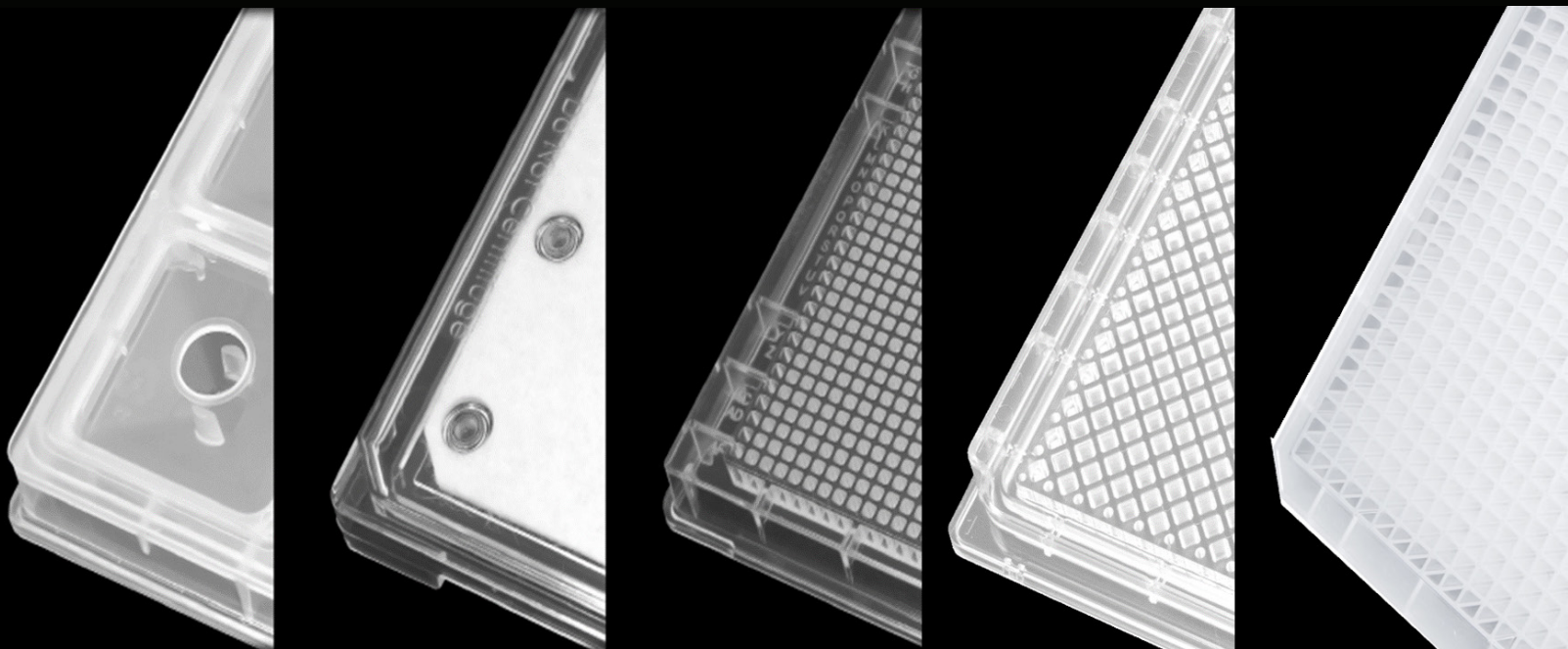


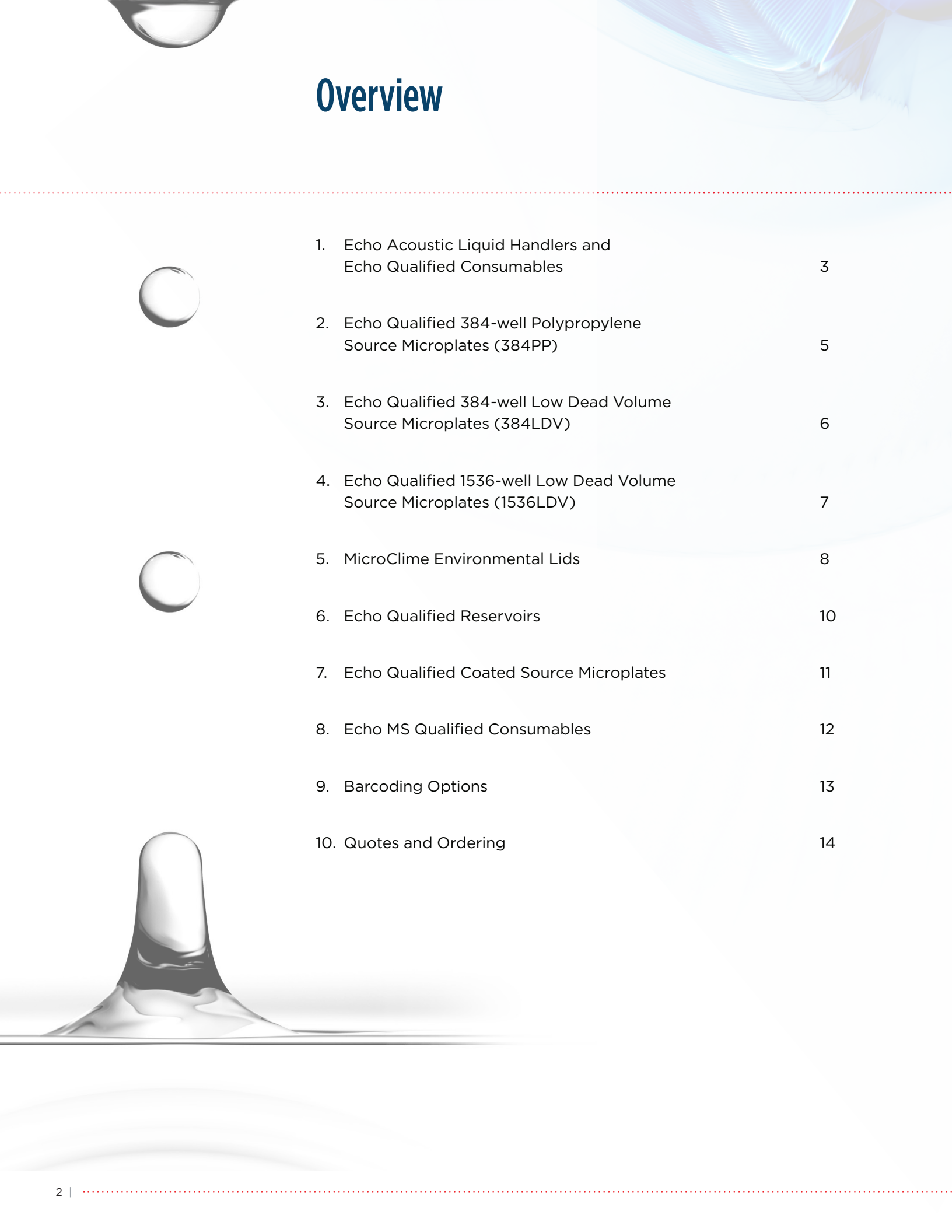
ECHO QUALIFIED CONSUMABLES



DISCOVERY
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Echo Acoustic Liquid Handlers and Echo Qualified Consumables

Echo Acoustic Liquid Handlers revolutionized liquid handling by using an innovative, acoustic energy based, non-contact dispensing technology. They deliver the utmost flexibility with any-well to any-well transfers and unparalleled accuracy and precision, even when working with nanoliter transfer volumes.

The instrument focuses sound waves directly under an Echo Qualified source microplate and produces sound waves to eject precisely sized droplets from the source microplate to a destination plate. Echo systems eliminate contact between the instrument and the sample by forgoing the use of tips, pin tools or nozzles. Fluids are transferred in nanoliter increments. Larger volumes are achieved by transferring hundreds of droplets per second.



