

2020



# PORVAIR MICROPLATES

Available through Chemglass Life Sciences

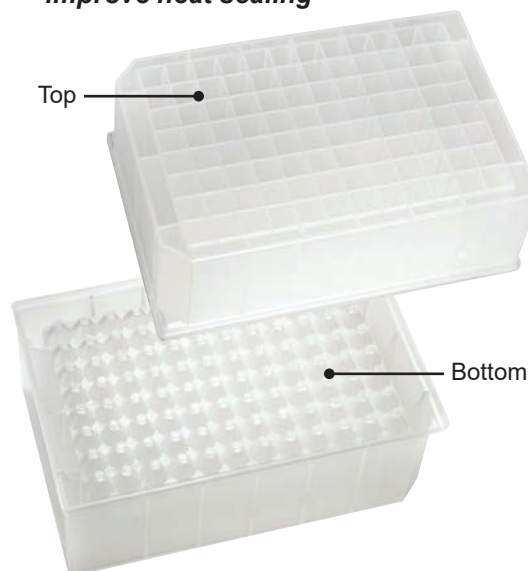
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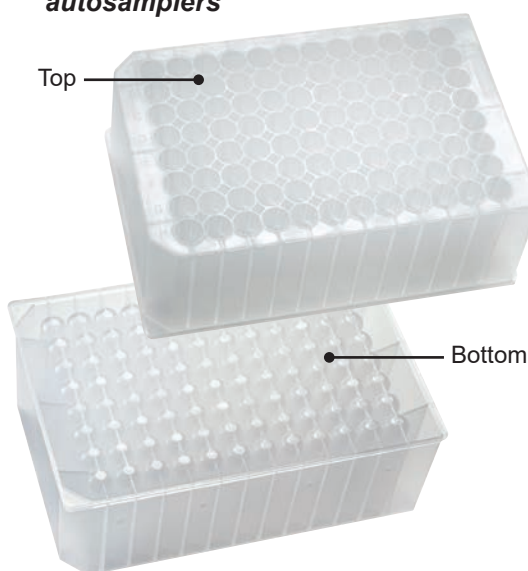


***Raised well rims to  
improve heat sealing***



CLS-3560-series

***Fits Waters AcQuity™  
autosamplers***



CLS-3562-002

### **Microplate, 96-Well, Deep Square, 44mm Height, Pyramid Bottom, PORVAIR**

- Made from virgin polypropylene and tested for low extractables
- V-bottom for total liquid removal, partial collection and to aid re-suspension
- No inner edges to allow better collection of magnetic beads
- DNase- and RNase-free
- Conical base aids sample concentration, reconstitution and centrifugation

Toughened genomics version for seed and leaf grinding 96 square well plates designed so that they would make the interchange of plates simpler in automated systems. Plates have the same geometry and the only variable is the well depth.

#### **Microplates with Deep, Square Wells and Pyramid Bottoms, 44mm Height**

Part No.	No. Wells	Well Vol. (mL)	Well Shape	Color	Qty.	Price
<b>CLS-3560-002</b>	96	2	square	white	5	<b>\$35.50</b> ♣
<b>CLS-3560-022</b>	96	2.2	square	white	5	<b>\$55.80</b> ♣

### **Microplate, 96-Well, Round, Common Wall, 45mm Height, PORVAIR**

- Manufactured from pre-tested polypropylene for low extractables
- Alphanumeric grid-referencing
- DNase- and RNase-free
- Packed in sealed sleeves of 5 plates
- Cylindrical well with round bottom for optimal mixing and recovery
- Can be stored at -80°C
- Easily sealed with matching cap mat or heat seal

Plates are made in virgin polypropylene to minimize extractables. Maximum volume is 2.075ml per well and working volume is a useful 1.85ml, more than any other comparable '2ml Round Well' plate in this class. The 'common wall' design allows the highest possible volume to be used while maintaining an overall height of just 45mm, complete with ANSI / SLAS standard base and footprint. Extra working volume is assured in a convenient round bottom, round well format. Rimless.

#### **Microplates with Deep, Round Wells and Bottoms, 45mm Height**

Part No.	No. Wells	Well Vol. (mL)	Well Shape	Color	Qty.	Price
<b>CLS-3562-002</b>	96	2	round	white	5	<b>\$39.60</b> ♣

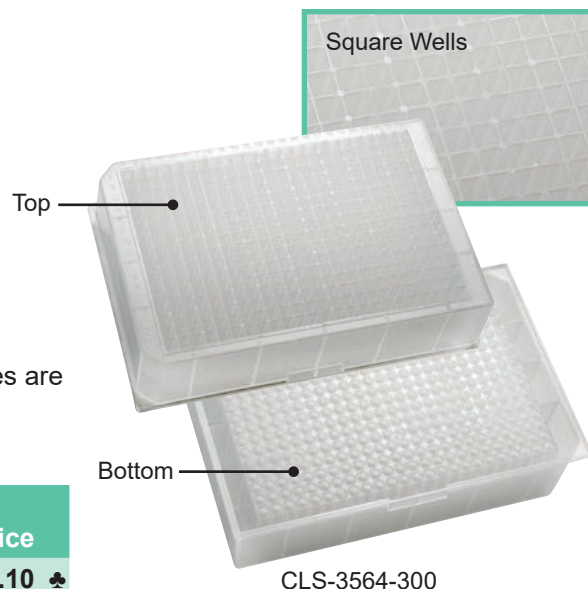
**Microplate, 384-Well, Square, PORVAIR**

- Manufactured for high density sample collection / storage
- 300µl per well working volume
- Designed to allow almost total removal of liquid sample
- Extra flat – allows plate sealing
- Storage temperature down to –80°C
- Manufactured to ANSI / SLAS specifications
- DNase- and RNase-free

30mm high, 384-well, polypropylene plates to suit most applications. Plates are made from pre-tested polypropylene in Class 100000 clean rooms.

