

Resprep[®] 12- & 24-Port Vacuum Manifolds

cat.# 26077, 26078, 26079, 26080, 26081, 26082

Caution: Do not operate this manifold without first reading and fully understanding these operating instructions.

Introduction

Resprep[®] vacuum manifolds for SPE sample preparation, filtration, and elution are available in 12- and 24-port configurations. These manifolds help in achieving consistent extraction and filtration results. Multiple sample processing with these manifolds simplifies procedures and saves time. The manifolds consist of a clear glass chamber and lid to which vacuum is applied, drawing a sample through an SPE column, cartridge, or disk. Adjustable racks placed in the glass vacuum chamber accommodate a variety of sample collection vessels, including test tubes, autosampler vials, volumetric flasks, and Erlenmeyer flasks. SPE columns or cartridges can be plugged into the flow control valves for conditioning, sample loading, washing, drying, and elution steps. Eluants are deposited directly into the collection vessel of choice via PTFE sample guide needles.

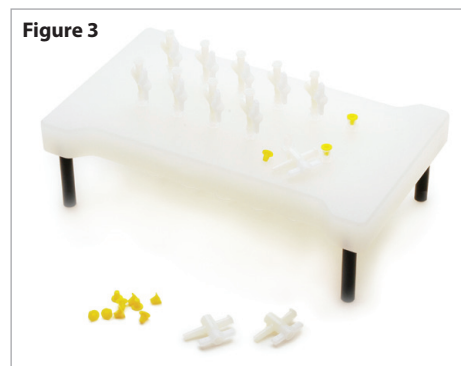
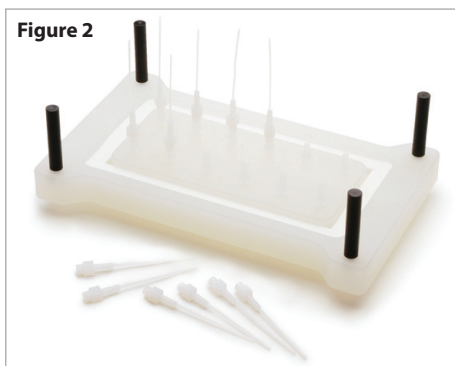
Assembly

Manifold Lid, Gasket, Needles, and Flow Control Valves:

1. Attach the four black legs to the manifold lid.
2. Ensure that the white plastic lid gasket is properly seated in the lid (Figure 1).
3. Attach the PTFE sample guide needles to the male luer connection fittings on the underside of the manifold lid (Figure 2).
4. Insert the flow control valves (stopcocks) into the female luer fittings on the lid (Figure 3).
5. Rotate the valves slightly to ensure positive seating, do not overtighten.

Rack and Adjustable Shelves:

1. The rack and shelf assembly consists of three attachment posts, and a support platform (Figure 4).
2. There are five shelves supplied with the 12-port manifold, and three with the 24-port unit (Figure 5).
3. Select and position one or more of the shelves that best accommodates your collection vessels. Align the three small holes in the shelf with the three posts attached to the platform. Adjust the height of the shelf so that the sample guide needles in the manifold lid will be inside the collection vessels (Figure 4).
4. Secure the shelves on the rack posts by attaching the C-shaped support clips to the slots in the support posts that are directly under the shelf to be supported (Figure 4).
5. When test tubes are used as collection vessels, use the dimple shelves to center the tubes.
6. If you are using collection vessels to collect sample preparation solvents, place the rack and shelves with appropriate collection vessels into the glass vacuum chamber and attach the lid.* You are now ready to attach your SPE columns in the stopcocks, and proceed with sample preparation (Figure 6).



*Place the rack with collection vessels inside the glass vacuum chamber only when sample fractions need to be retained for further processing or analysis. All other liquid wastes are automatically transferred from the glass vacuum chamber to the liquid waste trap. See Vacuum and Manifold Operation section for details.

