



Empore™

High Performance Extraction Disk Products

PRODUCT _____
Information

Standard and High Density Membranes

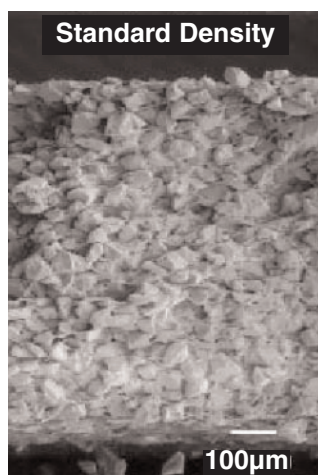
General Information

3M™ Empore™ Extraction Disk Products are available in two membrane formats:

The standard density (SD) Empore disk products are designed for use with biological matrices and are recommended as the first choice for most bioanalytical applications. The high density (HD) Empore disk products are intended for smaller elution volumes and relatively clean sample matrices.

Product Information

Both SD and HD membranes are made using a 3M patented technology which entraps sorbent particles within an inert matrix of polytetrafluoroethylene. The resulting particle-loaded membrane (90% particles: 10% PTFE, by weight) results in a denser, more uniform extraction bed than can be achieved in a traditional SPE cartridge made from loosely packed particles.



3M™ Empore™ Extraction Disk
45-55 µm particle size



3M™ Empore™ Extraction Disk
8-16 µm particle size

The dense particle packing and uniform distribution within SD and HD Empore disks provide efficient and reproducible sample preparation. The diffusion distance between particles is minimized, adsorption is more efficient, and extraction can be accomplished using less sorbent mass to provide the following performance gains:

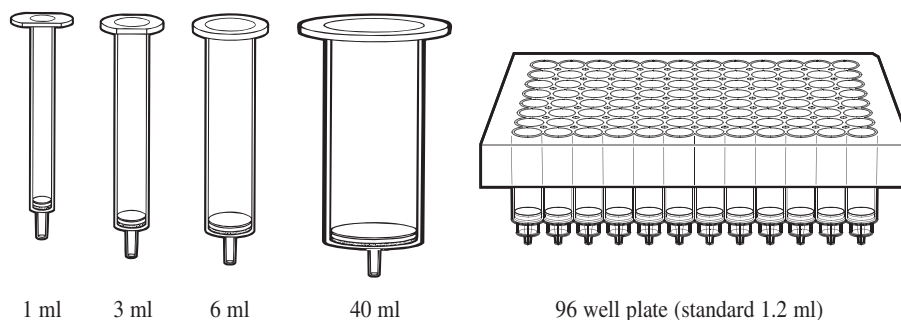
- Small elution volumes
- Reduced time for solvent evaporation or elimination of this step completely
- Channeling effects eliminated
- Excellent reproducibility/low CVs

Product Characteristics

Feature	Standard Density (SD)	High Density (HD)
Applications	For a wide range of samples and volumes including plasma and urine	Suggested for clean samples and when lower elution volumes are desired
Sorbent particle size	Standard, 45-55 μ	Small, 8-16 μ
Membrane thickness	0.75 mm approx.	0.5 mm approx.
Vacuum requirements	5-10 inches Hg, (0.17-0.34 bar), depending on sample viscosity	Requires strong vacuum of 15-20 inches Hg, (0.68-0.68 bar) or greater

Product Formats

A selection of Empore SD and HD membranes is available in four sizes of extraction disk cartridges: 4 mm/1 mL, 7 mm/3 mL, 10 mm/6 mL and 20 mm/40 mL. Empore SD membranes are also available in 96-well microtiter plate format, which is ideal for sample preparation prior to LC/MS and other high throughput applications. Each well of the 3M™ Empore™ Extraction Disk Plate has an effective membrane diameter of 5.5 mm and reservoir volumes of 1.2 or 2.5 mL. Methods can be easily transferred from disk cartridges to disk plates.



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