

96-Well Vacuum Manifold Instructions

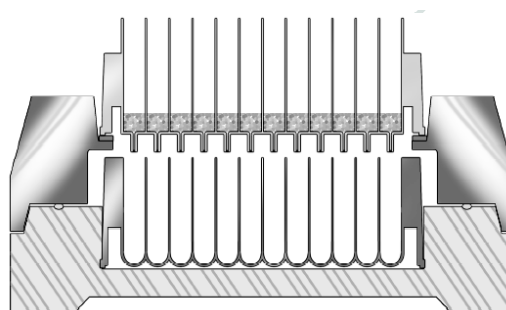
The Phenomenex 96-well plate vacuum manifold is precision machined from crystal clear acrylic (top plate) and acetal polymer (plenum chamber). The acrylic top plate allows visual access to the plenum chamber for checking progress on the separation process. The acetal plenum chamber has medium resistance to alcohols, weak acids, etc., but should be cleaned as soon as possible if the above solutions are spilt on it. Each unit comes fitted with a needle valve controller to ensure accurate adjustment of vacuum into the manifold. The unit will also take a reservoir tray to collect extraneous sample and wash solution for removal and disposal before collector plates are installed.



Description

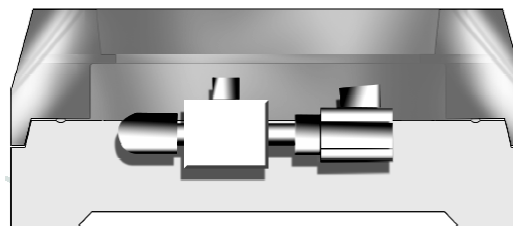
Lower plate, comprising of plenum (vacuum) chamber with lever-operated gate valve. Fitted with custom O-ring in upper surface allowing airtight interface between plates during operation. The plenum chamber can be used either as a simple sump for waste filtrate using reservoir trays or as a receptacle for a standard 96-well microtiter plate (capture plate).

Upper plate, comprising machined recess, to fit Phenomenex well plates, with custom polyether foam gasket.



Operation

Remove top plate and install reservoir tray. Replace top plate and place well plate on gasket on top plate. Once sorbent washing is completed, remove top plate (with well plate in place). Remove reservoir tray and discard. Place required collection tray in plenum chamber. Replace top plate, ensuring well plate drain spouts are inline with collection tray wells.



Collection plate options

350uL 1mL or 2mL well collection plates-

Phenomenex offer three types of standard sized square-well plates to fit the vacuum manifold. These plates will fit into the plenum chamber directly. If round-well versions of the 1mL well plate or tube racks are used, a spacer (supplied with manifold kit AH0-7284) must be placed at the bottom of the plenum chamber before inserting the collection plate/rack.



Vacuum Control

(deep well manifold only)

The vacuum control system consists of an on-off valve to the right of the tee piece and a needle valve, located to the left of the tee piece, to adjust the amount of vacuum applied to the chamber. The knurled control knob on the needle valve adjuster should be turned clockwise to a fully closed position. The vacuum source should be connected to the on-off valve and the valve opened (tap parallel to on-off valve). Carefully wind the needle valve controller anti-clockwise until the required level of vacuum is attained. Vacuum can be shut off at any time by turning the on-off tap at right angles to the valve. The knurled control knob can be used to 'vent' the plenum chamber, releasing any vacuum.

Maintenance & Cleaning

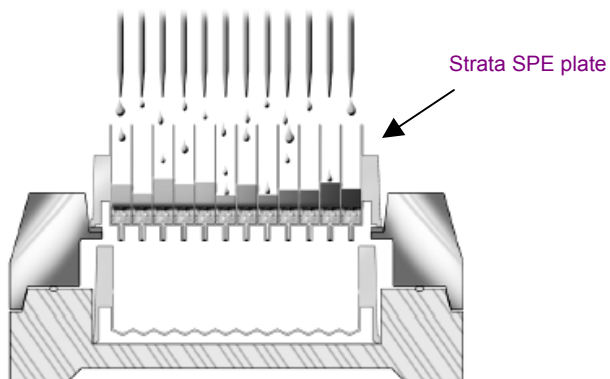
To clean, simply wipe all components with a paper towel containing water and dry. **DO NOT USE ALCOHOLS OR SOLVENTS TO CLEAN COMPONENTS.** If alcohols or solvents are spilled on the clear acrylic top plate, rinse immediately with water. To ensure the sealing rings and gasket are not contaminated, rinse with water and dry with paper towels. The vacuum unit should not be autoclaved or subjected to high temperature. A spare top gasket is enclosed and others are available from Phenomenex on request. Should it be necessary to return the unit for any reason, call your Phenomenex representative **FIRST** to obtain a Return Authorization Number. If contaminated by radiation, units will not be accepted for return.

instructions

Note: The steps below are generalized and may not cover completely the steps required for your method. Contact Phenomenex for further technical assistance or method development suggestions.

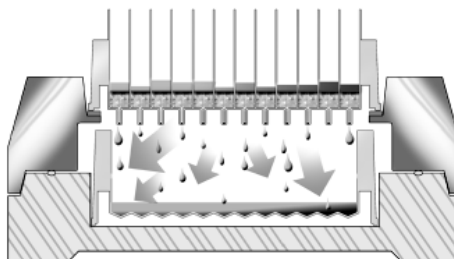
Step 1

Insert a reservoir tray in the plenum chamber, then place the well plate on the top of the vacuum manifold. Condition the well plate by passing volumes of appropriate solvent through the columns, followed by a volume of liquid similar in nature to the sample.



