



Empore™

Extraction Disk Plate Accessories

PRODUCT _____
Information

Vacuum Manifold

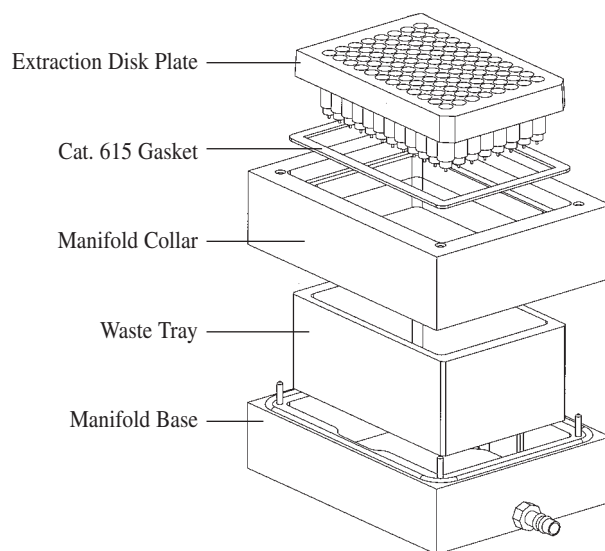
General Information

The 3M™ Empore™ High Performance Extraction Disk Plate differs in design from plates offered by other manufacturers and requires a specific vacuum manifold that is supplied by 3M. Manifolds supplied by different plate manufacturers are specific to the design of their plates and cannot generally be used with plates from other manufacturers. In some cases, the use of spacers to raise/lower the height of a collection device inside the manifold may overcome some incompatibility, but must be determined for each combination of manufacturer's manifold and the collection device.

Product Information

The 3M™ Empore™ Cat. 610 Vacuum Manifold is illustrated below. The waste tray shown is used for liquid collection during the conditioning, loading and washing steps of the extraction process. During the elution step, several types of collection devices may be used. These include deep well plates, shallow well plates, or racks of collection tubes.

3M™ Empore™ Cat. 610 Vacuum Manifold



Instructions For Use

1. Place waste collection tray inside manifold base.
2. Place transparent manifold collar on top of manifold base with the shallow side up.
3. Place Empore extraction disk plate in clear manifold collar.
4. Seal any unused wells in the extraction disk plate with sheets of 3M™ Empore™ Cat. 660 Sealing Tape to maintain uniform vacuum.
5. Condition disk, load sample, and wash.
6. Replace waste tray with collection plate for elution of analytes.
7. Check collection plate compatibility to assure the nozzle and collar of the Empore plate fit inside the collection well.
8. Use the spacers provided with the Empore manifold to adjust collection plate height.
9. Fit the nozzles and collars of the Empore plate into the top of the well of the collection plate. Vacuum will lower the nozzle into the collection plate wells during elution, minimizing the potential for cross contamination between wells.

Vacuum Recommendations

For best results, an initial vacuum setting of 5-10 inches Hg (0.17-0.51 bar) is recommended. Increase vacuum to 15-20 inches Hg (0.51-0.68 bar) to establish uniform flow.

Compare the effect of loading sample at both high and low vacuum pressures (fast and slow loading speeds). If an analyte has a low affinity for the sorbent, it may need to pass through the sorbent bed more slowly to allow sufficient attraction to occur.

When disrupting ionic interactions, such as secondary silanol interactions or ion exchange interactions, lower vacuum/slower flow may be required to allow adequate time for the reaction to occur.

Lower vacuum during the elution step is required when using shallow well collection plates. This helps prevent splashing and cross contamination of samples.

Replacement Parts

Replacement gaskets are available with the vacuum manifold assembly. The gasket can become worn over time and the seal between the plate and the manifold will be affected. This may result in poor vacuum pressure and negatively effect flow rates. The gasket should

be checked regularly and replaced when it becomes worn.

Cat. 615 replacement gaskets are sold 5 gaskets per bag.

Product Characteristics

Feature	Advantage	Benefit
Transparent top	Visual verification of elution process	Quality assurance Ensure samples are processed uniformly
Replaceable gasket	Ensures vacuum seal Replace gasket instead of entire manifold or manifold top	Quality assurance and better performance Saves money
Chemically resistant base and waste tray	Allows flexibility in reagent usage	Prolongs manifold life
Compatible with a variety of collection devices	Versatile Compatible with a variety of auto injectors	Convenient
Anti-skid base	Prevents slippage during bench top operation	Improved safety Convenient

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