The Echo Acoustic Advantage

- Lower transfer volumes enable the miniaturization of assays
- Provides unsurpassed accuracy and repeatability of results at all volumes
- Preserves sample integrity and viability during transfer
- Increases flexibility in transferring liquids at different positions and volumes
- Reduces operating costs by minimizing reagent usage, eliminating disposable tips, and reducing waste
- Dynamic Fluid Analysis™ allows the transfer of multiple fluid types and concentrations from a single plate



Echo Qualified Source Microplates are available in the following formats:

- Echo Qualified 384-well Polypropylene Source Microplates (384PP)
- Echo Qualified 384-well Low Dead Volume Source Microplates (384LDV)
- Echo Qualified 1536-well Low Dead Volume Source Microplates (1536LDV)
- MicroClime Environmental Lids
- Echo Qualified Reservoirs
- Echo Qualified Coated Source Microplates

Each Echo Qualified Source Microplate is designed to specifically enable the Echo Liquid Handler. Below is the instrument compatibility list of the Echo and Echo Qualified Consumables.

Instrument	384PP	384LDV	1536LDV	MicroClime Environmental Lid	Reservoirs	Coated Plates (amine and carboxyl)
Echo 525/R	✓			✓	✓	✓
Echo 650/R/T	✓	✓	✓	✓		
Echo 655/R/T	✓	✓	✓	✓		



Echo Qualified 384-well Polypropylene Source Microplates (384PP)

The Echo Qualified 384-well Polypropylene Source Microplates is highly resistant to solvents including DMSO and buffers, making it ideal for compound and sample storage. Each lot of microplates are tested and certified to meet stringent performance specifications. These microplates come in sterile and custom barcode options.



Key Features:

- Designed, manufactured and lot tested to meet Echo Liquid Handler specifications
- Compatible with a wide variety of fluid types including DMSO, buffers, proteins, and surfactants
- Working volume:* 20 – 65 μ L
- DNase-/RNase-free** for non-barcoded plates
- Automation compatible
- Heat seal*** and MicroClime Environmental Lid compatible
- Deionized and packaged in anti-static bags

*Working range and dead volumes may vary slightly depending on fluid class

**Based on sample results below detectable levels

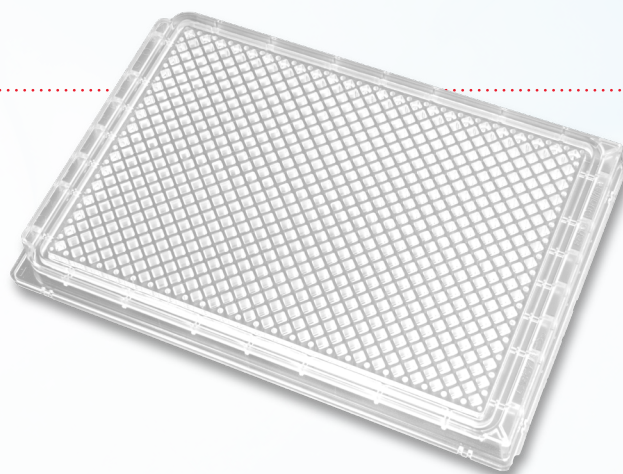
***Heat seal recommendations provided here are recommendations only and are based on an Agilent PlateLoc® heat sealer and Agilent aluminum adhesive seal (part number 24214-001). We also recommend use of the Plate Loc Support Insert (part number G5550-12880) or the Agilent Plate Insert for Labcyte plates (part number 16664-101) with every heat sealing application. Customer actual heat seal parameters may vary. Consult with your local Field Application Scientist or Service team to determine the best parameter for your use.

Ordering Information:

Part Number	Description	Packaging Configuration
001-14555	Echo Qualified 384-well polypropylene Source Microplate, Clear	
001-14615	Echo Qualified 384-well polypropylene Source Microplate, Clear, Sterile	10 plates / sleeve 10 sleeves / case 100 plates / case
001-14618	Echo Qualified 384-well polypropylene Source Microplate, Clear, Barcoded	

Echo Qualified 384-well Low Dead Volume Source Microplates (384LDV)

Echo Qualified 384-well Low Dead Volume Source Microplates are designed to minimize dead volume when using the Echo Liquid Handler. Each microplate is constructed of Cyclic Olefin Copolymer (COC) for optimal acoustic transfer performance and DMSO storage.



