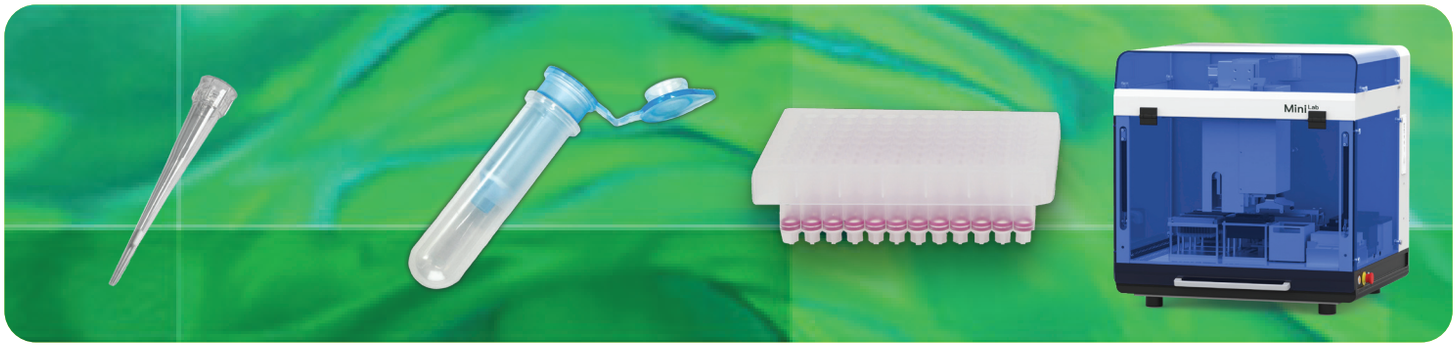
Empore™ Proteomics Catalog

Explore innovative tools to accelerate your proteomics workflow and drive discovery. Unlock the potential with Empore™

Protein Sample Preparation



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www.cdsanalytical.com/empore

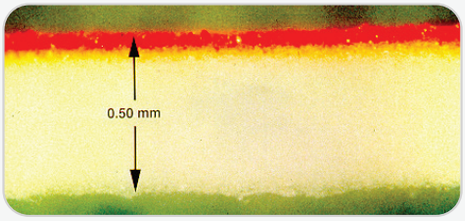
Contents

Introduction

Empore solid phase extraction (SPE) products were originally developed in 1989 by the 3M Company producing high quality disks, cartridges, and 96-well plates. As of 2019, CDS Analytical has become the proud new home of the Empore product line. With a new clean room at our facility in Oxford, PA, CDS Analytical continues to use the same formula and manufacturing process that brought users the historic quality of Empore products for more than 30 years.

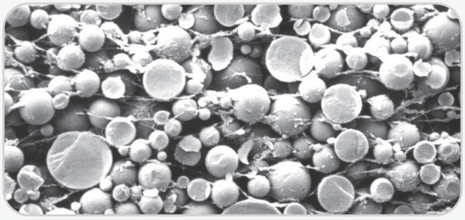
Empore solid phase extraction products are produced by trapping sorbent particles within an inert matrix of an engineered polymer. The resulting particle-loaded membrane, featuring sorbent particles in either a silica- or resin-based format, yields a more uniform and more densely packed particle bed than traditional loosely packed SPE products.

The resulting Empore product developed from our unique manufacturing process brings increased efficiency and reproducibility to SPE sample preparation methods.



Greatest Uniformity

Sorbent particles are packed uniformly in the Empore membrane providing superior extraction at high flow rates, making Empore excellent for high-throughput applications.

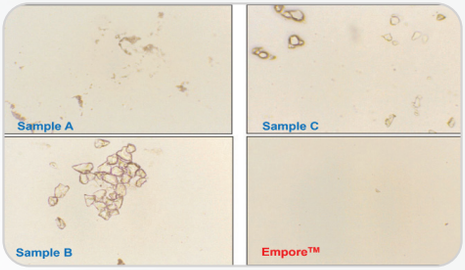


Highest Density

The high packing density of the Empore membrane reduces the distance between sorbent particles greatly improving extraction efficiency by eliminating the

Low Elution Volume

Sorbent particles are confined with the thin Empore membrane, which means less solvent is required for extraction, reducing or eliminating evaporation steps and reducing total solvent usage.



Less Fine Particles

The densely packed Empore membrane greatly reduces free fine particles resulting in a clean extract for analysis.

Introduction

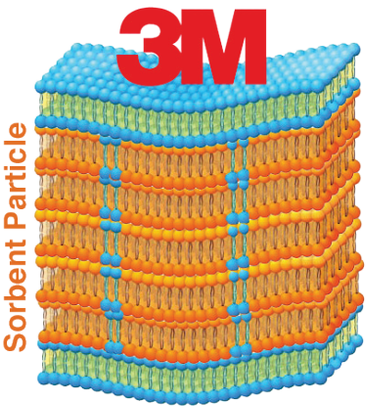
ISO-9 Clean Room

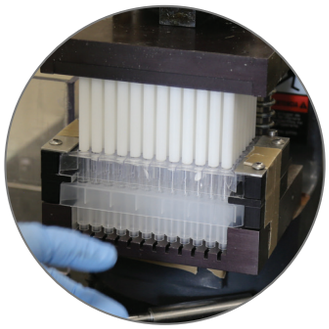
Empore products are manufactured at our brand new, GMP-compliant clean room at our facility in Oxford, Pennsylvania.

Visual Inspection

Our facility is equipped with the cutting-edge instruments needed to perform quality control and assurance to ensure that each product maintains the historic high quality of the Empore line.

QA/QC Analytical Lab

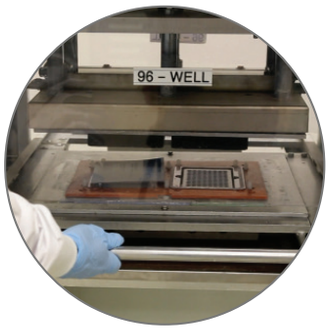




Automated Production

Application testing of Empore SPE products is performed in our state-of-the-art GC-MS instrument facility.

