

Care and Use of the 96 Tube Aspiration Manifold

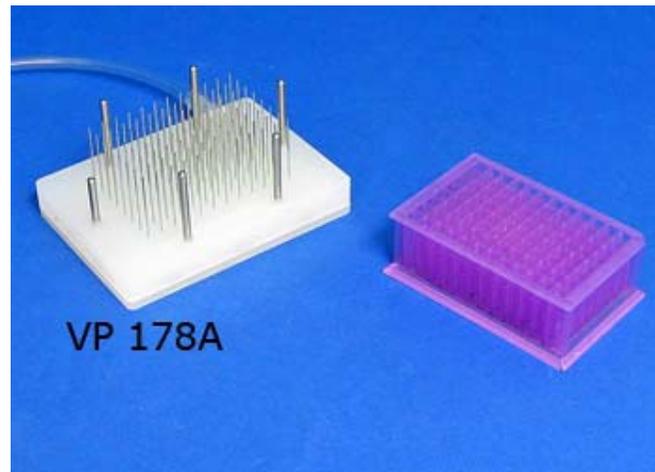


Figure 1. The VP 178A tube aspirator.

Set-up

1. Attach one end of a vacuum hose to the nipple on the aspiration manifold (VP 178A) and other end to a valve connected to a vacuum source (see Figure 2 below).

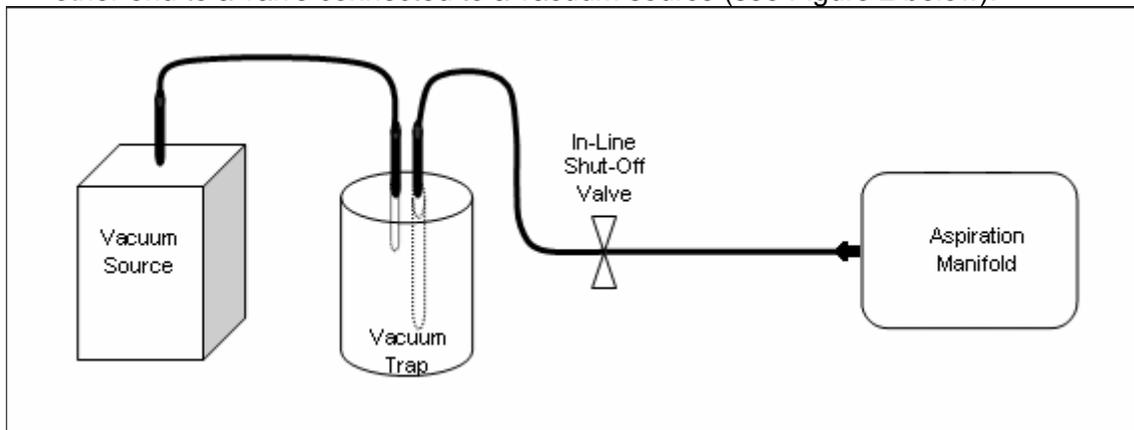


Figure 2. Connecting the Manifold to Vacuum System.

Operation

1. Make sure all tubes of the aspiration manifold (VP 178A) are clear by aspirating distilled water from a microplate. If tubes are clogged (failure to aspirate) use the rapier (provided) to clean out the tubes.
2. Place the VP 178A over the microplate, using guide pins to register to plate. (Shown in Figure 3.)



Figure 3. Place the aspirator over the microplate.

3. Once the tubes are near the bottom of the wells, push the microplate to the right (towards the short guide pin) about 3 mm with your thumb or finger as indicated in Figure 4. This places the tip of the tube in the corner of the well and facilitates aspiration.

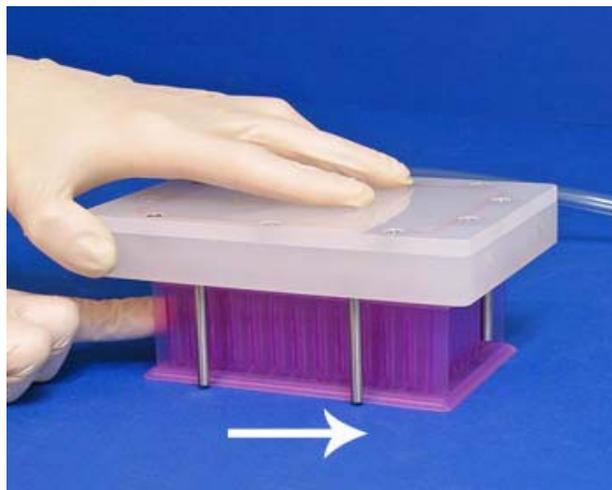


Figure 4. Shifting the microplate to the right.