Vacuum & Manifold Operation

1. Install a liquid waste trap between the manifold vacuum chamber and the vacuum source by attaching a side arm flask with a hose.
2. Use vacuum tubing to connect the vacuum source to the trap, and from the trap to the manifold.
3. Apply vacuum and adjust vacuum at the manifold using the knurled bleed valve ring adjacent to the vacuum gauge on the manifold. Do not allow vacuum to exceed 20 inches of Hg. Exceeding this vacuum will void the manifold warranty. The bleed valve ring also permits vacuum release for the purpose of changing collection vessels or inserting/removing the collection rack.
4. Proper operation of the manifold involves regulation of vacuum levels by using the vacuum bleed valve to achieve the desired flow rates. Individual flow control valves at each port also must be regulated to control the flow through each individual column.
5. The individual flow control valves should be in the closed position prior to removal of SPE columns or cartridges when under vacuum. Failure to completely bleed the vacuum from the chamber prior to venting the manifold may result in splash or spillage of collected eluants.

CAUTION: Vacuum should not exceed 20 inches of Hg to avoid implosion!

A vacuum bleed valve and gauge assembly attached to the side of the glass chamber permits controlling and monitoring vacuum. Solvent-resistant polypropylene luer fittings in the lid make the manifold compatible with any male luer-terminated SPE device. Stopcock valves on each port control liquid flow into the manifold chamber and collection vessel.

Sample Filtration

After column preparation and sample cleanup, and prior to final sample elution, the final eluate can be filtered prior to collection and injection. To filter the final eluate, remove the SPE column cartridge or disk from the female luer of each stopcock. A 25 mm syringe filter is inserted into the female luer of the stopcock, and the SPE column, cartridge, or disk is placed into the female luer of the filter. Syringe filters using 0.45 µm PTFE or nylon 66 membranes are ideal for final sample filtration and will prevent sample debris from clogging HPLC instruments. Eluate collection vessels are placed in the rack in the glass vacuum chamber, and the system is now ready to deliver a filtered final eluate. It is important that filters must NOT be placed on the manifold until the final elution step. If filters are in place during column preparation or sample cleanup, they may air-lock and not permit passage of any final eluant.

Resprep® 12- or 24-Port SPE Manifolds

Description	qty.	cat.#
Complete Resprep SPE Manifold, 12-Port (Includes: glass basin with built-in vacuum regulator, polypropylene lid with 12 individual control valves, 12-position collection rack, 12 PTFE sample guides, and waste container.)	kit	26077

Complete Resprep SPE Manifold, 24-Port (Includes: glass basin with built-in vacuum regulator, polypropylene lid with 24 individual control valves, 24-position collection rack, and 24 PTFE sample guides.)	kit	26080
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Resprep® Manifold Replacement Parts

Description	qty.	cat.#
Replacement Waste Container, 12-Port	ea.	24014
Replacement Vacuum Valve and Gauge Assembly	ea.	24008
Glass Vacuum Chamber w/gauge & valve for Resprep manifolds, 6 or 12-Port	ea.	25991

Collection Rack

Collection Rack, 12-Port	ea.	26079
Collection Rack, 24-Port	ea.	26082

Manifold Lid

Replacement Manifold Lid (sample guides not included), 12-Port	ea.	26078
Replacement Manifold Lid (sample guides not included), 24-Port	ea.	26081

Manifold Lid Replacement Parts

Valves, 12 or 24-Port	2-pk.	26083
Valve Attachment	48-pk.	26130
Needle Attachment	48-pk.	26131
Sample Guide Needles, 12 or 24-Port	12-pk.	26084

NOTE: Replacement waste container not included in 24-port manifold kit (cat.# 26080).

*Waste container (shown in tank) and top shelf for round-bottom flasks are not included in 24-port manifold kit (cat.# 26080).

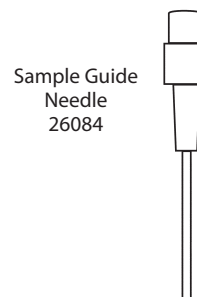
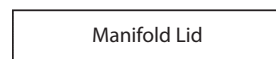
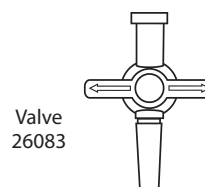
Oil-Free Vacuum/Pressure Station for 12-Port Resprep® SPE Systems

Description	qty.	cat.#
Oil-Free Vacuum/Pressure Station, 115VAC, 60Hz, US	ea.	24002
Oil-Free Vacuum/Pressure Station, 230VAC, 50Hz, Europe (CE certified)	ea.	24003
Vacuum Tubing (10 ft./3 m, 1/4" ID)	ea.	24016

Not recommended for use with 24-port manifold.

Warranty period is one year from date of purchase. Evaluation fee is charged for repairs out of warranty.

Resprep® Manifold Replacement Parts



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