Key Features:

- Designed, manufactured and lot tested to meet Echo Liquid Handler specifications
- Enables high precision transfer for a broad range of fluid types
- Working volume* DMSO: 3 - 12 μ L
- Working volume* Buffer: 2.5 - 12 μ L
- Working volume* Buffer/Protein: 6 - 14 μ L
- DNase-/RNase-free** for non-barcoded plates
- Automation compatible
- Heat seal*** and MicroClime Environmental Lid compatible
- Deionized and packaged in anti-static bags

*Working range and dead volumes may vary slightly depending on fluid class

**Based on sample results below detectable levels

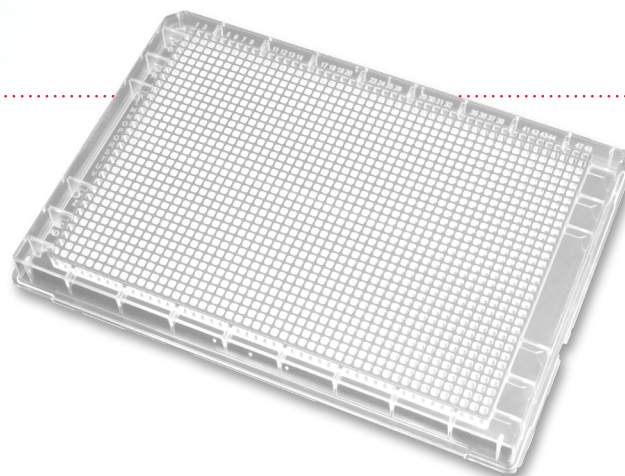
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Ordering Information:

Part Number	Description	Packaging Configuration
001-12782	Echo Qualified 384-well Low Dead Volume Source Microplates, Clear	
001-16128	Echo Qualified 384-well Low Dead Volume Source Microplates, Clear, Sterile	10 plates / sleeve 5 sleeves / case
001-6025	Echo Qualified 384-well Low Dead Volume Source Microplates, Clear, Barcoded	50 plates / case

Echo Qualified 1536-well Low Dead Volume Source Microplates (1536LDV)

Echo Qualified 1536-well Low Dead Volume Source Microplates improve assay results by increasing working range and reducing dead volume. Each microplate is constructed of Cyclic Olefin Copolymer (COC), which provides optical clarity and improved signal levels for luminescence and fluorescence-based assays.



Key Features:

- Designed, manufactured and lot tested to meet Echo Liquid Handler specifications
- Enables high precision transfer for a broad range of fluid types
- Working volume:* 1 – 5.5 μ L
- DNase-/RNase-free** for non-barcoded plates
- Automation compatible
- Heat seal*** and MicroClime Environmental Lid compatible
- Deionized and packaged in anti-static bags

*Working range and dead volumes may vary slightly depending on fluid class

**Based on sample results below detectable levels

***Heat seal recommendations provided here are recommendations only and are based on an Agilent PlateLoc® heat sealer and Agilent aluminum adhesive seal (part number 24214-001). We also recommend use of the Plate Loc Support Insert (part number G5550-12880) or the Agilent Plate Insert for Labcyte plates (part number 16664-101) with every heat sealing application. Customer actual heat seal parameters may vary. Consult with your local Field Application Scientist or Service team to determine the best parameter for your use.

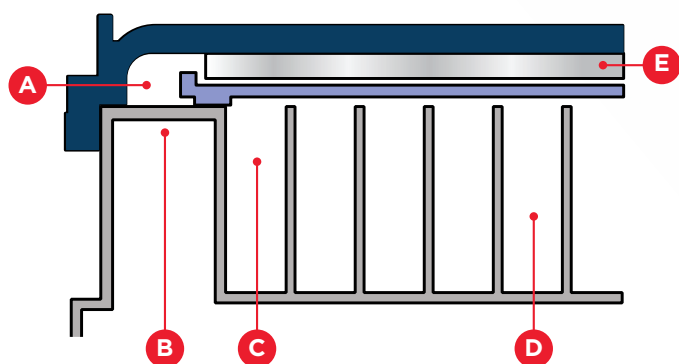
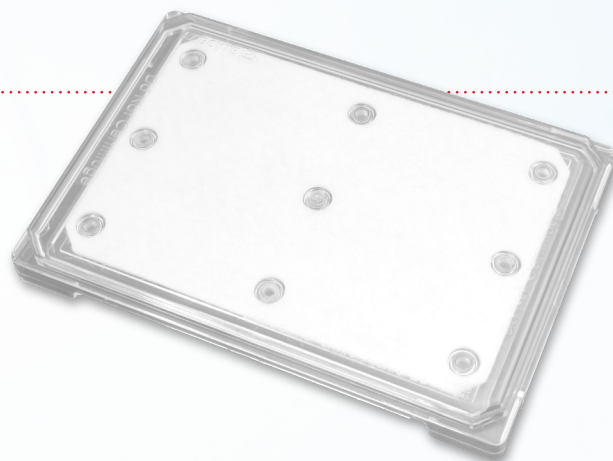
Ordering Information:

Part Number	Description	Packaging Configuration
001-6969	Echo Qualified 1536-well Low Dead Volume Source Microplates, Clear	
001-8768	Echo Qualified 1536-well Low Dead Volume Source Microplates, Clear, Sterile	10 plates / sleeve 5 sleeves / case 50 plates / case
001-7913	Echo Qualified 1536-well Low Dead Volume Source Microplates, Clear, Barcoded	

MicroClime Environmental Lids

The MicroClime Environmental Lid minimizes edge effects and preserves the concentrations of solutions in microplate wells. This lid incorporates a unique, fluid-absorbing matrix that creates a vapor barrier, protecting the sample from the exterior environment, from evaporation or hydration, and greatly reducing edge effects. By eliminating edge effects, the MicroClime Environmental Lid enables the use of every microplate well, thereby increasing microplate efficiency by 37%.

The MicroClime Environmental Lid does not require any specialized tools and is compatible with robotic plate lidding and delidding systems.



- A and C:** Regions of saturated vapor
- B:** Sealing surface
- D:** Microplate well
- E:** Fluid-saturated polypropylene felt

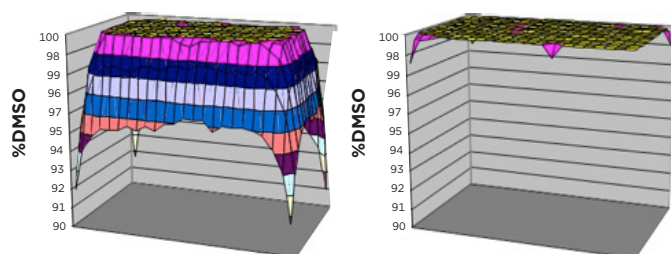


Figure 1. MicroClime® Lid eliminating DMSO hydration edge effect. Every well of two 384-well microplates was filled with 30 μL of dry DMSO (45% r.h., 22°C). The plate on the left was covered with a standard lid and the plate on the right was covered with a MicroClime® Lid filled with DMSO. The water concentration of each well was measured acoustically after 20 hours.

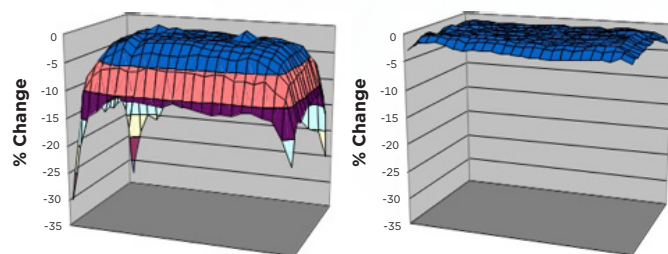


Figure 2. MicroClime® Lid eliminating aqueous evaporation edge effect. Each well of two 384-well plates were filled with 50 μL of water. The plate on the left was covered with a standard lid and the plate on the right was covered with a MicroClime® Lid that had been filled with water. Graphs show the loss of depth (volume) in the edge wells over a 72-hour period.

Key Features:

- Minimizes microplate edge effects
- Increases microplate efficiency by 37%
- Designed to fit a wide variety of SBS standard microplates
- DNase-/RNase free**
- Fill volume of up to 9 mL
- MicroClime Environmental Lids are not compatible with centrifugation

**Based on sample results below detectable levels

Ordering Information:

Part Number	Description	Packaging Configuration
001-5716	MicroClime Environmental Lid, Non-sterile	10 lids / sleeve 5 sleeves / case
001-5717	MicroClime Environmental Lid, Sterile	50 lids / case
001-5719	MicroClime Environmental Lid, Non-sterile (Introductory Pack)	10 lids / case
001-5718	MicroClime Environmental Lid, Sterile (Introductory Pack)	

Echo Qualified Reservoirs



The Echo Qualified Reservoir is designed to enable large volume transfers on the Echo 525 Liquid Handling System. Its 6-well design enables the transfer of over 15 mL from a single reservoir plate. This reservoir's low dead volume enables efficient dispensing of costly and precious reagents and samples.

