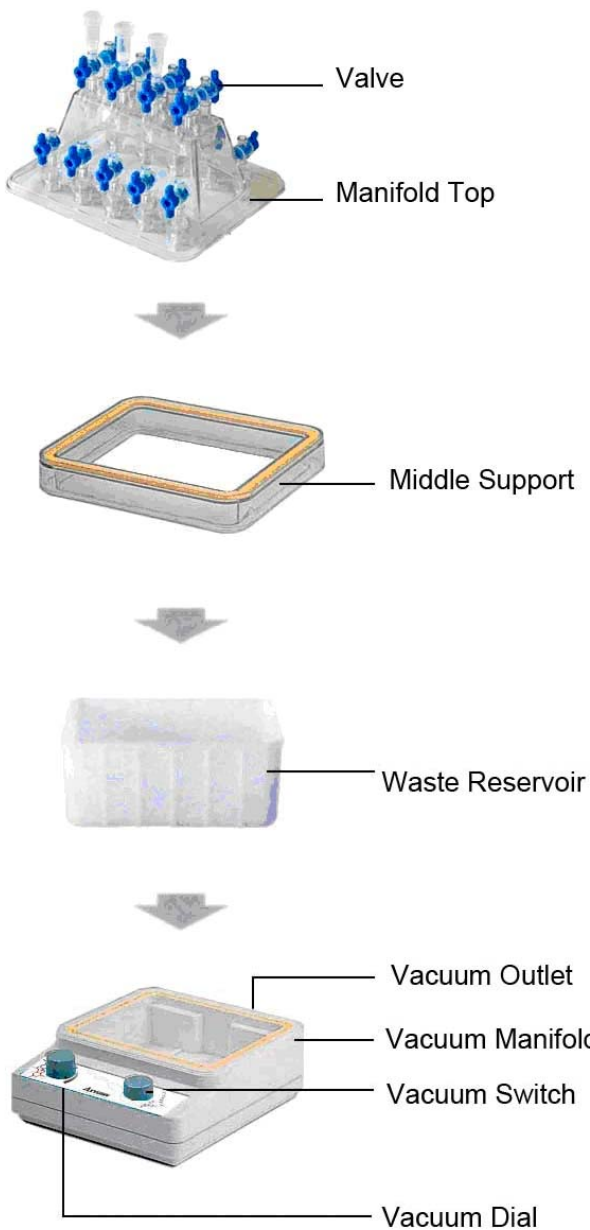


AxyVac Vacuum Manifold

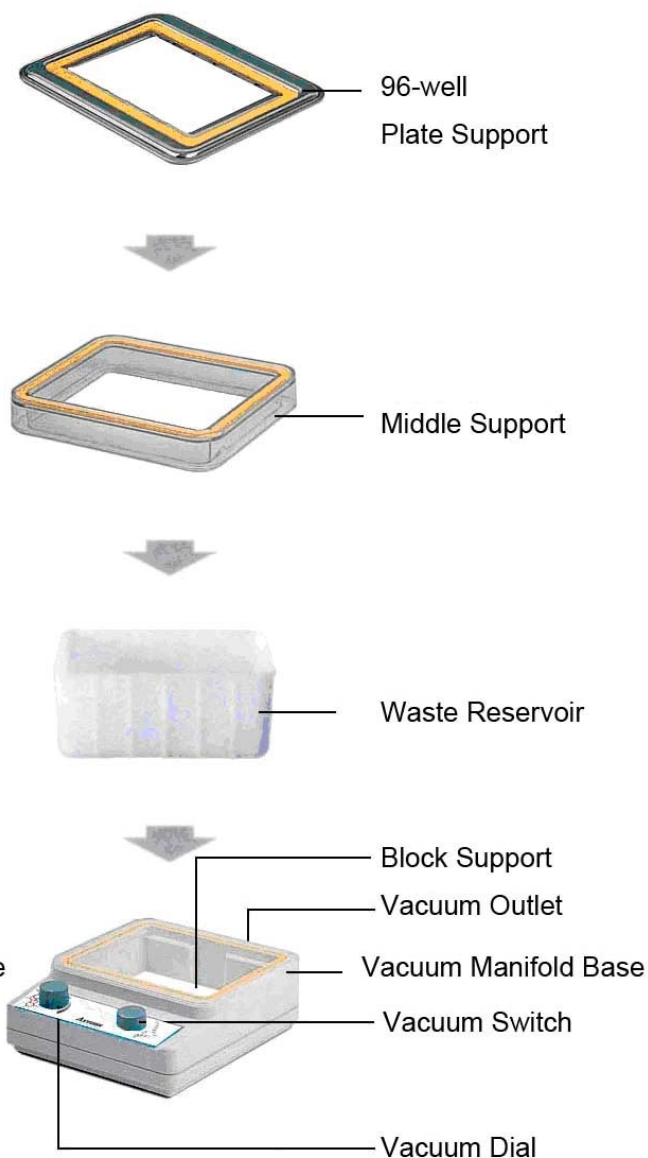
(#AP-VM)

AxyVac Components

A. Column Setup



B. Plate Setup



Introduction

The AxyVac Vacuum Manifold System provides a complete solution for filtration-type sample purification. It is designed to accommodate a wide variety of different columns and SBS-format, 96- and 384-well plates. The AxyVac is constructed from durable, easy-to-clean materials. The manifold base is injection molded from ABS plastic. The manifold top and middle support are molded from polycarbonate. The 96-well plate support is constructed from stainless steel. These materials offer exceptional resistance against breakage and chemical degradation. The high-clarity polycarbonate components allow the various filtration processes to be monitored visually. With a brief rinse after use and proper care, your AxyVac Vacuum Manifold will provide many years of trouble-free service.