**Microplates with Square Wells, 30mm Height**

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
<b>CLS-3564-300</b>	384	300	square	white	6	<b>\$76.10</b> ♣



## Life Sciences Solid Bottom Assay Plates | 96-Well

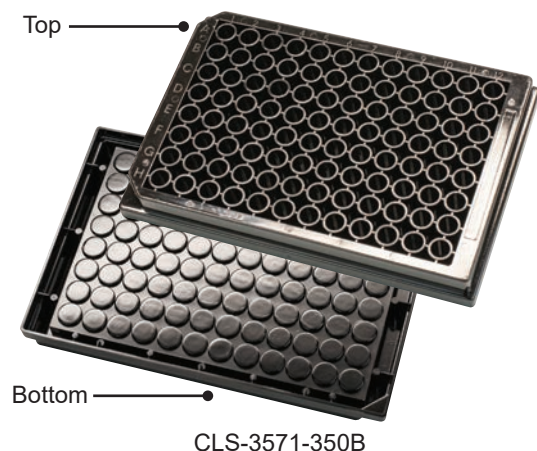
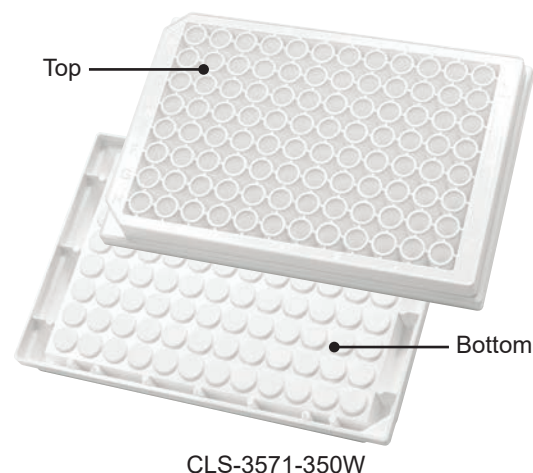
**Microplate, 96-Well, Assay, White or Black, PORVAIR**

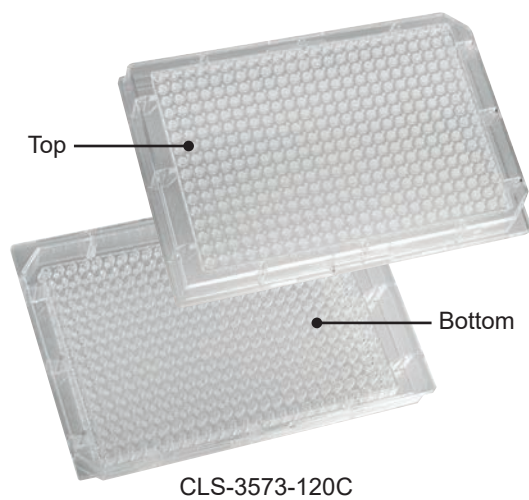
- Black plates designed for top reading fluorescence instruments
- Black plates have low background fluorescence and minimize light scattering
- White plates maximize signal for luminescence readers
- Highly polished well to give better readings
- Specially designed plate featuring a white well set in a black matrix to overcome the problem of a very high luminescence causing false positives
- Working volumes of 350µL / well
- Complies with the standard ANSI / SLAS format
- Alphanumerically labeled wells mean samples can be easily traced

Porvair Sciences range of solid bottom 96-well assay plates is specifically designed for absorbance, fluorescence, luminescence and scintillation applications. The design uses the most popular 96-well format with standard 'chimney' wells to overcome optical crosstalk and contamination. These plates are designed to give optimum results from any instrument which reads from the top of the plate.

**Non-Sterile, Non-Treated, Assay Plates - Bulk Packed**

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
<b>CLS-3571-350W</b>	96	350	round	white	100	<b>\$486.20</b> ♣
<b>CLS-3571-350B</b>	96	350	round	black	100	<b>\$486.20</b> ♣

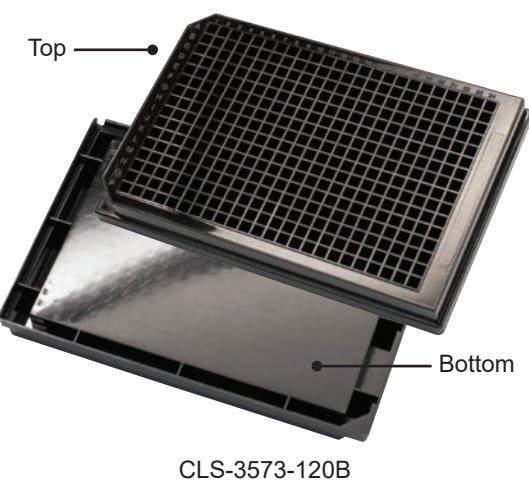




**Microplate, 384-Well, Assay, Square Wells, PORVAIR**

- Designed to reduce well-to-well crosstalk
- Black plates have low background fluorescence and minimize light scattering
- White plates enhance bio- & chemi-luminescence signals and have low background luminescence and fluorescence
- Well working volumes of 120µl
- Rounded square at the well bottom to reduce wicking
- Low residual volume
- Designed to the standard ANSI / SLAS format
- Alphanumerically labeled wells mean samples can be stored and easily traced