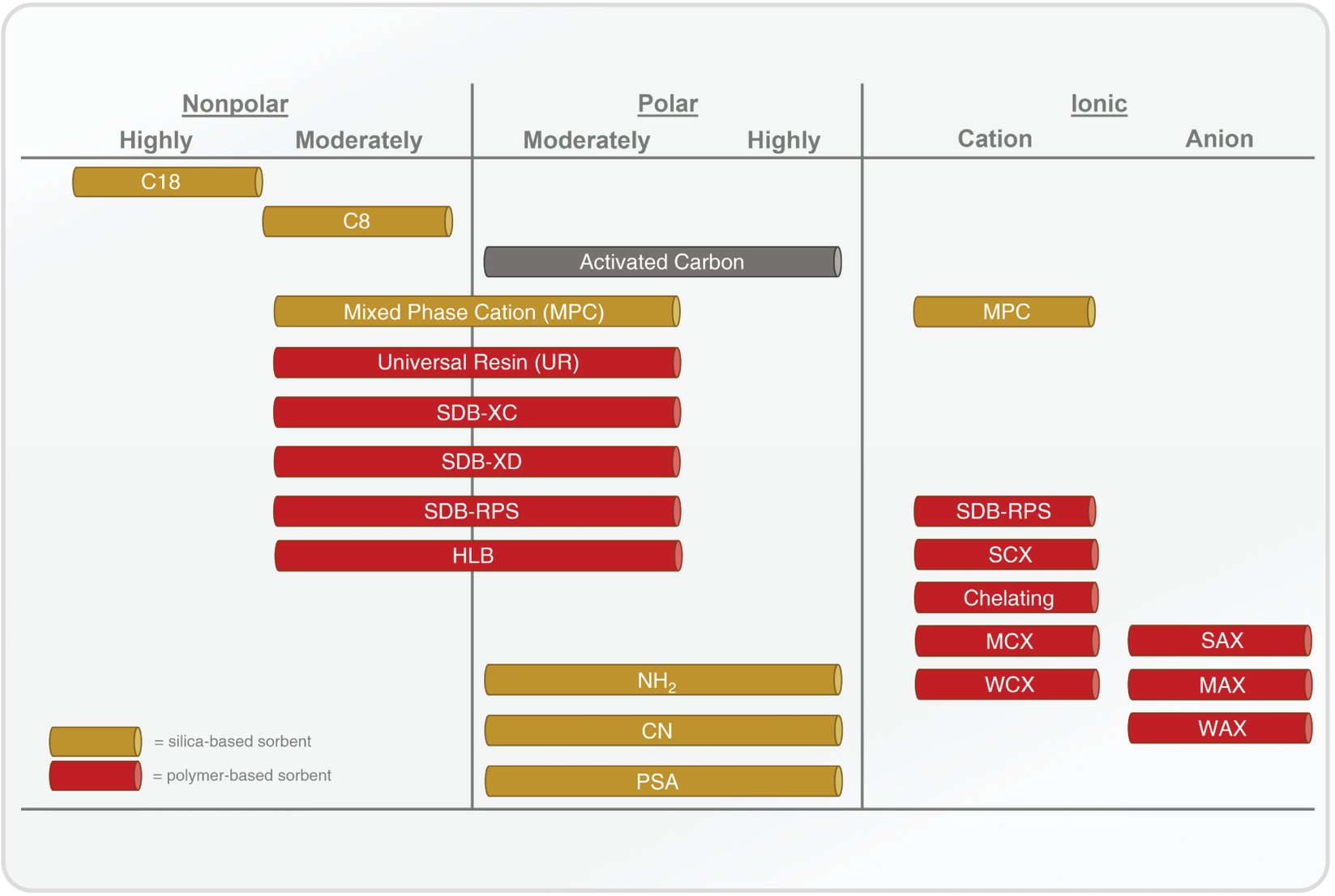
Highest Quality Chemicals

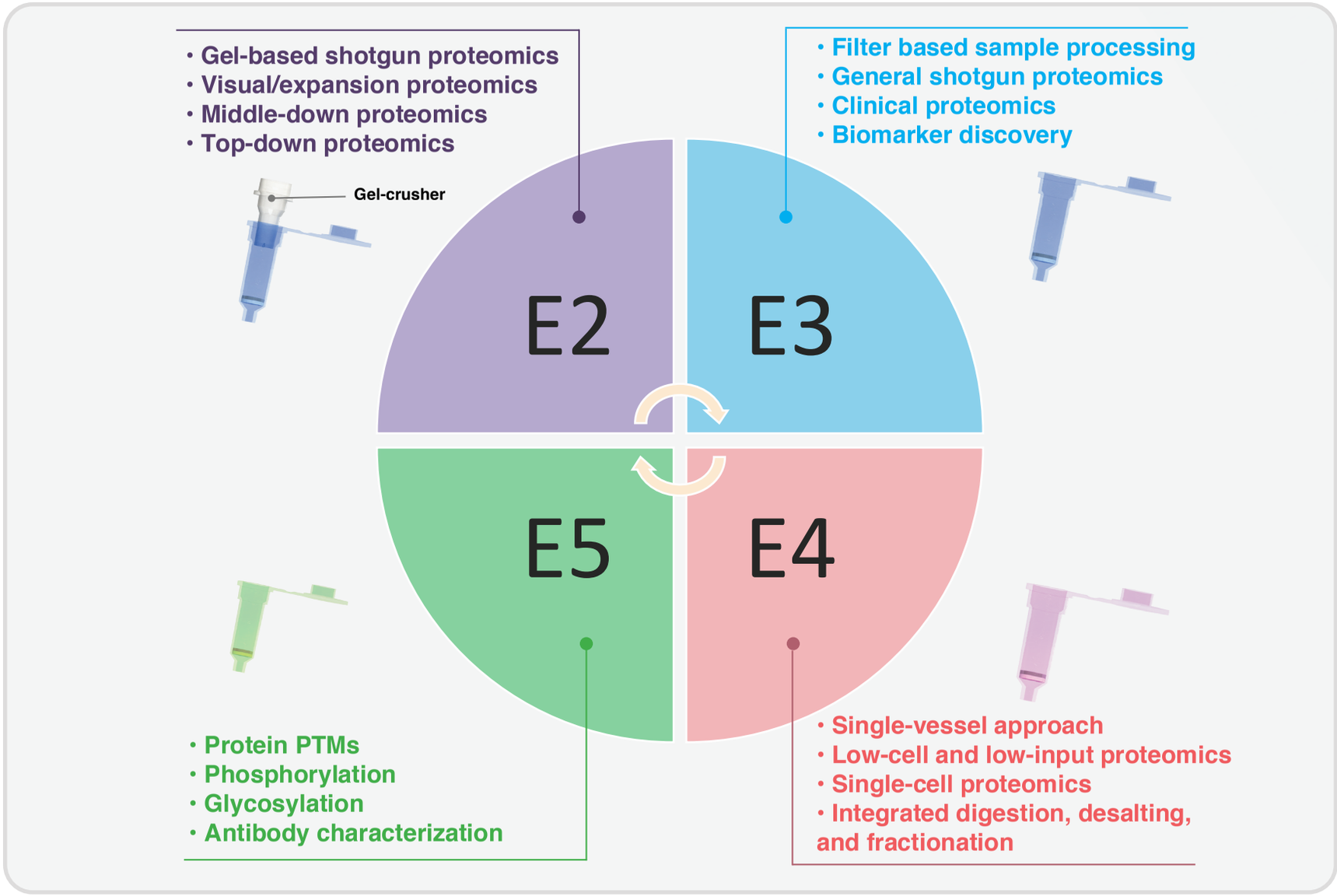


Precision Tooling

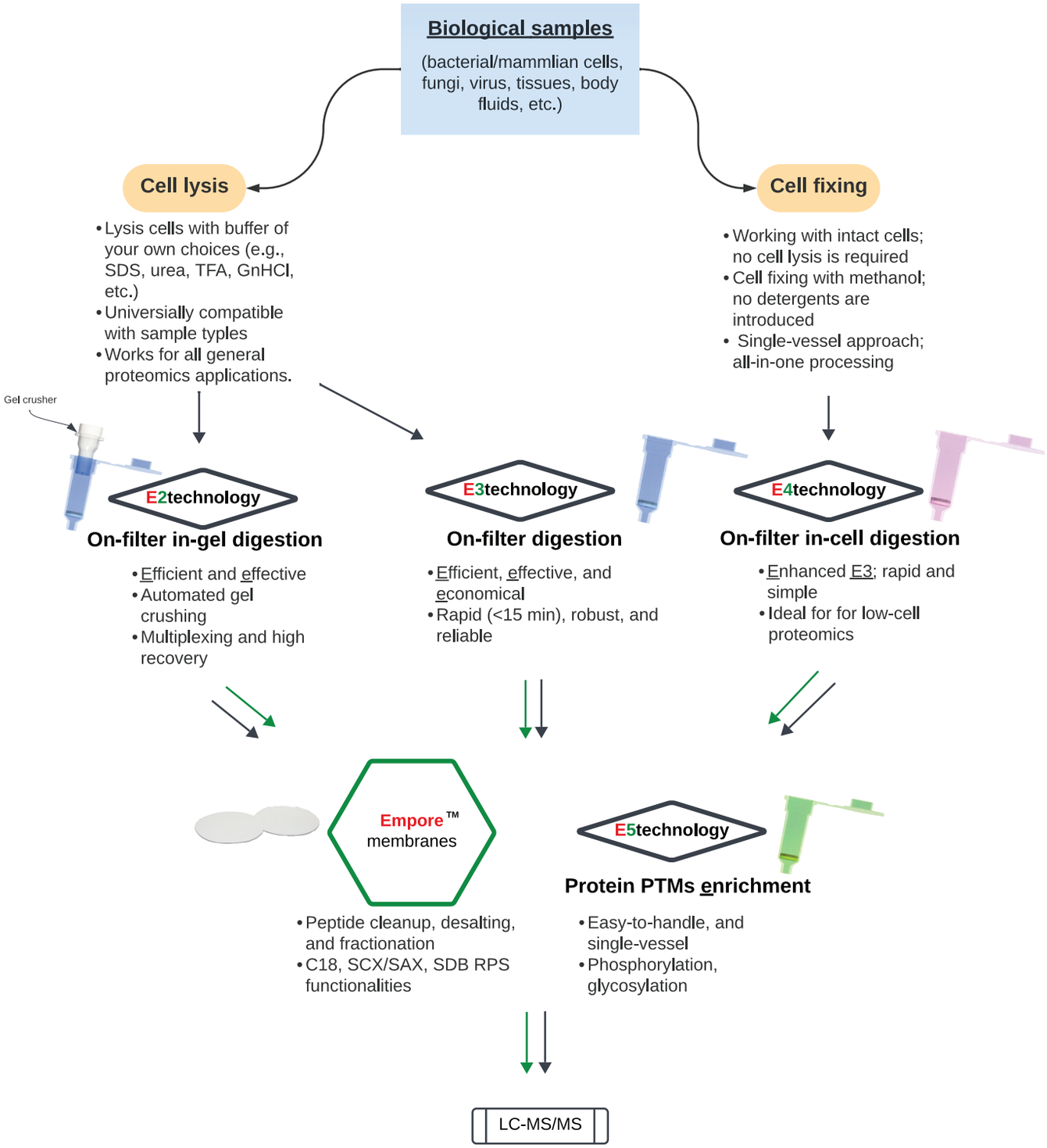
Flow Rate Testing

Sorbent Chemistry Selection Guide

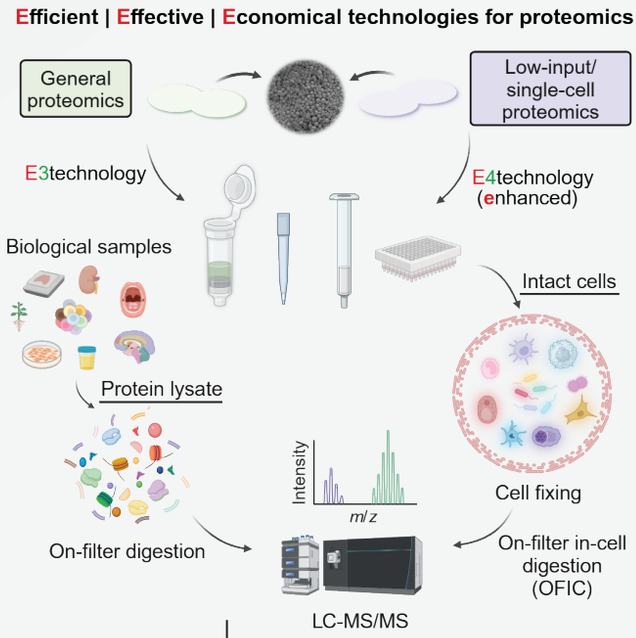



• Gel-based shotgun proteomics
• Visual/expansion proteomics
• Middle-down proteomics
• Top-down proteomics
Gel-crusher
• Filter based sample processing
• General shotgun proteomics
• Clinical proteomics
• Biomarker discovery
E2
E3
E5
E4
• Protein PTMs
• Phosphorylation
• Glycosylation
• Antibody characterization
• Single-vessel approach
• Low-cell and low-input proteomics
• Single-cell proteomics
• Integrated digestion, desalting, and fractionation

Empore™ E-Series Product Work Flow



E3technology™



Future of Proteomics Starts Here

E3technology™, introduced as a latest addition to the Empore™ E-Series is an **efficient, effective**, and **economical** approach for proteomics sample preparation. Its accessibility makes it suitable for users of any expertise level, providing digestion-ready samples in mere minutes while completely eliminating various detergents and interferences, yet it is significantly cost-effective.

The versatility of E3technology™ is evident in its diverse formats, such as **E3tip™**, **E3filter™**, **E3cartridge™** and **E3plate™**, accommodating a broad spectrum of sample types in terms of volume, quantity, and size.

The approach is extremely robust, and can reliably process samples ranging from sub-microgram to milligram levels, ensuring reproducibility at a low cost.

E-Series is multi-functional. **E-Series is able do all the preps in a single vessel**, which includes protein cleanup, protein digestion, peptide desalting, and even fractionation and enrichment.

E3technology™ exhibits potential for processing rare cells and conducting single-cell proteomics, expanding its utility in proteomic research.

Key Features:

1. **Universally compatible with various detergents and lysis conditions**
2. **No technical barrier to entry-level and non-experts; stress-free**
3. **Versatile formats and high flexibility**
4. **Multi-functional and integrated platform**
5. **Single-vessel processing and minimal sample loss**

Product Features:

- **Efficient:** <15-min hands-on time