Echo Qualified Reservoir is compatible with a broad variety of aqueous solutions. The welded lid minimizes evaporation and prevents cross-contamination and splashing when centrifuged or handled.

Key Features:

- Designed, manufactured and lot tested to meet Echo Liquid Handler specifications
- Working volume:* 250 μ L – 2.8 mL
- Maximum 250 μ L dead volume per well
(This is less than 10% of maximum working volume. Dead volume is recoverable via manual pipetting.)
- DNase-/RNase-free**
- Automation compatible
- Deionized and packaged in anti-static bags
- Echo Qualified Reservoirs are not compatible with centrifugation or heat sealing

*Working range and dead volumes may vary slightly depending on fluid class.

**Based on sample results below detectable levels

Ordering Information:

Part Number	Description	Packaging Configuration
001-11101	Echo Qualified Reservoir, 2 x 3 well, polypropylene, Sterile, Amine Coated	10 lids / sleeve 5 sleeves / case 50 lids / case

Echo Qualified Coated Source Microplates

Echo Qualified Coated Source Microplates have been specially optimized for high precision aqueous liquid transfers to 384-well microplates using the Echo 525 Liquid Handler. Each lot of our coated microplates is tested and certified to meet stringent performance specifications and are distinguishable from the standard Echo Qualified 384-well Source Microplates by a yellow dot on the long side of the lower P-24 corner.



Key Features:

- Designed, manufactured and lot tested to meet Echo 525 Liquid Handler specifications
- DNase-/RNase-free**
- Automation compatible
- Heat seal*** and MicroClime Environmental Lid Compatible
- Deionized and packaged in anti-static bags
- The coated plates come in 2 different coatings and working ranges
- Please consult your application scientist when using coated plates as destination plates

**Based on sample results below detectable levels

***Heat seal recommendations provided here are recommendations only and are based on an Agilent PlateLoc® heat sealer and Agilent aluminum adhesive seal (part number 24214-001). We also recommend use of the Plate Loc Support Insert (part number G5550-12880) or the Agilent Plate Insert for Labcyte plates (part number 16664-101) with every heat sealing application. Customer actual heat seal parameters may vary. Consult with your local Field Application Scientist or Service team to determine the best parameter for your use.

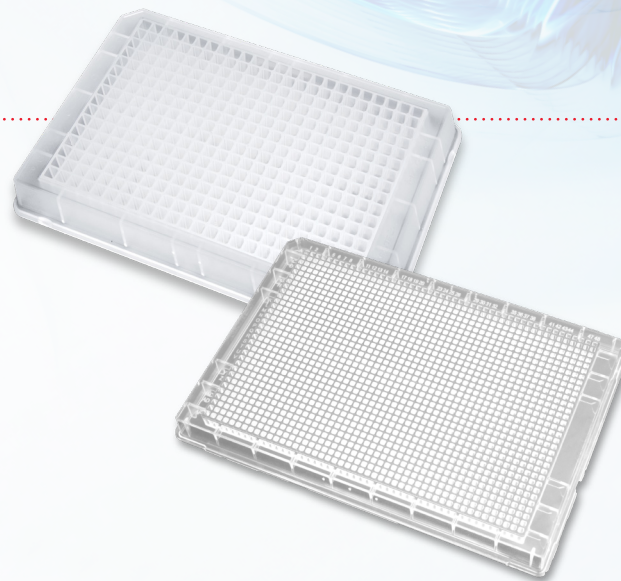
Ordering Information:

Part Number	Description	Working Volume	Coating Type	Material	Packaging Configuration
001-14622	Echo Qualified 384-well polypropylene Source Microplate, Clear, Sterile, Coated	20 μ L to 65 μ L*	Amine	Polypropylene	10 plates / sleeve, 10 sleeves / case, 100 plates / case
001-13070	Echo Qualified 384-well low dead volume Source Microplates, Clear, Sterile, Coated	4.5 μ L to 14 μ L*	Carboxyl	Cyclic Olefin Copolymer	10 plates / sleeve, 5 sleeves / case, 50 plates / case