384-well assay plates are available in black, white and clear. These have been optimized for fluorescence, luminescence / scintillation and ELISA / turbidity measurements respectively. The working volume is 120µl / well. The 384-well format, with its higher density of wells, allows more work to be carried out in a standard sized plate, aiding higher throughput. All of these plates are manufactured from high quality polystyrene.



**Non-Sterile, Non-Treated, Assay Plates - Bulk Packed**

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
CLS-3573-120C	384	120	square	clear	100	\$679.05 ♣
CLS-3573-120W	384	120	square	white	100	\$679.05 ♣
CLS-3573-120B	384	120	square	black	100	\$679.05 ♣





## Microplate, 24-Well, Assay or Tissue Culture Treated, Black or White, Round Wells, PORVAIR

- Opaque walls to prevent well-to-well crosstalk
- Clear plate bottom permits direct microscopic viewing
- Base plate thickness 0.75mm
- For use with top or bottom reading instruments
- Conforms to the standard ANSI / SLAS format
- Well volume of 3.1mL
- Constructed with ultra-pure polystyrene components polished to give exceptional photometric performance and optimized for cell growth

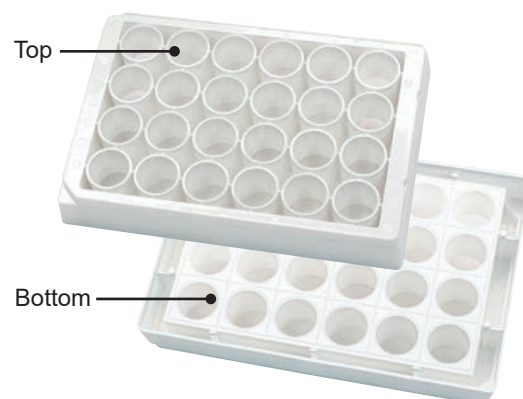
Clear bottom plates allow the cells grown on the bottom surface to be viewed using an inverse microscope. In addition, light-emitting assays can be measured from the bottom. Clear bottom 24-well Krystal plates are optimized for fluorescence and luminescence. The special design of the plate virtually eliminates well to-well light crosstalk inherent with other clear-bottomed microplate designs, enabling unmatched accuracy, higher sensitivity and better repeatability of photometric readings. For photometric applications where samples are typically large, Porvair range of unique black or white Krystal 24 plates provides a perfect solution. Offering 24 high volume (3.1ml) wells in the same convenient footprint of a standard 96-well plate, the Krystal 24 provides a large surface area per well, enabling efficient cell growth. All tissue culture treated plates are supplied lidded and sterile, in individual bags.

### Non-Sterile, Assay Plates - Bulk Packed

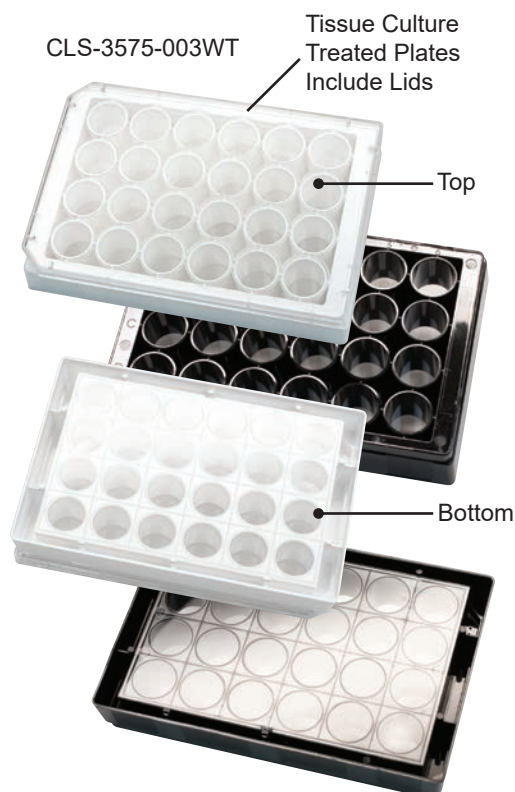
Part No.	No. Wells	Well Vol. (mL)	Well Shape	Color	Qty.	Price
CLS-3575-003W	24	3.1	round	white	68	\$689.20 ♣
CLS-3575-003B	24	3.1	round	black	68	\$689.20 ♣