- **Effective:** Compatible with a variety of upstream cell lysis conditions (e.g., urea, SDS, RIPA, TFA, etc.)
- **Economical:** To bridge gaps between genomics and proteomics products
- **Robust:** Zero technical barrier to even entry-level biomedical scientists
- **Versatile:** E3tips™, E3filter™, and E3plate™ to satisfy different sample volumes, concentrations, quantities, and the need for automation.
- **Stress-free:** No liquid transfer, no concerns of any free-beads related issues (protein-bead ratios, beads sticking to tube walls and surfaces, cross-contaminations, etc.)

Product Listings:

Thumbnail	Product Name	Format	Size	Quantity	Product	Catalog
	E3tip™	Pipette Tips	10 µL	25 / 96	70-2019-3002-3	6601
	E3tip™	Pipette Tips	200 µL	25 / 96	70-2019-3001-1	6601
	E3filter™	Spin Column	500 µL	25 / 100	70-2019-3101-0	6701
	E3cartridge™	Cartridge	3 mL	50 / 150	70-2019-3103-4	6703
	E3plate™	96-well plate	1.2 mL	1 / 12	70-2019-3201-9	6801

Quick Order

Application Notes:

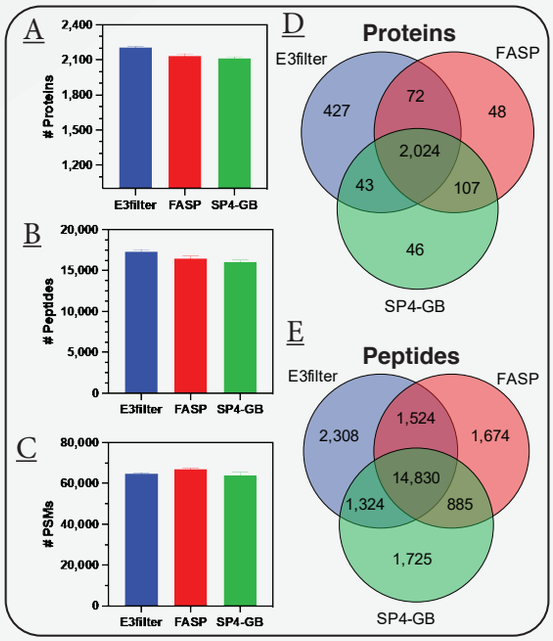


Figure 1. Qualitative assessment of E3technology (E3filter) for E. coli proteome analysis.
(A-C) Comparison of the number of proteins, peptides, and PSMs between the E3filter, FASP, and SP4-GB approaches. Error bars represent three replicates. (D-E) Overlapping analyses of proteins and peptides derived from the three methods.

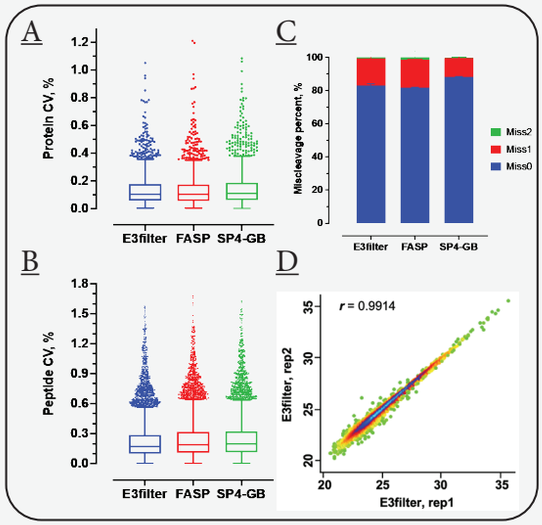


Figure 2. Quantitative assessment of E3technology (E3filter) for E. coli proteome analysis.
(A) Coefficient of variation of quantified proteins by the three methods. (B) Coefficient of variation of quantified peptides. (C) Percentages of missed cleavages. (D) Pearson correlation of replicate experiments of E3technology.

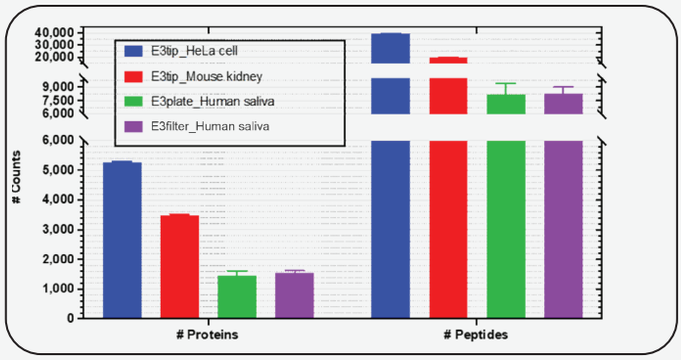


Figure 3. Applying E3technology to various sample types.
Mammalian cell (HeLa), tissue (mouse kidney), and body fluid (human saliva) were tested using E3tip, E3filter, or E3plate, respectively. Histograms showed the identification rates of unique proteins and peptide groups. Error bars represent three biological replicates.

Additional Applications

E4technology™ is designed for global proteome analysis. It combines four key advantages:

- Enhanced sensitivity
- Efficient workflow
- Effective results
- Economical cost

E4technology™ also allows for the innovative "On-Filter In-Cell" (OFIC) method for low-cell or single-cell proteomics.