* Working range and dead volumes may vary slightly depending on fluid class

Echo MS Qualified Consumables

Echo MS Qualified Consumables enable acoustic liquid transfer with the SCIEX Echo MS System. The 384PP and 1536LDV plates deliver ultra-high throughput analyses with zero carryover thanks to contact-free sample transfer. To ensure high reliability and quantitative precision, the SCIEX Echo MS System is specified to work with acoustically qualified microplates by Beckman Coulter Life Sciences. Each lot of microplates are tested and certified to meet stringent performance specifications.



Key Features:

- Designed, manufactured and lot tested to meet Echo MS System specifications
- DNase-/RNase-free**
- Automation compatible
- Heat seal and MicroClime Environmental Lid compatible
- Deionized and packaged in anti-static bags

**Based on sample results below detectable levels

Ordering Information:

Part Number	Description	Working Volume	Packaging Configuration	Instrument Compatibility
C74290	Echo Qualified 384-well Polypropylene Source Microplate, Clear	20 μ L to 65 μ L	10 plates / sleeve 10 sleeves / case 100 plates/case	SCIEX Echo MS System
C52621	Echo Qualified 1536-well Cyclic Olefin Copolymer (COC), low dead volume, Source Microplates, Clear, Non-sterile	1 μ L to 5.5 μ L	10 plates / sleeve 5 sleeves / case 50 plates/case	

Barcoding Options

Beckman Coulter Life Sciences provides custom barcoding services for the following Echo Qualified Source Microplates.



Part Number	Description	Packaging Configuration
001-14618	Echo Qualified 384-well polypropylene Source Microplate, Clear, Barcoded	10 plates / sleeve 10 sleeves / case 100 plates/case
001-6025	Echo Qualified 384-well low dead volume Source Microplates, Clear, Barcoded	10 plates / sleeve 5 sleeves / case 50 plates/case
001-7913	Echo Qualified 1536-well low dead volume Source Microplates, Clear, Barcoded	10 plates / sleeve 5 sleeves / case 50 plates/case

Customers need to complete the barcode specification form and submit it with their Echo Consumable purchase orders. This barcode specification form also provides the most commonly used barcode types and information to help customers ordering barcoded source microplates for the first time. If you need more assistance in ordering barcoded plates, you can reach out to our Client Services Department or your local sales team.

Quotes and Ordering

A wide variety of products can be purchased on beckman.com through a touchless e-commerce process. Other forms of ordering include a process to request for quote, eFax orders or calling **1-800-742-2345** to place an order with our Clients Services team.

Request a quote or order online via this website link or applicable email address (North America or EU):

- Online quotes and orders: www.beckman.com/support/e-commerce/shopping
- NA: insidesalesNA@beckman.com
- EU: eupeinsidesales@beckman.com

Order Echo consumables through the Client Services Department via the following:

- **North America**
Telephone: **1-800-742-2345**, Option 1
Fax: **1-800-742-1987**
Email: LSOrders@beckman.com

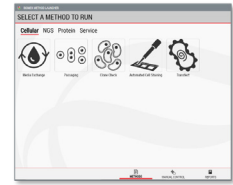
- **Europe**
LSEuropeOrders@Beckman.com

- **Other Regions**

Customers outside of North America and Europe can call the direct phone line for the closest regional Beckman Coulter Life Sciences location.

Visit the www.mybeckman.in/contact-us to find your region's contact information.

The Client Services Department will help new customers set up their Beckman Coulter Life Sciences account. Current customers can use their existing account(s) to place an order.

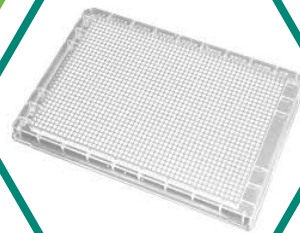


Enabling software that's focused on user friendliness

Growing applications portfolio

Consumables that fit the workflow

Instruments designed for continuous innovation





For more information, contact your
Beckman Coulter Life Sciences representative
or contact us via [beckman.com](https://www.beckman.com).



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