### Sterile, Tissue Culture Treated Plates - Individually Wrapped

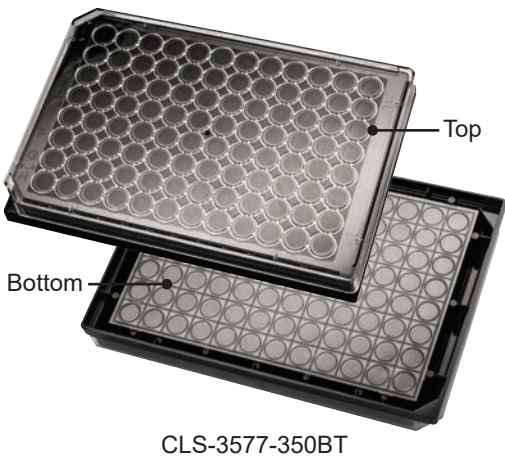
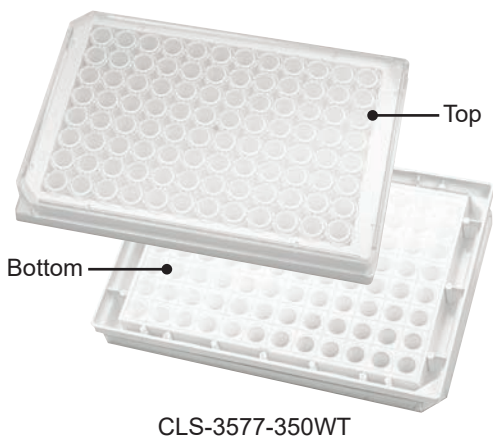
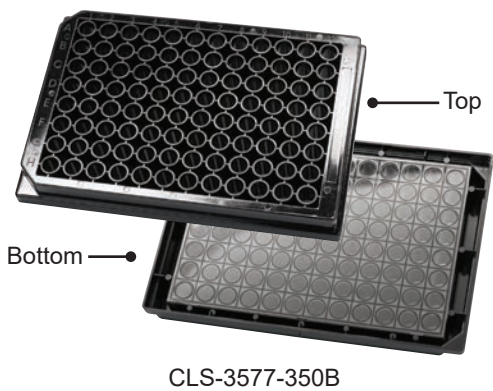
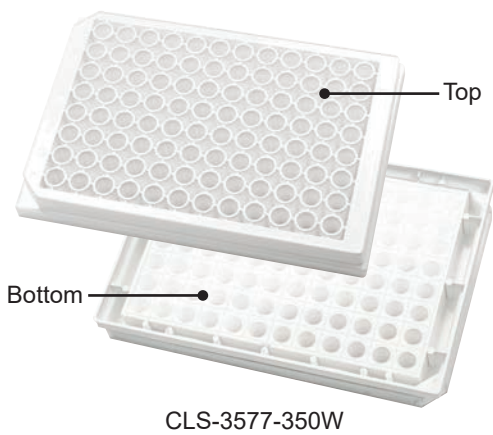
Part No.	No. Wells	Well Vol. (mL)	Well Shape	Color	Qty.	Price
CLS-3575-003WT	24	3.1	round	white	56	\$1,014.00 ♣
CLS-3575-003BT	24	3.1	round	black	56	\$1,014.00 ♣



CLS-3575-003W



CLS-3575-003BT



Microplate, 96-Well, Assay or Tissue Culture Treated, Black or White, Round Wells, PORVAIR

Clear bottom 96-well Krystal plates are optimized for fluorescence and luminescence. Proprietary ultra-sonic welding is used to assemble the clear bases to the solid top plate in our clean room. This design provides flat, optically clear bases to each well with no leakage, enabling excellent accuracy and reproducibility of photometric readings. All tissue-culture treated plates are supplied lidded and sterile, in individual bags.

- Opaque walls to prevent well-to-well crosstalk
- Clear plate bottom permits direct microscopic viewing
- Thickness of bottom 0.75mm
- For use with top or bottom reading instruments
- Standard ANSI / SLAS format
- Well volume of 350µl
- Constructed from ultra-pure grade polystyrene

Non-Sterile, Assay Plates - Bulk Packed

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
CLS-3577-350W	96	350	round	white	100	\$699.35 ♣
CLS-3577-350B	96	350	round	black	100	\$699.35 ♣

Sterile, Tissue Culture Treated Plates - Individually Wrapped

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
CLS-3577-350WT	96	350	round	white	100	\$892.20 ♣
CLS-3577-350BT	96	350	round	black	100	\$892.20 ♣

♣ Consumable Product Line    \*Not Subject to Discount

### Microplate, 384-Well, Assay or Tissue Culture Treated, Black or White, Square Wells, PORVAIR

- Opaque walls to prevent well-to-well crosstalk
- Clear plate bottom permits direct microscopic viewing
- Thickness of bottom 0.40mm
- For use with top or bottom reading instruments
- Maintaining the standard ANSI / SLAS format
- Well volume of 120µl
- Constructed from ultra-pure grade polystyrene

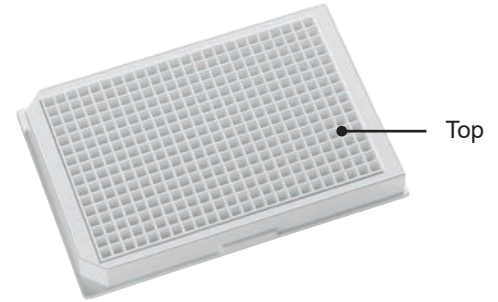
The Krystal 384-well microplate range incorporates novel square wells with a large liquid capacity of 120µl per well, increasing the achievable sensitivity of most HTS assays. Using a proprietary manufacturing technique, the Krystal 384 offers market leading plate flatness (+ / - 0.1mm tolerance) that translates into a significant increase in measurement precision and elimination of read errors when performing cell-based assays using fluorescent or luminescent imaging. All tissue-culture treated plates are supplied lidded and sterile, in individual bags.