How It Works

1. No Cell Lysis Required
   - Proteins are digested directly in methanol-fixed cells:
     - Methanol dissolves cell membrane lipids, making cells porous and permeable to enzymes
     - Eliminates cell lysis and protein extraction steps, and minimizes sample loss
2. All-in-One Filter Device
   - Entire workflow (fixation, reduction, alkylation, digestion, and desalting) occurs in a single filter device
     - Reagents are removed via centrifugation after each step, preventing chemical carryover
     - Built-in functional resins enable instant peptide desalting, skipping time-consuming "dry-resuspend" steps
3. Flexible Formats
   - Adaptable to diverse sample types and scales using:
     - E4tip™, E4filter™, E4cartridge™, E4plate™, etc
   - Handles samples from individual cells to milligram levels with high reproducibility.

Product Features:

- **Efficient**: <15-min hands-on time
- **Effective**: Eliminate lysis step and surfactant usage keeping samples clean
- **Economical:** To bridge gaps between genomics and proteomics products
- **Robust:** Zero technical barrier to even entry-level biomedical scientists
- **Versatile:** E4tips™, E4filter™, E4cartridge™, and E4plate™ to satisfy different sample volumes, concentrations, quantities, and the need for automation
- **Stress-free:** No liquid transfer, and no concerns of any free-beads related issues (protein-bead ratios, beads sticking to tube walls and surfaces, cross-contaminations, etc.)

E4technology™

E4technology™

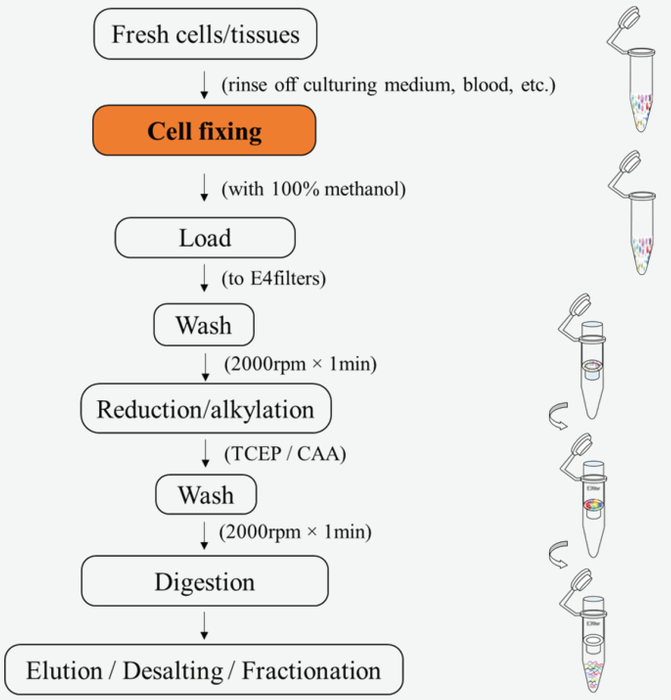
Key Features:

1. **All-in-one enhanced single-vessel-approach**
2. **Processing intact cells directly**
3. **Excluding cell lysis and protein extraction steps**
4. **Minimal sample loss and high sensitivity**
5. **Enabling deep proteome profiling**

Product Listings:

Thumbnail	Product Name	Format	Size	Est. Capacity	Quantity	Product	Catalog
	E4tip™	Pipette Tips	10 µL	100-1000 cells	25 / 96	70-2019-3004-7	6602
	E4tip™	Pipette Tips	200 µL	1K-10K cells	25 / 96	70-2019-3003-5	6602
	E4tip™ Ultra	Pipette Tips	200 µL	For single cell and ultra-low cells	25 / 96	70-2019-3005-9	6603
	E4tip™ XL	Pipette Tips	200 µL	10K-50K cells	25 / 96	70-2019-3006-0	6604
	E4filter™	Spin Column	500 µL	50K-5M cells	25 / 100	70-2019-3102-2	6702
	E4cartridge™	Cartridge	3 mL	50K-5M cells	50 / 150	70-2019-3105-8	6705
	E4plate™	96-well plate	1.2 mL	50K-5M cells	1 / 12	70-2019-3202-7	6802

E4technology™ Workflow:



E2technology™

E2technology™ was developed to address the labor-intensive challenges associated with filter-aid-in-gel digestion. Say goodbye to the tedious task of slicing gels bands into small pieces. With our innovative E2 Gel-Crusher, simply place your gel directly into the device and centrifuge.

The process is quick, effortless, automatable, high-recovery, and loss-free, transforming what was once a time-consuming chore into a trivial step in your workflow.

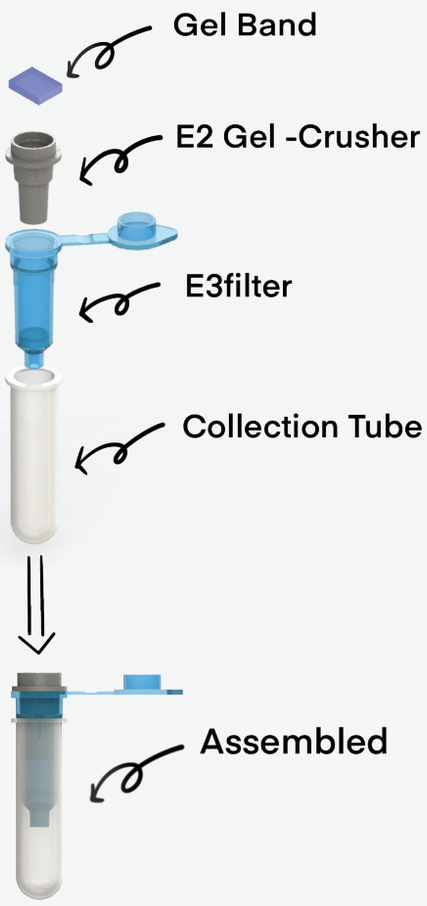
E2 Gel-Crusher

Left: Manually cut 9mm x 9mm gel band into 4mm x 1mm

Right: 9mm x 9mm gel band after centrifugation in E2 Gel-Crusher at 7,000 RPM

E3filter™ after centrifugation at 7,000 RPM

How It Works

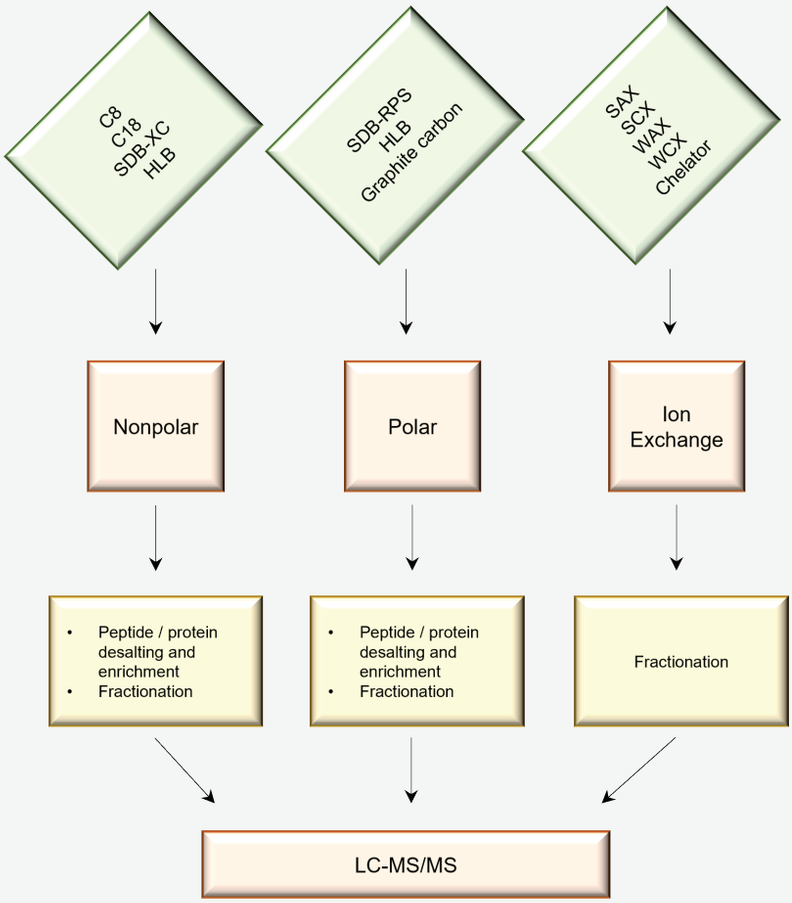


Product Listings:

Thumbnail	Product Name	Format	Size	Quantity	Product	Catalog
	E2 Gel-Crusher	N/A	N/A	25/100	70-2019-3104-6	6704

Application Road map: Small Volume Samples

StageTips, Spin Columns, Cartridges, And 96-Well Plates



Empore™ SPE StageTips

StageTips

Reduce time and money spent on your proteomics LC-MS sample preparation with the original Empore SPE StageTips. Empore StageTips are perfect for rapid peptide / protein desalting and fractionation applications at acidic, neutral, and basic pH conditions. Combine multiple layers of the same sorbent or different sorbents of the Empore membrane to increase capacity and enhance recovery and detection for peptide analysis.