Supplied by customer

An appropriate length of thick-walled, ¼ inch ID tubing.

A. Column preps: Setup and procedure

Column preps are performed with the waste reservoir positioned within the Manifold Base (Figure A, above). The columns are inserted into the fittings integrated into the manifold top. Each AxyPrep kit protocol will provide detailed instructions for the use of various columns on the AxyVac manifold.

1. Connect the Manifold Base to the vacuum source using a section of thick-walled PVC tubing (¼ inch ID).
2. Place the Waste Reservoir into the Manifold Base.
3. Place the Middle Support onto the Manifold Base.

Note: The Middle Support allows liquid discharge by the column(s) to be visualized.

4. Place the Manifold Top onto the Middle Support. Make sure that all blue valves are rotated to the full horizontal or “OFF” position.
5. Turn on the vacuum source (pump) and rotate the Vacuum Switch (on manifold base) counterclockwise to the “ON” position.
6. Rotate the Vacuum Dial (on manifold base) fully clockwise to “MAXIMUM”. Check to ensure that all components for a vacuum-tight seal. If necessary, apply mild pressure to the Manifold Top to achieve a seal.

Note: AxyVac column are designed to perform optimally within a negative range of -25-30 inches Hg. This is equivalent to approximately -850-1,000 mbar or -12-15 psi.

7. Place the desired number of columns into the blue valve fittings on the manifold top. Pipette the samples intended for filtration/purification into the columns according to the protocol.
8. Apply vacuum to the columns by rotating the blue valves clockwise to the vertical position (Figure A.1). The Vacuum Dial (on the manifold base) can be used to adjust the amount of vacuum applied to the columns and hence, the rate of liquid flow through the columns.

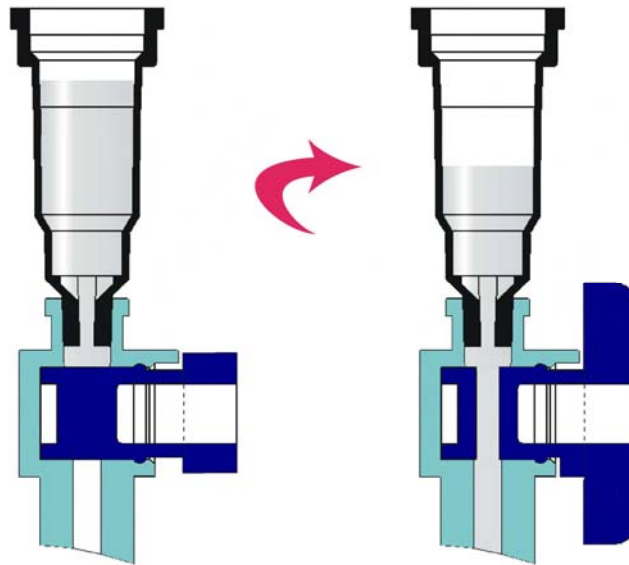


Figure A.1. Full OFF

Full ON

9. After the final wash and vacuum purge (as directed by the protocol), perform the following steps in the order indicated:
 - Turn the Vacuum Dial (manifold base) counterclockwise to the “MINIMUM” position.
 - Rotate all blue valves on the manifold top counterclockwise to the horizontal position to shut off airflow through the attached columns.
 - Rotate the Vacuum Switch (manifold base) clockwise to the “OFF” position.
 - Remove the columns from the manifold top.

B. 96-well plate preps: Setups and procedures

Each AxyPrep-96 kit protocol will provide an overview which depicts the vacuum manifold setup used for that specific kit.

Figures B.1, B.2 and B.3 (below) represent different AxyPrep plate set-ups and purification schemes.