#### Non-Sterile, Assay Plates - Bulk Packed

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
CLS-3579-120W	384	120	square	white	100	\$1,064.75 ♣
CLS-3579-120B	384	120	square	black	100	\$1,064.75 ♣

#### Sterile, Tissue Culture Treated Plates - Individually Wrapped

Part No.	No. Wells	Well Vol. (µL)	Well Shape	Color	Qty.	Price
CLS-3579-120WT	384	120	square	white	100	\$1,105.35 ♣
CLS-3579-120BT	384	120	square	black	100	\$1,105.35 ♣



CLS-3579-120W



CLS-3579-120B

## Life Sciences Filtration Plates | 96-Well

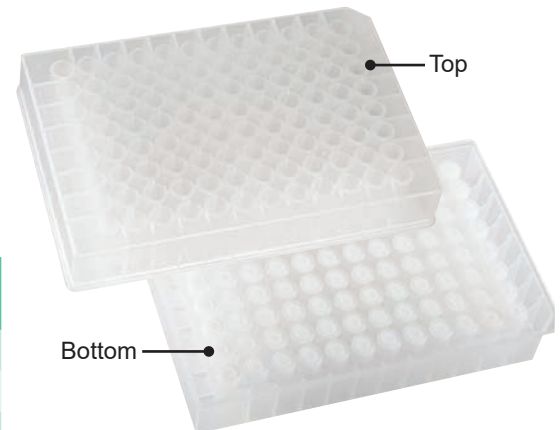
### Microplate, Filtration Plate, PES Filter, 96-Well, 400µl, PORVAIR

Filtration plates used in their simplest form to remove particulate matter from liquid. Either the particulate matter or the filtrate is needed for further study.

Please note: Other Filtration plates are available. We have optimized filter plates for applications including cell harvesting, DNA separations, binding studies, Plasmid isolation, general filtration and sample clean-up.

#### Filtration Plates with Short Drip PES Filters

Part No.	No. Wells	Well Vol. (µL)	Pore Size (kD / µM)	Qty.	Price
CLS-3581-010	96	400	10 / 0.0025	25	\$1,369.25 ♣
CLS-3581-030	96	400	30 / 0.004	25	\$1,369.25 ♣
CLS-3581-100	96	400	100 / 0.010	25	\$1,612.85 ♣
CLS-3581-300	96	400	300 / 0.015	25	\$1,612.85 ♣



CLS-3581-100

♣ Consumable Product Line \*Not Subject to Discount





### Bacti-Growth Microplates, 96-Well (Round or Square) and 24-Well (Square), Sterile, PORVAIR

- Well volumes from 1mL through to 10mL per well
- Robot friendly
- Made to the highest specifications - conform to the ANSI / SBS format

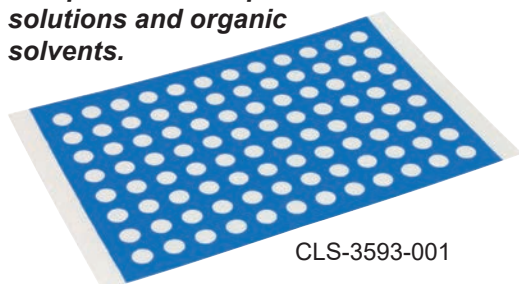
Bacti-growth plates are specially packaged plates to allow the growth of bacteria, yeast, mammalian or insect cell lines. Using only the highest-grade raw materials, our plates are tested to ensure no molding or polymer contaminants leach out into the samples. This guarantees reproducibility and maintains customer confidence. Each Bacti-growth plate consists of a deep well plate and a tight-fitting lid, sealed in sterile bags of 5 plates each.

#### Sterile Bacti-Growth Microplates, Polypropylene

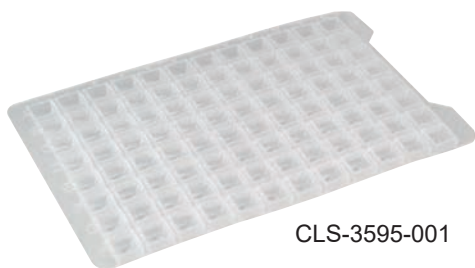
Part No.	No. Wells	Well Vol. (mL)	Well Shape	Color	Qty.	Price
CLS-3584-001	96	1	round	white	25	\$344.10 ♣
CLS-3584-002	96	2	square	white	25	\$344.10 ♣
CLS-3584-003	96	2	round	white	25	\$344.10 ♣
CLS-3584-010	24	10	square	white	25	\$465.90 ♣

## Sealing Film and Sealing Cap

*Compatible with aqueous solutions and organic solvents.*



CLS-3593-001



CLS-3595-001



CLS-3596-001

### 96-Well Pattern, PTFE Sealing Film with Solvent-Free Adhesive

- Adheres to polypropylene, polystyrene, and polycarbonate materials
- Excellent chemical resistance, resistant to DMSO
- Functional temperatures range: -80°C to +120°C

Sealing film is adhesive-free around wells, preventing the glue from adhering to plastic pipette tips or metal probes. This advanced adhesive is solvent free.