SDB - Styrenedivinylbenzene
SAX - Strong anion exchange
SCX - Strong cation exchange

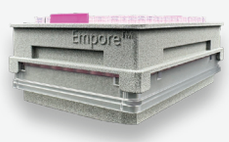
Product Listings:

Sorbent	Size (µL)	Quantity	Product Number	Catalog Number
C18-HD	200	96 / 960	70-2019-1001-3	6091
C18-HD, 3 layers	200	96 / 960	70-2019-1034-0	6114
C18-HD, 4 layers	200	96 / 960	70-2019-1009-0	6099
C18-HD, 6 layers	200	96 / 960	70-2019-1010-9	6100
C8-HD	200	96 / 960	70-2019-1002-5	6092
SDB-XC	200	96 / 960	70-2019-1003-7	6093
SDB-XC, 4 layers	200	96 / 960	70-2019-1013-3	6103
SDB-XC, 6 layers	200	96 / 960	70-2019-1014-1	6104
SDB-RPS	200	96 / 960	70-2019-1004-9	6094
SDB-RPS, 4 layers	200	96 / 960	70-2019-1011-7	6101
SDB-RPS, 6 layers	200	96 / 960	70-2019-1012-5	6102
SAX	200	96 / 960	70-2019-1005-2	6095
SCX	200	96 / 960	70-2019-1006-4	6096
C18 / SCX	200	96 / 960	70-2019-1007-6	6097
C18 / SCX / C18	200	96 / 960	70-2019-1008-8	6098
HLB-SD	200	96 / 960	70-2019-1018-2	6108
SDB-RPS, 2 layers	100	384*2	70-2019-1060-1	6150
C18-HD	10	96 / 960	70-2019-1019-0	6108
SDB-RPS	10	96 / 960	70-2019-1030-2	6110

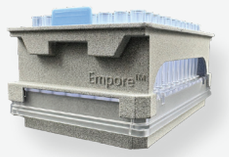
StageTips Accessories

Accessory	Quantity	Product Number	Catalog Number
StageTips Ring Adaptor (10 µL, 200 µL)	25	70-2019-1023-7	691
	*2 mL collection tube and StageTips sold separately		

Accessory	Quantity	Product Number	Catalog Number
StageTips Rack Adaptor for 10 µL tips	1	70-2019-1027-2	697
	*Clear Reservoir and 10 µL StageTips sold Separately		

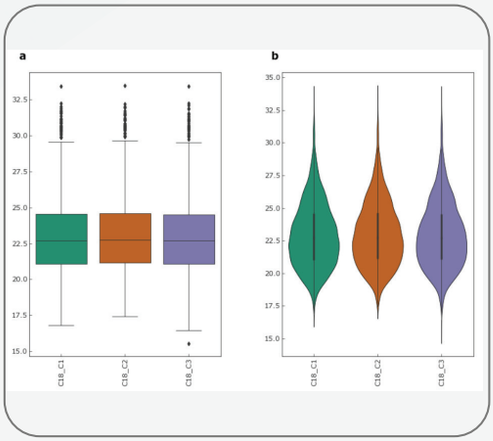


Accessory	Quantity	Product Number	Catalog Number
StageTips Rack Adaptor for 200 µL tips	1	70-2019-1022-5	695
	*Clear reservoir and 200 µL StageTips sold separately		

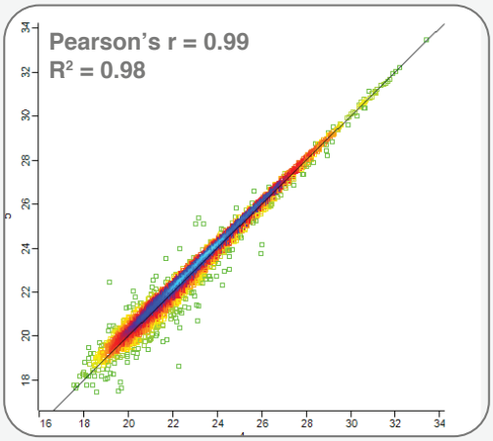


Tip-to-Tip Reproducibility:

Reproducibility Testing for C18 StageTips HeLa Cell Lysate Samples



Box and violin plots for C18 StageTips (n = 3) show tip-to-tip consistency for peptide identifications.

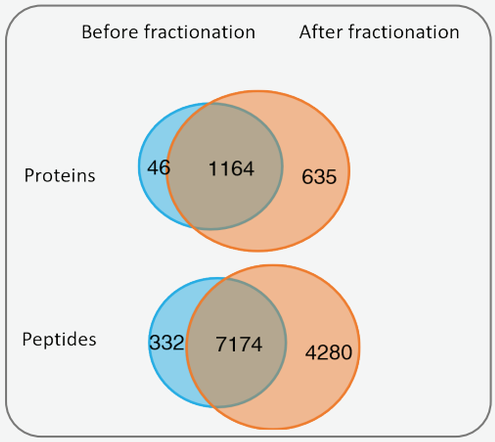


Scatter plot shows technical reproducibility of C18 StageTips.

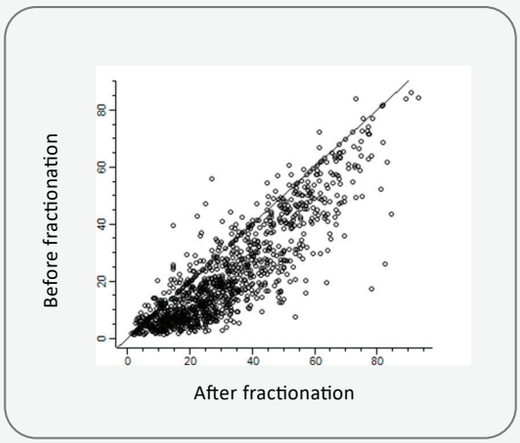
Quick Order

Example Application:

High pH Peptide Fractionation of HeLa Cell Lysate



Venn diagrams show number of proteins and peptides identified before and after high-pH fractionation, respectively.



Comparison of protein sequence coverage before and after high-pH fractionation.

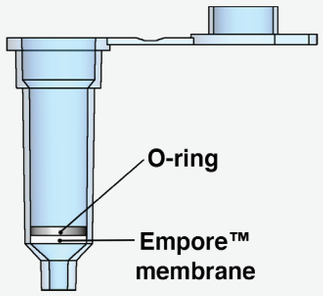
Additional Applications

Empore™ Spin Columns

Spin Columns

Empore™ Spin Columns are now available pre-pacwwked with the Empore™ membrane offering researchers a much-needed alternative to arduous and monotonous manual packing procedures.
This quick and easy-to-use spin column format is ideal for preparative applications and large scale proteomics. Empore™ membrane has high capacity enabling small-volume desalting and fractionation of peptides and proteins.

1. High capacity and recovery rate with low elution volume
2. Chemically resistant, low-binding polypropylene material
3. Standard layers of Empore™ membrane and leakage-free after rigorous testing
4. Highly customizable for customer needs
5. Same Empore™ membrane used in the Empore™ product line

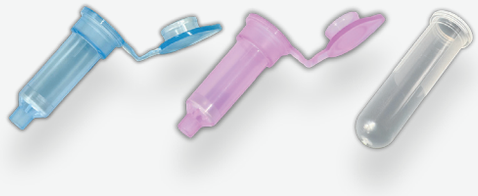


Empore™ Spin Column

Product Listings

Sorbent	Size (µL)	Quantity	Product Number	Catalog Number
C18-HD	500	25 / 100	70-2019-2001-0	6491
C8-HD	500	25 / 100	70-2019-2002-2	6492
SDB-XC	500	25 / 100	70-2019-2003-4	6493
SDB-RPS	500	25 / 100	70-2019-2004-6	6494
SAX	500	25 / 100	70-2019-2005-8	6495
SCX	500	25 / 100	70-2019-2006-1	6496
C18-HD/RPS	500	25 / 100	70-2019-2007-3	6701

HD - High Density
SD - Standard Density
SAX - Strong Anion Exchange
SCX - Strong Cation Exchange



Technical Specifications

Reverse Phase Phases	C18-HD, C8-HD, SDB-XC
Mixed-Mode Phases	SDB-RPS
Ion Exchange Phases	Anion Exchange (SAX), Cation Exchange (SCX)
Volume	500 µL (Up to its collar)
Layers of Empore™ Membrane	1
Particle Weight	15 mg (C18-HD)
Diameter	7 mm

Spin Columns Accessories

Accessory	Quantity	Product Number	Catalog Number
2mL Collection Tube	25 / 100	70-2019-2021-0	698

*Each spin column is accompanied by a 2 mL collection tube but can be ordered upon request.

