter from the bottom of the plate.
3. Tighten the Loading Bar Stop Set Screw to lock position in place and remove the 96 well plate.

Bleeding Air from Manifold

1. Attach a luer-lock syringe to the fitting on the top of the unit. If you are unable to read the volume markings on the syringe unscrew the syringe, rotate it 180°, then screw the syringe back into position.
2. Insert the Liquid Collection Trough in the bottom of the unit.
3. Check to ensure the Bleed Tube is positioned over the Collection Trough.
4. Insert the Reservoir Tube into the hole in the bottle lid and screw cap onto the Reservoir Bottle. If the Reservoir Tube does not fit loosely in the hole of the lid then cap will need to be unscrewed slightly so a vacuum does not form in the Reservoir Bottle. (note: ensure the level of liquid does not fall below the tube depth or air will enter into the system)
5. Lift syringe plunger.
6. Depress the Bleed Valve Button (The white button beside the syringe).
7. Compress the syringe in a steady stroke, and then release the Bleed Valve Button shortly before reaching the bottom of the stroke.
8. The VP 195B1-96 has a 95 ml dead volume, so you may need to repeat steps 4-6 several times depending on the volume or syringe you are using. Stop when you observe a steady stream of liquid coming out of the Bleed Tube.
9. The air has been removed from the manifold, but there is still some air remaining in the Metal Dispense Tubes.

10. Without touching the Bleed Valve Button depress the syringe vigorously in 1 ml increments until you see 96 streams coming from the metal dispense tubes.
11. Remove the Liquid Collection Tray.

Use

1. Place 96 well plate into Loading Rack.
2. Raise Loading Bar.
3. Draw the desired volume of liquid into the syringe.
4. Compress syringe plunger in a steady motion.
5. Lower Loading Bar and withdraw the 96 well plate.

Exchanging Reagents

1. Insert Liquid Collection Trough and remove the Reservoir Tube from liquid. Then use the syringe to pump air into the system.
2. When the liquid begins to bubble out of the Metal Dispense Tubes, empty the Liquid Collection Tray.
3. Tip the dispenser forward at a 15° angle. Then position the Liquid Collection Tray under the Dispense Tubes.
4. While the Multi-Spense is at an angle cycle more air through the system till liquid is no longer freely coming out of the Dispense Tubes.
5. Insert the Reservoir Tube into water, and then insert the Liquid Collection Trough in the bottom of the unit.
6. Insert the Liquid Collection Trough in the bottom of the unit.
7. Check to ensure the Bleed Tube is positioned over the Collection Trough.
8. Lift syringe plunger.
9. Depress the Bleed Valve Button (The white button beside the syringe).
10. Compress the syringe in a steady stroke, and then release the Bleed Valve Button shortly before reaching the bottom of the stroke.
11. The VP 195B1-96 has a 95 ml dead volume, so you may need to repeat steps 4-6 several times depending on the volume or syringe you are using. Stop when you observe a steady stream of liquid coming out of the Bleed Tube.

12. Repeat steps 3 – 13 three times ending with the manifold empty.
13. To load the next reagent place the Reservoir Tube into new reagent and aspirate about 5ml into the manifold. Then take the Reservoir Tube out of the reagent and cycle air through the system till liquid is no longer freely coming out. Once this is complete load the new reagent into the reservoir as outlined in the Bleeding Air from Manifold section.

Storage

1. For short term storage keep the tips of the metal dispense tubes in the liquid you are using in the manifold. This will prevent clogging.
2. For long term storage drain manifold, then cycle distilled water through the system. A minimum of 300 ml of distilled water should be used (see steps 1 – 12 in the Exchanging Reagents section).
3. Ensure all water is drained from the Manifold on the final rinse, then place a clean 96 well plate into the Loading Rack and raise the Loading Bar. Then let the plate sit for 10 minutes. This will siphon the remaining water out of the Manifold. Continue to empty and replace the plate till water ceases to drain.
4. Remove the syringe and 96 well plate, then store in a clean dry area.
5. To autoclave simply place the entire dispenser into the autoclave. It is not necessary to remove any parts.

Troubleshooting

1. If you notice a single well not filling properly locate the clogged tube corresponding to the well. Then insert the metal wire (included with the dispenser) into the clogged tube. This should remove the obstruction.
2. If you experience problems with aspiration and dispensing or leaking inside the system, it is most likely a problem with the 3-way valve. The valve connects the syringe, manifold and the reservoir tube. Detach the back panel and visually inspect the valve. If the valve is loose it could cause air to get in the system or leakage to occur. If the valve is not connected properly retighten tightly by hand (if you use a wrench or pliers do not over tighten). If the valve threading is no longer functional then replace the valve with extra valve supplied with the unit.