#### 2mil Sealing Film, Blue PTFE

Part No.	Well Pattern	Thick. (mil)	Material	Qty.	Price
CLS-3593-001	96	2	Blue PTFE	100	\$223.40 ♣

### EVA Sealing Cap, 96 Square Well, DNase- and RNase-free

EVA Sealing Cap, 96 square well to fit CLS-3560-002.

#### 96-Well Square, EVA Sealing Cap, Individually Wrapped

Part No.	Well Pattern	Material	Qty.	Price
CLS-3595-001	96 square	EVA	50	\$229.50 ♣

### Sealing Mat, 96-Well Round, Clear, PTFE / Premium Silicone Spray-Coated

#### 96-Well Round, Clear Sealing Mat for CLS-3562-002 Microplates

Part No.	Well Pattern	Material	Qty.	Price
CLS-3596-001	96 round (8mm dia. plug)	PTFE / silicone	5	\$49.45 ♣

♣ Consumable Product Line \*Not Subject to Discount



**Microlute™ Vacuum Manifold, Microplate, PORVAIR**

- Designed to take most filter plates manufactured to the ANSI / SLAS specification with long drip directors
- Also designed so that SPE plates can be used, especially the Porvair MicroLute™ plate
- Valve controller for accurate adjustments of vacuum to the manifold
- On / Off valve for speed of use
- Square well collection plate volumes of 350µl, 1ml and 2ml may be used
- Any plate up to 44mm in height can be used
- Fitted with a custom O-ring in upper surface allowing airtight interface between plates during operation
- Removable top plate to install reservoir tray or collection plate
- Chamber has a medium resistance to alcohols and weak acids

Vacuum manifolds are used to draw liquid through a filter or SPE plate into either a waste tray or a collection plate. The application of vacuum increases the speed at which samples can be collected.

The MicroLute™ vacuum manifold from Porvair is precision machined from crystal clear acrylic (top plate) and acetal polymer (plenum chamber). The acrylic top plate allows visual access to the plenum chamber for checking progress of the separation process.



CLS-3588-001

**Vacuum valve  
control for accurate  
adjustments**

**Microlute™ Vacuum Manifold**

Part No.	Description	Qty.	Price
CLS-3588-001	Microlute Vacuum Manifold	1	\$1,927.50 ♣

## Sample Preparation | 96-Well Precipitation Plates

**P3 Protein Precipitation Plate, PORVAIR**

- Dual frit design
- Pore size optimized to allow ideal flow rate

Biological samples commonly contain proteins that interfere with downstream applications. The P3 plate uses the “crash” method, in which the protein is denatured with acetonitrile and the flocculant filtered out, allowing 96 samples to be handled at one time. The Protein Precipitation Plate, P3, is based on the industry standard MicroLute™ format, but without the chromatographic sorbet. Protein crashes out of solution and precipitates directly in each well when acetonitrile is added, thus solving all common problems associated with the CRASH technique of protein clean-up.



CLS-3586-001

**P3 Protein Precipitation Plate, Packed Individually in a Rigid Shell**

Part No.	No. Wells	Well Shape	Color	Qty.	Price
CLS-3586-001	96	square	white	1	\$171.55 ♣

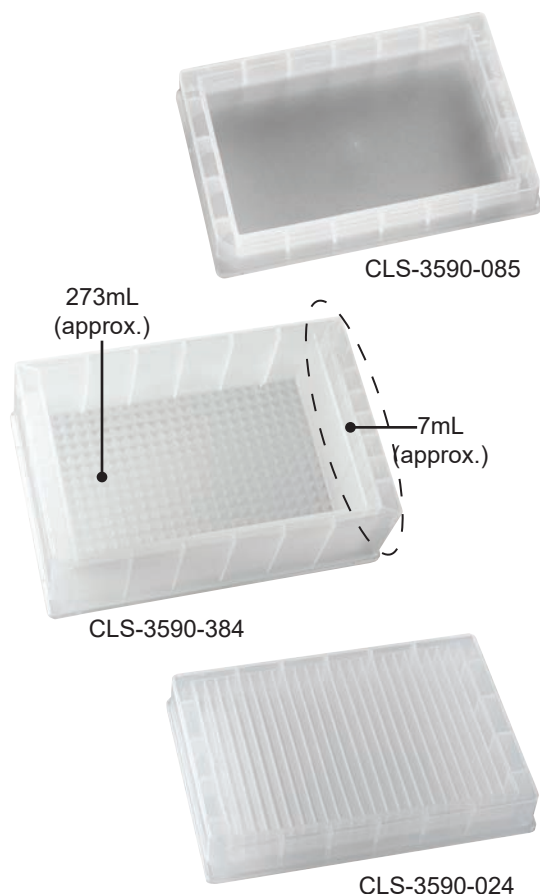
**Reservoir Trays, Microplate, Polypropylene, PORVAIR**

- Robot friendly
- Molded in natural virgin polypropylene
- Autoclavable, chemical- and heat-resistant
- Can be gamma irradiated
- Made to ANSI / SLAS standard dimensions

Porvair reservoir trays are designed for use with any robotic liquid handling system. These reservoirs offer options for a single liquid or a partitioned space for several liquids. Please note: Additional trays are available for a wide range of liquid handling configurations from 8 or 12 channel pipettes through to 96 or 384 pipette head.