Quick Order

Example Application

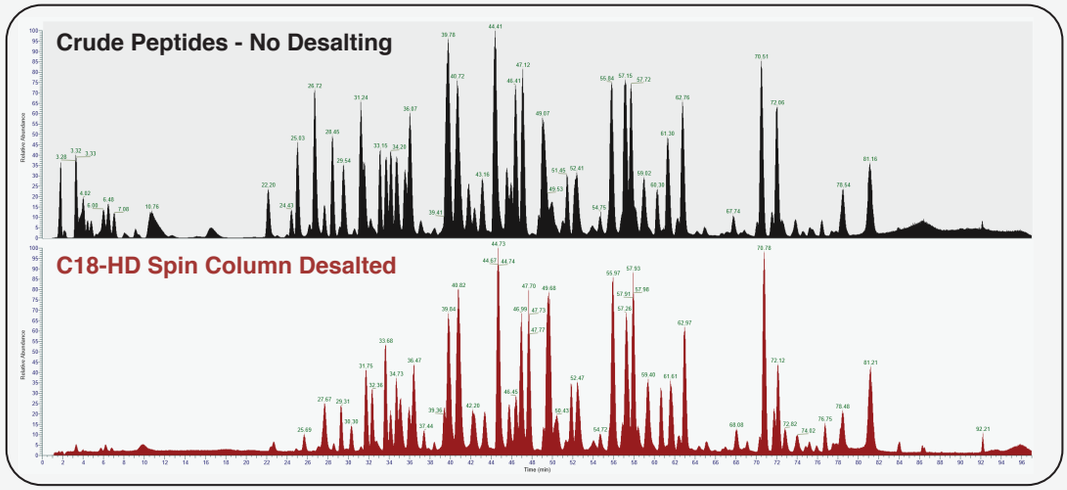
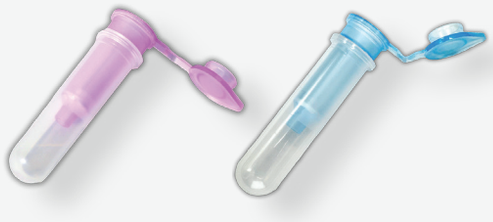


Figure1. Total Ion Chromatogram (TIC) of BSA digested peptides before (top) and after desalting (bottom).
100 µg of BSA peptides were desalted on C18-HD Spin Column and analyzed by LC-MS.



Additional Applications

Empore™ Extraction Disk Cartridges

Cartridges

The cartridge is molded from a polypropylene resin. An Empore extraction disk is secured in place at the bottom of each cartridge with a sealing ring with a proprietary prefilter placed above the Empore disk. This prefilter aids in preventing particulates and macromolecules from reaching the underlying membrane and improves the flow of biological samples, such as serum and plasma, through the cartridge.

Product Listings: Silica-Based Sorbents

Sorbent	Size	Quantity	Product Number	Catalog Number
C8-SD	1 mL	100 / 300	98-0604-0191-0	4114SD
	3mL	50 / 150	98-0604-0192-8	4214SD
	3mL (2-layer)	50 / 150	98-0604-0193-6	4214SD2
	6mL	30 / 90	98-0604-0194-4	4314SD
	6mL (2-layer)	30 / 90	98-0604-0195-2	4314SD2
C8-HD	1 mL	100 / 300	98-0604-0188-6	4114HD
C18-SD	1 mL	100 / 300	98-0604-0197-7	4115SD
	3mL	50 / 150	98-0604-0198-5	4215SD
	3mL (2-layer)	50 / 150	98-0604-0196-9	4215SD2
	6mL	30 / 90	98-0604-0199-3	4315SD
	6mL (2-layer)	30 / 90	98-0604-0200-1	4315SD2
Mixed Phase Cation (MPC)	1 mL	100 / 300	98-0604-0180-9	4130SD
	3mL	50 / 150	98-0604-0181-7	4230SD
	3mL (2-layer)	50 / 150	98-0604-0182-5	4230SD2
	6mL	30 / 90	98-0604-0183-3	4330SD
	6mL (2-layer)	30 / 90	98-0604-0184-1	4330SD2

Product Listings: Polymer-Based Sorbents

Sorbent	Size	Quantity	Product Number	Catalog Number
SDB-XC	1 mL	100 / 300	98-0604-0201-7	4140HD
	3mL	50 / 150	98-0604-0202-5	4240HD
	3mL (2-layer)	50 / 150	98-0604-0209-8	4240HD2
	6mL	30 / 90	98-0604-0203-3	4340HD
	6mL (2-layer)	30 / 90	98-0604-0204-1	4340HD2
SDB-RPS	1 mL	100 / 300	98-0604-0205-6	4141HD
	3mL	50 / 150	98-0604-0206-4	4241HD
	3mL (2-layer)	50 / 150	98-0604-0210-1	4241HD2
	6mL	30 / 90	98-0604-0207-2	4341HD
	6mL (2-layer)	30 / 90	98-0604-0208-0	4341HD2
HLB	1 mL	100 / 300	98-0604-0851-9	4180HD
	3mL	50 / 150	98-0604-0852-5	4280HD
	3mL (2-layer)	50 / 150	98-0604-0853-3	4280HD2
	6mL	30 / 90	98-0604-0854-1	4380HD
	6mL (2-layer)	30 / 90	98-0604-0855-7	4380HD2

HD = High Density
SD = Standard Density
SDB = Styrenedivinylbenzene
RPS = Reverse Phase Sulfonated
HLB = Hydrophilic Lipophilic Balance

Empore™ Extraction Disk Cartridges

Product Listings: Polymer-Based Sorbents

Sorbent	Size	Quantity	Product Number	Catalog Number
Anion-SR (SAX)	1 mL	100 / 300	98-0604-0501-0	4152HD
	3mL	50 / 150	98-0604-0502-8	4252HD
	3mL (2-layer)	50 / 150	98-0604-0211-3	4252HD2
	6mL	30 / 90	98-0604-0503-6	4352HD
	6mL (2-layer)	30 / 90	98-0604-0504-4	4352HD2
Cation-SR (SCX)	1 mL	100 / 300	98-0604-0505-7	4151HD
	3mL	50 / 150	98-0604-0506-5	4251HD
	3mL (2-layer)	50 / 150	98-0604-0212-3	4251HD2
	6mL	30 / 90	98-0604-0507-3	4351HD
	6mL (2-layer)	30 / 90	98-0604-0508-1	4351HD2

Quick Order

Silica Bed Mass Equivalencies - Empore Membrane vs. Traditional Loose-Packed Sorbent C8, C18, MPC, NH2, and PSA

Empore Effective Membrane Diameter	Cartridge Volume	Empore SD Sorbent Mass	Empore HD Sorbent Mass	Loose-Packed Sorbent Mass
4 mm	1 mL	5.5 mg	4 mg	50 mg
7mm	3 mL	17 mg	12 mg	100 mg
7mm	3 mL (2-layer)	34 mg	24 mg	200 mg
10 mm	6 mL	35 mg	24 mg	200 mg
10 mm	6 mL (2-layer)	70 mg	48 mg	500 mg

Polymer Bed Mass Equivalencies - Empore Membrane vs. Traditional Loose-Packed Sorbent SDB-XC, SDB-RPS, SAX, SCX, UR, Chelating, and HLB

Empore Effective Membrane Diameter	Cartridge Volume	Empore HD Sorbent Mass	Loose-Packed Sorbent Mass
4 mm	1 mL	2.2 mg	30 mg
7mm	3 mL	7.5 mg	60 mg
7mm	3 mL (2-layer)	15 mg	100 mg
10 mm	6 mL	15 mg	200 mg
10 mm	6 mL (2-layer)	30 mg	500 mg

Additional Applications

Empore™ 96-Well Plates

Well Plates

Empore 96-Well Solid Phase Extraction Plates are designed for high throughput solid phase extraction (SPE). 96 samples can be processed with a standard 8 row by 12 column microliter plate format. One disk plate can replace four separate runs on a conventional SPE manifold handling 24 individual cartridges per run. The 96-well format is ideal for sample preparation prior to LC/MS/MS or other high throughput analytical techniques.