4. When a great enough vacuum has been created, open the valve to allow the wells to be aspirated.
5. After all liquid has been aspirated, turn off the vacuum and then remove the VP 178A.

Storage

1. For short-term storage, keep the tips of the metal tubes in the liquid you are using in the plates or distilled water. This will prevent the liquid from drying and clogging the tubes.
2. For long-term storage, drain the manifold and aspirate three separate 100 ml distilled water aliquots through the system. **DO NOT USE DE-IONIZED WATER**, as de-ionized water will corrode the stainless steel tubes.
3. Tip the system back and forth after each aliquot to ensure all water is aspirated from the manifold on each rinse.
4. Aspirate two separate 50 ml aliquots of alcohol (methanol, ethanol or isopropyl alcohol) through the manifold. Tip the system back and forth to ensure all the alcohol is removed.
5. Store in a clean dry area.
6. The aspirator manifold can be sterilized by autoclaving.

Troubleshooting

PROBLEM: Not all wells being aspirated.

SOLUTIONS:

1. Use rapier to clear the clogged tubes.
2. Create a greater vacuum.
3. Wiggle VP 178A while aspirating. Sometimes the tubes may be touching the bottom of the wells, which leads to incorrect aspiration.
4. If wells are still not being aspirated, contact V&P Scientific for more technical assistance.

PROBLEM: The tubs are either too high or right at the bottom of the wells.

SOLUTIONS:

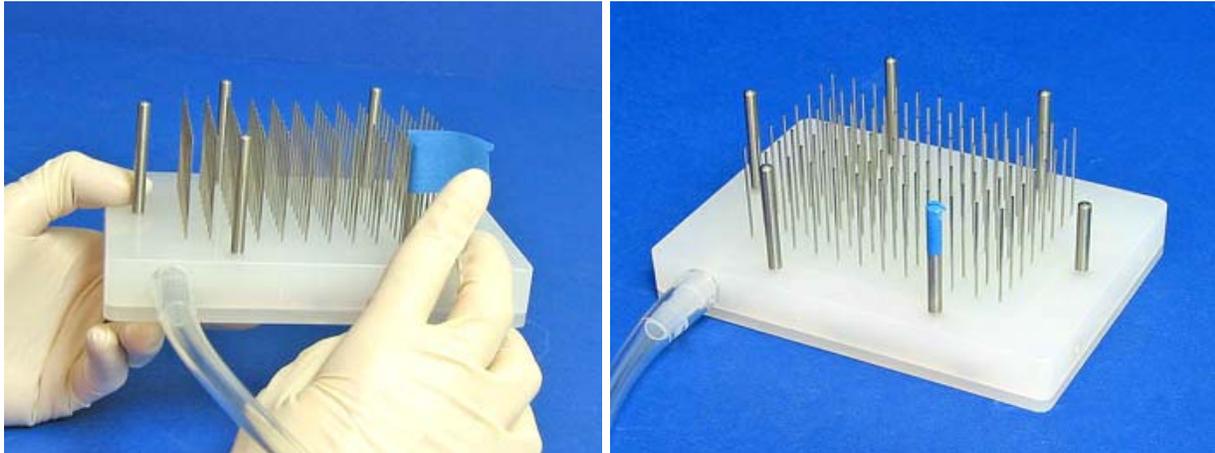


Figure 5. Wrap the guide pins with a layer of tape.

1. To increase the height of the aspirator, simply apply one layer of tape around the guide pins. (Shown in Figure 5.)
2. To decrease the distance between the well and the tubs, simply put a 127.7 mm by 85.5 mm piece of construction paper under the well. (The piece of construction paper is included with the VP 178A.)

Warning:

- Some aspirators are custom made with a handle on top. Do not unscrew the handle, if you unscrew it you will lose vacuum in the manifold chamber. In this case simply unscrew the top and tighten the handle. When screwing on the top piece, screw each screw half way in and then sporadically screw the screws tight.