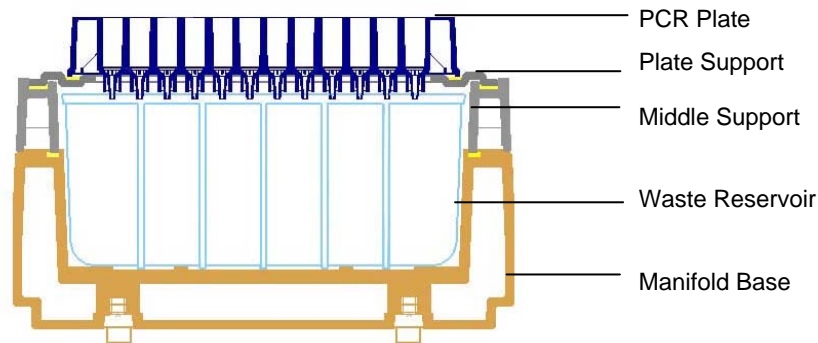


Figure B.1. Binding and washing PCR products

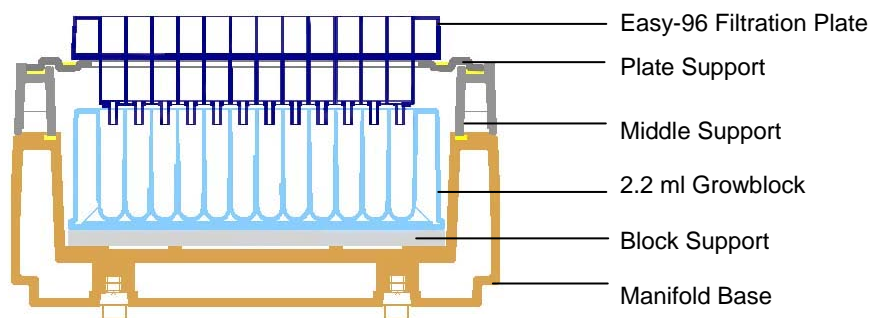


Figure B.2. Easy-96 bacterial lysate filtration

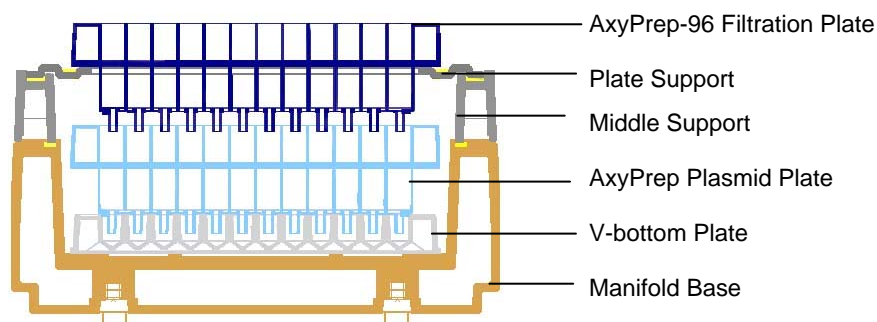


Figure B.3. AxyPrep-96 Plasmid bacterial lysate filtration and plasmid binding

General Setup and Procedure for 96-well Plates

1. With the Vacuum Switch in the "OFF" position, connect the vacuum manifold to the vacuum source using a section of thick-walled PVC tubing (¼ inch ID). The Vacuum Dial should be set at "MINIMUM".
2. Place the appropriate components into the manifold base for a particular step as designated by the protocol.
3. Place the Middle Support onto the manifold base and then place the stainless steel Plate Support on top.
Note: The Middle Support allows the discharge of fluid from the plate to be visualized.
4. Place the specified 96-well plate onto the plate support. If a second plate is positioned within the manifold, make sure that the drip directors of the 96-well plate resting on the plate support extend into the corresponding wells on the plate within the manifold base.
5. Transfer the lysates or reactions into the corresponding wells of the 96-well plate resting on the Plate Support.
6. Turn on the vacuum source (pump) and rotate the Vacuum Switch counterclockwise to the "ON" position.
7. Rotate the Vacuum Dial clockwise to "MAXIMUM". Check to ensure that all components form a vacuum-tight seal.
Note: On occasion, it may be necessary to apply gentle downward pressure to the 96-well plate resting on the plate support to achieve a seal.
8. Continue to apply vacuum until all wells of the 96-well plate are empty. If the upper 96-well plate will be discarded, rotate the Vacuum Switch to the "OFF" position and then turn the Vacuum Dial counterclockwise to "MINIMUM". For protocols in which the 96-well plate will be subjected to subsequent washes, it is not necessary to turn the vacuum off. Simply continue with the addition of wash buffer to the plate wells.

Care and Maintenance

After use, each component of the AxyVac manifold should be thoroughly rinsed with tepid tap water, followed by room temperature deionized water. Do not use hot water. In the event that dried biologic materials or salts must be removed, please soak the manifold component in tap water to soften the material. Mild, dilute detergents, such as household dish detergent can also be used. Never use strong laboratory glassware cleaners. Never use organic solvents, such as ethanol or isopropanol. The manifold gaskets require special care to avoid tearing and degrading. Allow the manifold components to air-dry under ambient conditions after washing and rinsing. Routinely inspect the gaskets and sealing surfaces for debris accumulation or signs of wear.

Warranty/Disclaimer

Axygen Biosciences warrants that this product will perform as indicated when used according to the instructions provided. In using this product, the customer agrees that Axygen Biosciences shall not be held liable for any direct or indirect damages, including, but not limited to, personal injury, property damage or lost profits (or other economic loss) resulting from the use or inability to use this product. In the event that this product fails to perform in the specified manner, remedial measures on the part of Axygen Biosciences shall be limited to the replacement of this product and will be implemented at the discretion of Axygen Biosciences.