The plate is molded from a polypropylene resin. An Empore extraction disk is secured in place at the bottom of each well with a sealing ring with a proprietary prefilter placed above the Empore disk. This prefilter aids in preventing particulates and macromolecules from reaching the underlying membrane and improves the flow of biological samples, such as serum and plasma, through the plate. A second sealing ring is placed above the prefilter to secure the layers in each well.

Product Listings :

Fractionation and desalting for protein and peptides

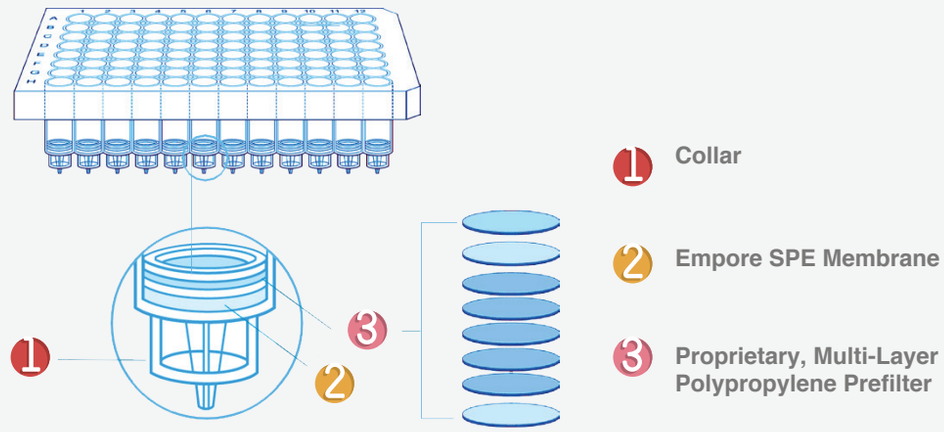
Sorbent	Size (mL)	Quantity	Product Number	Catalog Number
C8-SD	1.2 2.5	1 / 12	70-2007-3981-4 70-2007-3986-3	6014SD 6314SD
C18-SD	1.2 2.5	1 / 12	70-2007-3982-2 70-2007-3987-1	6015SD 6315SD
MPC-SD	1.2 2.5	1 / 12	70-2007-3983-0 70-2007-3980-6	6030SD 6330SD
SDB-XC-HD	1.2 2.5	1 / 12	98-0405-0081-4 98-0405-0086-7	6040HD 6340HD
SDB-RPS-HD	1.2 2.5	1 / 12	98-0405-0080-6 98-0405-0089-1	6041HD 6341HD
HLB-SD	1.2 2.5	1 / 12	98-0405-1000-3 98-0405-1006-4	6080SD 6380SD
MCX-SD	1.2 2.5	1 / 12	98-0405-1001-5 98-0405-1007-6	6081SD 6381SD
MAX-SD	1.2 2.5	1 / 12	98-0405-1002-7 98-0405-1008-8	6082SD 6382SD
WCX-SD	1.2 2.5	1 / 12	98-0405-1003-9 98-0405-1009-0	6083SD 6383SD
WAX-SD	1.2 2.5	1 / 12	98-0405-1004-1 98-0405-1010-9	6084SD 6384SD

HD = High Density
SD = Standard Density

Empore™ 96-Well Plates

Typical Extraction Plate Specifications

Membrane Diameter	5.5 mm
Well Volume	1.2 and 2.5 mL
Membrane Thickness	0.75 mm
Membrane Type	High Density (HD), Standard Density (SD)
Prefilter Composition	Graded Density Polypropylene
Bed Volume	18 µL
Bonded Silica Sorbent Mass	10 mg (C8 and C18, nominal); 15 mg (MPC, nominal)
Polymer Sorbent Mass	5 mg (nominal) both HD and SD
Mean Particle Size	50 µm (C8 and C18), 32 µm (MPC), 44 µm (universal resin), 16 µm (other polymers)
Membrane Composition	≥ 90% or greater sorbent particles ≤ 10% inert polymer matrix



Quick Order

96-Well Plate Accessories

Accessory	Quantity	Product Number	Catalog Number
Sealing Tape Pad	10 / 60	98-0604-0472-4	660

Additional Applications

Empore™ Positive Pressure Device For 96-Well Plate

Positive Pressure

The 96-well positive pressure solid phase extraction (SPE) device can be used in conjunction with either a 96-well plate or 1 mL edgeless cartridges to complete solid phase extraction operations, making it an ideal choice for high-throughput sample processing. When using edgeless cartridges, a 1 mL edgeless cartridge holder is required. The applicable pressure range for the 96-well positive pressure solid phase extraction device (0.3~0.7 MPa) is much higher than that of traditional negative pressure solid phase extraction devices, allowing for effective processing of more viscous samples.

Compared to traditional negative pressure solid phase extraction devices, positive pressure solid phase extraction devices have many advantages:

High reproducibility

The multi-branch plate with 96 independent ports and sealed gaskets can effectively control the gas output of each hole. Whether it's holes filled with liquid, partially dried liquid, or unused positions, the device can apply the same pressure to each port, ensuring consistent solid phase extraction operations between holes, greatly improving the reproducibility of analytical results.

Capability to handle high viscosity samples

This device can withstand pressures of 0.3~0.7 MPa (ideal pressure is 0.4 MPa), providing greater power for high viscosity samples. By adjusting the pressure, samples of different viscosities in the 96-well plate can pass smoothly. Switching the "selection valve" to the right (High Flow mode) provides high gas flow. Using the High Flow mode can significantly increase the gas flow through the SPE 96-well plate when processing viscous samples, significantly reducing the risk of sample clogging the plate holes.

Empore™ Positive Pressure Device For 96-Well Plate

Accurate SPE flow control

The device can precisely control the flow through the SPE plate. Switching the "flow selector" left/right (Low Flow mode; High Flow mode) adjusts the gas flow. In Low Flow mode, gas is delivered to the 96-well positive pressure device through an adjustable flow regulator and a rotor flowmeter (left side), providing uniform and controllable gas flow to the entire SPE 96-well plate, unaffected by empty holes.

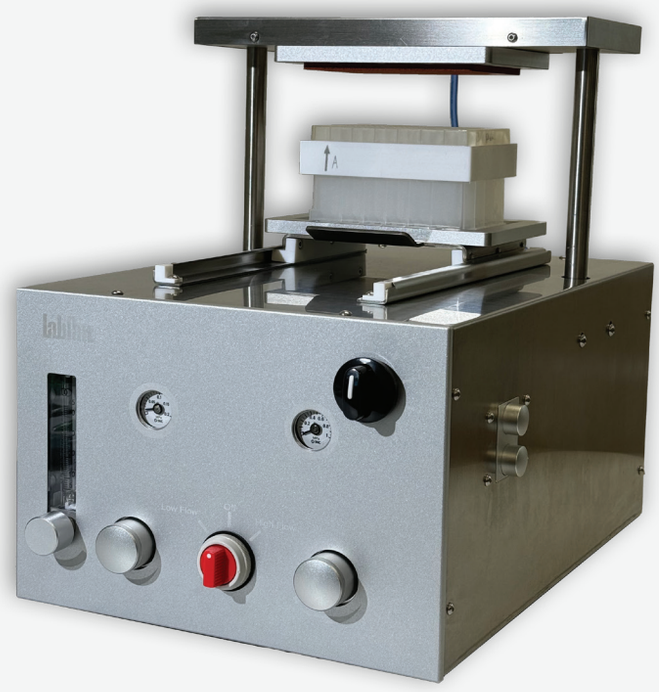
Strong adaptability, compatible with various sizes of 96-well plates

The height of the multi-branch plate can be adjusted to accommodate various commonly used sizes of 96-well plates on the market.

Simple operation, safe and easy to use

Simply assemble the SPE plate and collection plate, then place the assembly on the sliding tray of the device. Slide the tray to the rear of the device until the assembly stops below the multi-branch plate. Press both the up/down command buttons simultaneously to start the positive pressure device for pressing down/ lifting up the multi-branch plate. Operating both buttons simultaneously ensures the safety of the operator.