**Microplate Reservoir Trays, Polypropylene**

Part No.	Description	Qty.	Price
<b>CLS-3590-085</b>	85mL Reservoir, Low Profile, Flat Bottom	25	<b>\$303.50</b> ♣
<b>CLS-3590-384</b>	384-Well Reservoir with 2 Control Wells, Pyramid Bottom for Very Low Dead Volume	25	<b>\$323.80</b> ♣
<b>CLS-3590-024</b>	24 Column Reservoir / Each of 3.5mL, Low Profile, Partitioned, Pyramid Bottom for Very Low Dead Volume	25	<b>\$303.50</b> ♣

**ULTRAVAP MISTRAL Sample Concentrators**

- Fully liquid handling robot-compatible dry down station
- Plate shuttle sends/retrieves plates from robot deck
- Adjustable shuttle position and height
- Intuitive graphical color touch screen display
- Up to 15 stored evaporation programs
- Up to 5 programmable steps per method
- On board gas management
- Master & multiple slave configuration supported
- Remote control from PC option
- Reversible screen for integration at side of robot
- Built-in fume management and duct connector
- Faster evaporation times
- Choice of 24-, 48-, 96- and 384-well heads
- Small footprint to fit in your hood
- Energy-saving eco mode extends heater and fan life

**Saves time!**



*Optimize your microplate sample preparation with the NEW Ultravap Mistral.*



The new Ultravap® Mistral from Porvair Sciences is designed to remove the traditional laboratory 'bottleneck' of solvent evaporation from microplates.

Fully automating the dry-down step has always been impossible because it is difficult to interface liquid handling robots with traditional centrifugal-type evaporators. The Ultravap Mistral design, by dispensing with the rotating arm of the centrifuge, overcomes this problem and is much better positioned to link with your robot. With more than 20 years' experience in producing deep well microplates, Porvair Sciences has thoroughly researched the problems of drying down organic solvents in plates. This has led to the ultimate microplate blow down evaporator – the Ultravap Mistral.

The Ultravap Mistral is the most sophisticated automation-friendly model yet, giving significant throughput advantages to laboratories looking to optimize microplate sample preparation. It has been designed in close co-operation with the leading suppliers of laboratory liquid handling robots. The result is a fully robot compatible evaporator, suitable for integration directly with the following leading laboratory liquid handling robots:

**Hamilton Robotics | Tecan | Perkin Elmer | Beckman Coulter | Agilent**

Designed with the demands of linear robots very much in mind, the Ultravap Mistral offers a plate shuttle which can serve and retrieve plates from the deck of most liquid handlers. The color touch-screen controlled dry down station accepts interchangeable 24-, 48-, 96- or 384-needle heads and comes complete with clear safety screens and integral fume management leading to a 4-inch duct adaptor that incorporates a fan for high speed fume removal.

Please contact Technical Services for quotations on Ultravap Mistral systems:

**[tech@cglifesciences.com](mailto:tech@cglifesciences.com)**



Part No.	Description	Qty.	Price
<b>CLS-3599-C-100</b>	Mistral Sample Concentrator, Without Needle Head, Porvair, 110V	1	<b>\$21,450.00 *</b>
<b>CLS-3599-C-100E</b>	Mistral Sample Concentrator, Without Needle Head, Porvair, 220V	1	<b>\$21,450.00 *</b>
<b>CLS-3599-C-102</b>	96 Needle Head, Spiral Needles, for all Porvair Evaporators	1	<b>\$2,999.00 *</b>
<b>CLS-3599-C-104</b>	96 Needle Head, Straight Needles, for all Porvair Evaporators	1	<b>\$2,399.00 *</b>
<b>CLS-3599-C-106</b>	384 Needle Head, Straight Needles, for Ultravap RC Mistral & Levante Only	1	<b>\$3,649.00 *</b>
<b>CLS-3599-C-108</b>	12 Needle Head, Straight, for all Porvair Evaporators, 48mm Needles, Gasket	1	<b>\$2,399.00 *</b>
<b>CLS-3599-C-110</b>	12 Needle Head Straight, for all Porvair Evaporators, 38mm Needles, Gasket	1	<b>\$2,399.00 *</b>
<b>CLS-3599-C-112</b>	24 Needle Head Straight, for all Porvair Evaporators	1	<b>\$2,399.00 *</b>
<b>CLS-3599-C-114</b>	Dedicated 48 Needle Head Straight, for use with HPLC Vial Adapter, for all Porvair Evaporators	1	<b>\$2,399.00 *</b>
<b>CLS-3599-C-116</b>	Vial Adapter for HPLC Vials, 48 x 1.5mL (Finneran), Black Polypropylene	1	<b>\$279.15 *</b>
<b>CLS-3599-C-118</b>	Gasket, Needle Head Manifold, for all Porvair Evaporators	1	<b>\$178.00 *</b>
<b>CLS-3599-C-120</b>	24-Well 12mm I.D. Vial Holder, Solid Aluminium, for all Porvair Evaporators	1	<b>\$1,198.60 *</b>
<b>CLS-3599-C-122</b>	Disposable Vial Rack, Plastic, Clear Bottom, for 13.75mm O.D. Glass Vials (24)	5	<b>\$76.80 *</b>
<b>CLS-3599-C-124</b>	Replacement LCD Screen for Ultravap RC	1	<b>\$1,098.00 *</b>

