



**Purify right.™**  
**Results and Costs Matter.**

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## LukPrep™ 12- & 24-Port Vacuum Manifolds (Cat# L2080120 and L2080240)

**CAUTION:** Please do not operate this manifold without first reading and fully understanding these operating instructions. Any questions please contact your distributor or us.

### INTRODUCTION

Luknova offers LukPrep™ vacuum manifolds for solid phase extraction (SPE) sample preparation, filtration, and elution in 12- and 24-port configurations. These manifolds are designed to help in achieving consistent extraction and filtration results. Multiple samples processing with these manifolds significantly 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. Eluants are deposited directly into the collection vessel of choice via Teflon® needles. Drying attachments can be connected, using adaptors, to SPE columns or cartridges in order to dry the column or cartridge prior to final elution. The propylene waste container in 12-port manifold significantly simplifies the solvent disposal, sample preparation, and clean up.

### ASSEMBLY MANIFOLD LID, NEEDLES, AND FLOW CONTROL VALVES

1. Find out the manifold lid, 4 legs, and needles (Fig. 1) and attach the legs to the manifold lid and the Teflon® needles to the male luer connection fittings on the underside of the lid (Fig. 2). Carefully to tighten the parts, but do not overtighten.
2. Insert the flow control valves (stopcocks) into the female luer fittings on the lid (Fig. 3).
3. Rotate the valves slightly to ensure positive seating, please do not overtighten.



Fig.1

### ASSEMBLY RACK AND ADJUSTABLE SHELVES

1. The rack and shelf assembly consists of three attachment posts and a support platform (Figs. 4 & 5).
2. There are five shelves supplied with the 12-port manifold, and three with the 24-port unit.
3. Select and position one or more of the shelves that best accommodates your collection vessel. 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 delivery needles in the manifold lid will be inside the collection vessels (Fig. 6).
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 (Figs. 6 & 7).
5. When test tubes are used as collection vessels, use the dimple shelves to center the tubes. 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. The manifold is ready to attach your SPE columns in the stopcocks, and proceed with sample preparation (Fig. 8).



Fig.2

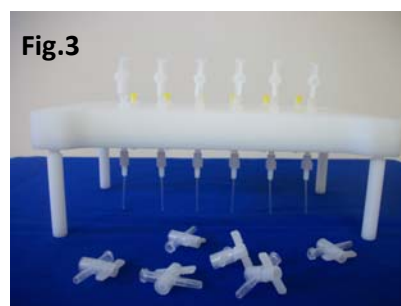


Fig.3

Please be noted that only when sample fractions need to be retained and collected in the collection vessels for further processing or analysis, the rack with collection vessels should be placed inside the glass vacuum chamber. All other liquid wastes are automatically transferred from the glass vacuum chamber to the liquid waste trap.

## VACUUM CONNECTION AND MANSFIELD OPERATION

1. Install a liquid waste trap or PTFE filter between the manifold vacuum chamber and the vacuum source.
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 mercury.** Exceeding this vacuum will damage the system and void the manifold warranty. A vacuum of 3 to 5 inches of Hg can pull reasonable flow through the common SPE columns. 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!

A vacuum bleed valve and gauge assembly in 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 clean-up, 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 25mm syringe filter is first inserted into the female luer of the stopcock, and then the SPE column, purify cartridge, or disk is placed into the female luer of the filter. Syringe filters using 0.45µm 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 eluants.

### Order Info

Complete LukPrep™-12 Port Vacuum Manifold: cat.# L2080120

Complete LukPrep™-24 Port Vacuum Manifold: cat.# L2080240

### LukPrep™ Vacuum Manifold Replacement Accessories

Description	12-port accessories	24-port accessories
A set of replacement lid, gasket, and stopcocks	L2080121	L2080241
A set of glass chamber	L2080122	L2080242
A set of collection rack-shelves, C-clips, and posts	L2080123	L2080243
Oil free diaphragm vacuum pump	L2080124	L2080244

Any questions please contact your distributor or us directly. [www.luknova.com](http://www.luknova.com) contact/quote/order online



Fig.4

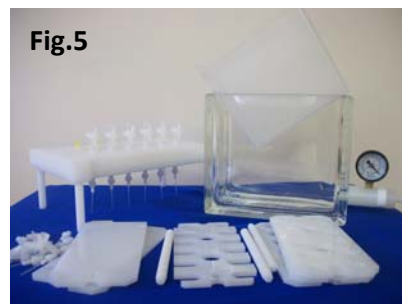


Fig.5



Fig.6



Fig.7



Fig.8