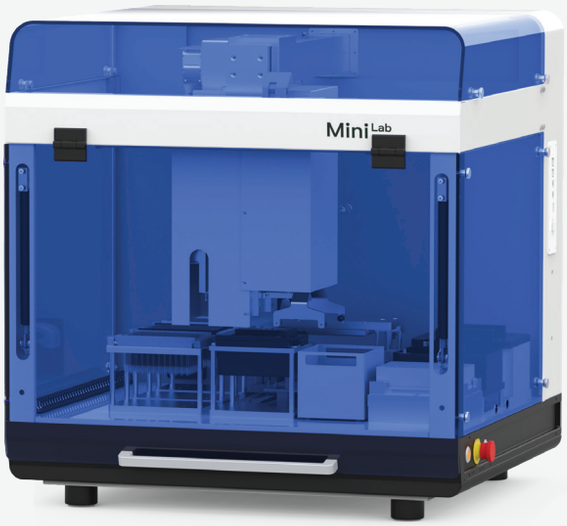
Discritption	Quantity	Product Number
EZ Pressure- 96 Well Positive Pressure SPE Device	1	98-0604-0830-1

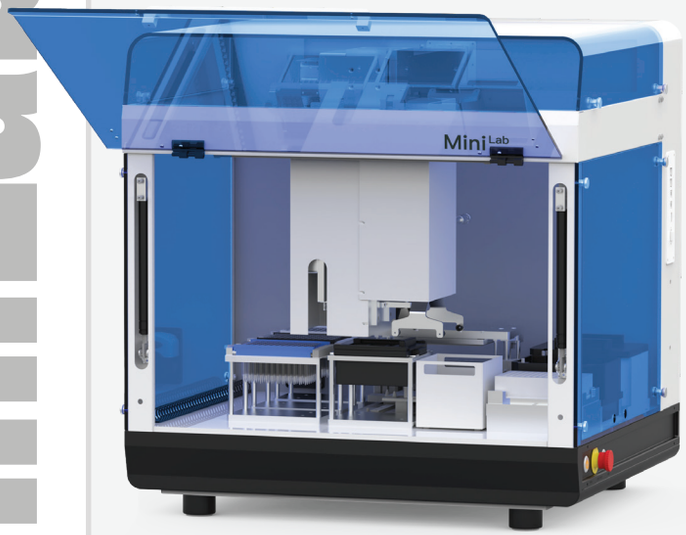


Empore™ MiniLab5000

MiniLab5000

The MiniLab5000 is a dedicated automated system used for the preparation of biological samples such as urine, proteins, small molecule drugs, etc. The equipment can automatically perform functions such as 96-well plate movement, washing, pipetting, liquid dispensing, temperature-controlled heating in dark conditions, filtration, etc. It features user-friendly operation software, allowing even non-professional technical personnel to operate it according to the instrument's workflow while ensuring the accuracy of test results.





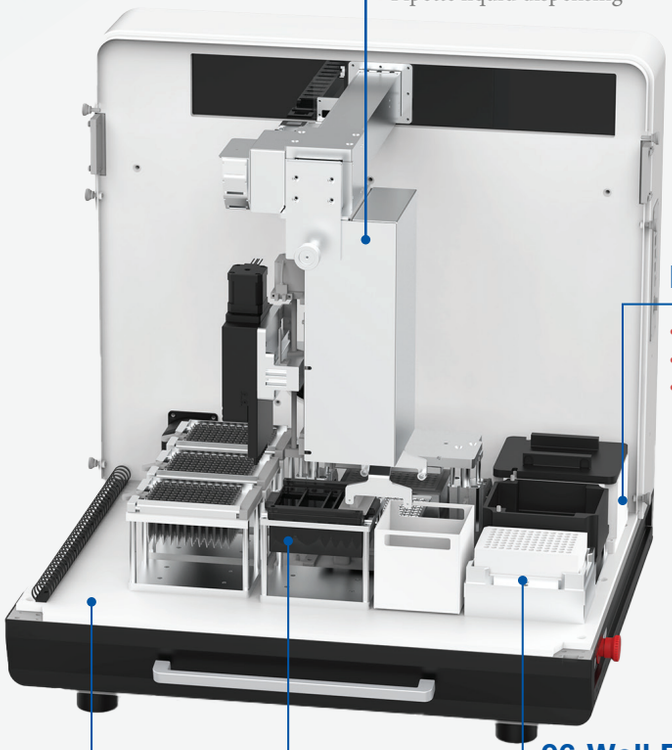
Key Features:

- 8 Channel Liquid Handling
- Temperature-controlled Heating
- 96-Well Plate Movement
- Positive Pressure Filtration
- Choose Your Own Method
- 9 Modularized Blocks

Empore™ MiniLab5000

Multi-functional Robot Arm

- 96-well plate movement
- Open and close heat lid
- Pipette liquid dispensing



Heat Module

- Sealed heating module
- Precise and stable temperature Control
- Up to 90°C (194°F) for 12 hours

96-Well Plate Load Base

- Empore™ 96-well plate adaptor base
- Inform us about the plate you are utilizing, and we can customize it for your needs

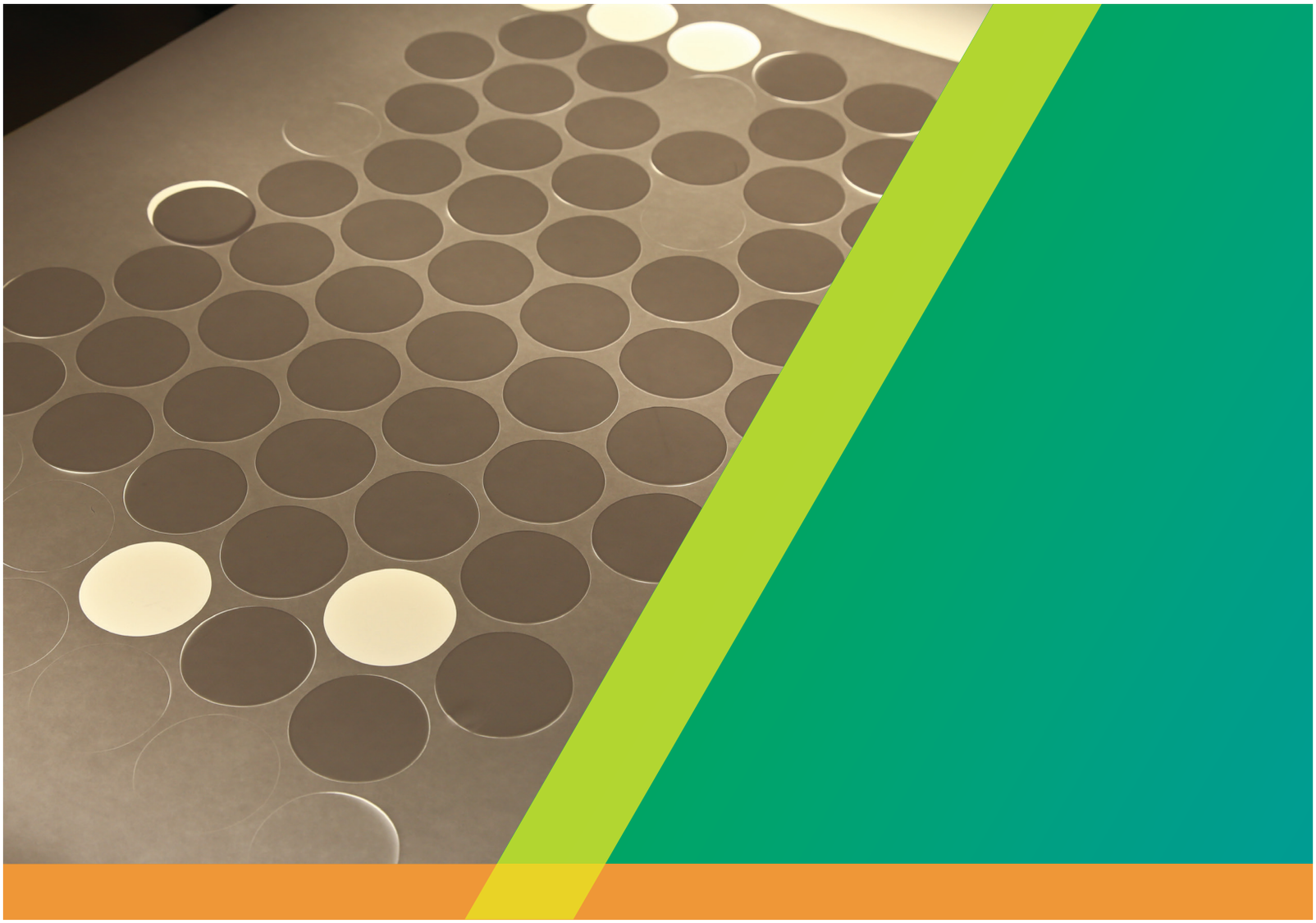
Solvent Tank

- 6 slots can be used
- 30 and 80 mL capacities
- You can store the solvent requiring light shielding on SO6

Work Area

- It comprises nine standard module blocks that accommodate diverse functions and can be fully tailored to specific requirements
- The arrangement of the work surface configuration can be adapted to your specifications, as we are prepared to design a layout that precisely meets your needs

Descwription	Quantity	Product Number
MiniLab-5000	1	98-0604-0841-2



CDS Empore™

Protein Sample Preparation

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