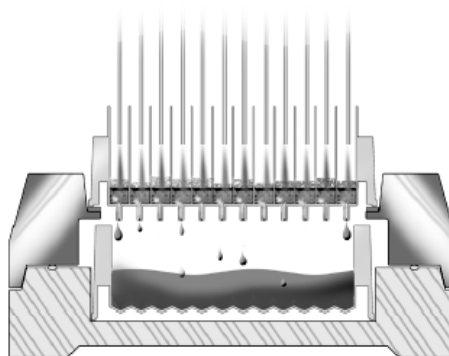
Step 2

The samples should now be added to the well plate columns, thus allowing all sample components to become retained on the sorbent surface.



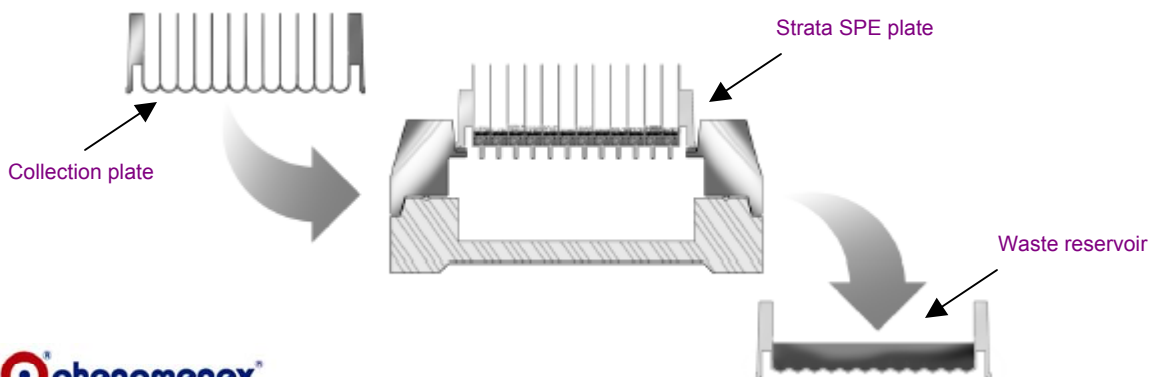
Step 3

The interfering components can now be removed by washing with the relevant solvents while leaving the analyte retained, allowing the solvents to drop into the reservoir tray.



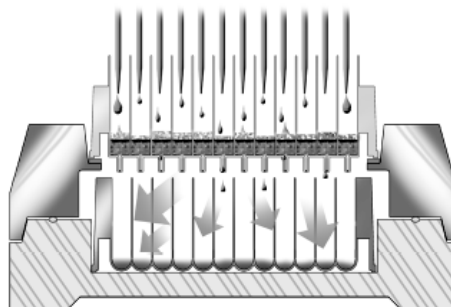
Stage 4

Once the interferences have been removed, the reservoir tray should be removed from the plenum chamber and the collection plate can be inserted into the lower section of the manifold. Please ensure that you have the correct size collection plate in the manifold (drain spouts should intrude into the tops of wells).



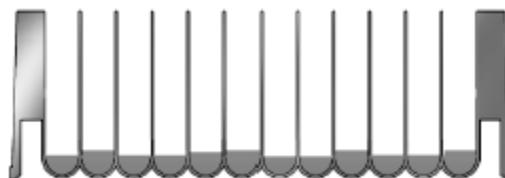
Stage 5

The samples (analyte) can now be eluted off the well plate into the collection plate by washing with a specific solvent that disrupts the analyte-sorbent interactions.



Stage 6

Finally the collection plate containing the analyte can be removed from the vacuum manifold.



IMPORTANT Vacuum Information: The vacuum should only be sparingly applied after each reagent and (or) sample has been added to the complete block. It is recommended that the vacuum should be pulsed, used sparingly and in some cases not used at all, leaving gravity to take effect especially when using the well plate with small packed columns.

ORDERING INFORMATION

Collection Plates*			
Order No.	Description	Unit	Price
AHO-7192	0.35mL/well 96 square well collection plate	50/pk	
AHO-7193	1mL/well 96 square well collection plate	50/pk	
AHO-7194	2mL/well 96 square well collection plate	50/pk	
AHO-7408	Solvent waste reservoir tray	25/pk	
Sealing Mats*			
Order No.	Description	Unit	Price
AHO-7195	Pierceable sealing mats, 96 square well	50/pk	
AHO-7362	Sealing tape pad	10/pk	

ORDERING INFORMATION

Manifold*			
Order No.	Description	Unit	Price
AHO-7284	96-Well Plate Manifold, Acrylic	1 ea	
Replacement Parts			
Order No.	Description	Unit	Price
AHO-7198	96-Well Plate Manifold replacement gasket, profile (to fit between top plate and vacuum chamber)	1 ea	
AHO-7285	96-Well Plate Manifold replacement gasket, flat (to fit between lid and plate)	1 ea	

*Manifold, Collection plates, & Sealing mats compatible with 2mL Impact plate and strata 96-well plate formats only.



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