**See features diagram on back**

♣ Consumable Product Line \*Not Subject to Discount

## Full Automation Compatibility

### Direct Integration with

- Hamilton Robotics
- Tecan
- Beckman Coulter
- Perkin Elmer
- Agilent

Tough, clear splash and safety guard

Warm nitrogen gas injected directly into each well for optimal drying

Choice of interchangeable needle heads: 96 spiral or straight, 12, 24, 48, 384 straight

Accepts plates or vials up to 60mm height overall

Robotic shuttle with SLAS standard plate nest

Integrated safety bumpers provide positive plate location and obstruction detection

Precision stepper motor raises plate stage towards needles during run to speed evaporation

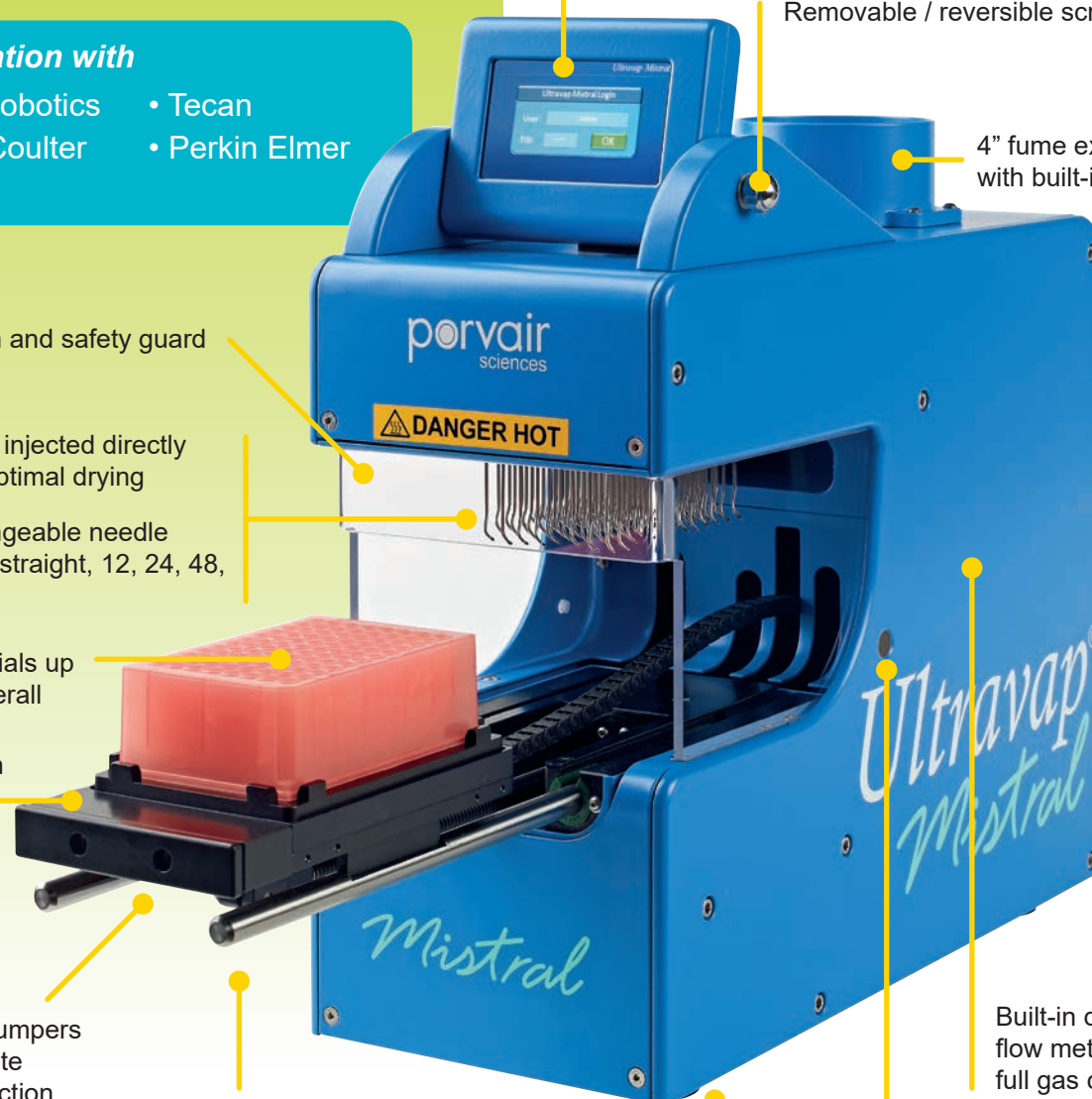
Extended rails reach up to 240mm onto the robot deck for ease of loading

Color touchscreen programming

Optional protective anti-splash membrane

Removable / reversible screen

4" fume extractor duct with built-in fan



Built-in digital flow meter and full gas control

Rubber feet reduce vibration. Secure mounting points for integration to robotic cell

Quick release splash guard for head change and cleaning

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