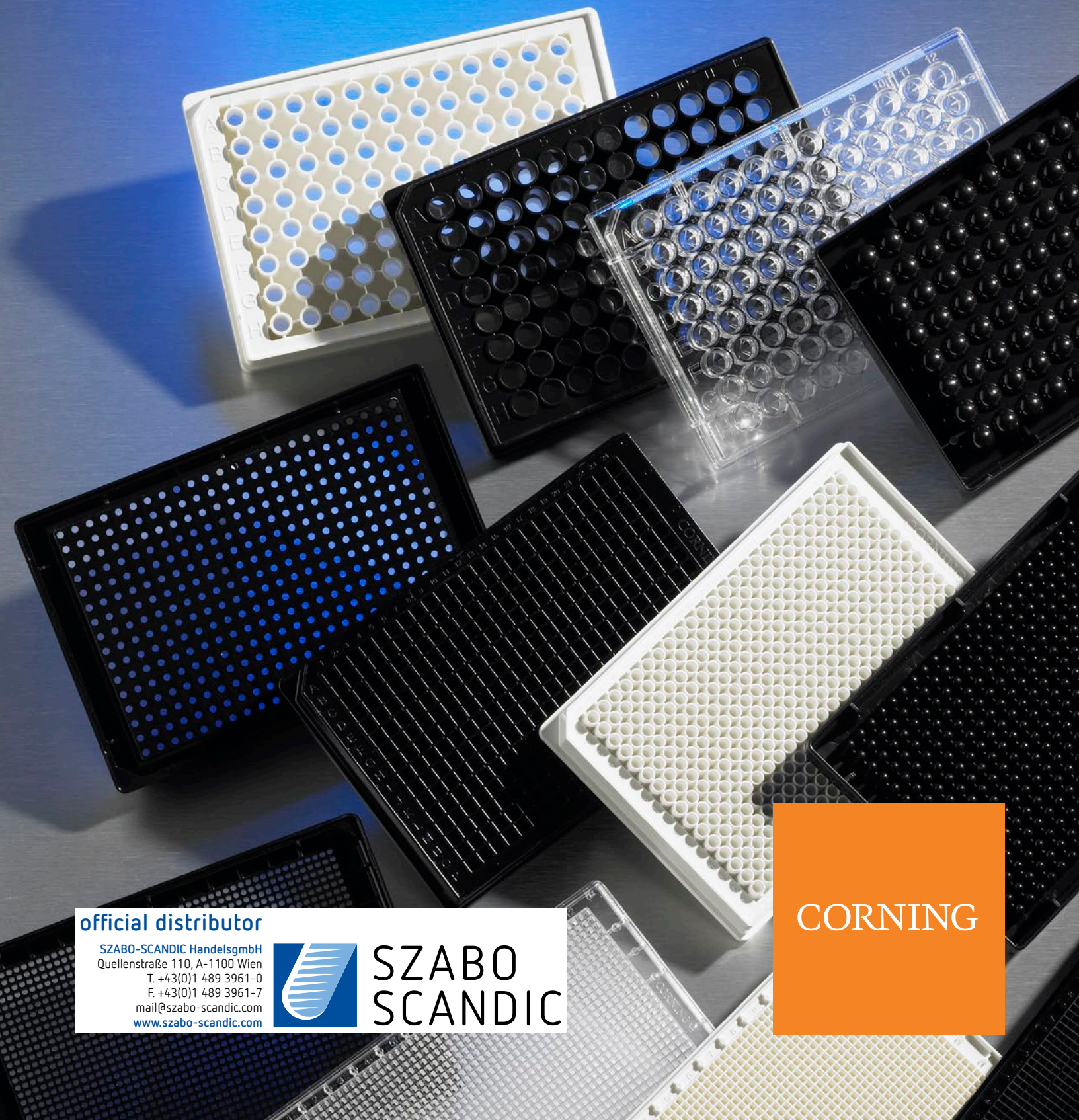
Corning® and Falcon® Microplates Product Selection Guide

For Assays and Drug Discovery



CORNING

Product Ordering Information

Ordering Products Direct from Corning

For our U.S. customers who currently have Corning accounts, you can order direct through our Customer Service group or online:

t: 800.492.1110, prompt 2
f: 978.442.2476
e: CLSCustServ@corning.com
w: www.corning.com/lifesciences

Hours of Operation: Monday to Friday, 8:00 a.m. to 6:00 p.m. (Eastern Standard Time)

Customers outside of the U.S., please contact your local Corning distributor, www.corning.com/lifesciences.

Phone/Fax Orders

For each order, customers should provide the Corning product number, product description, and desired quantity. You should also include your billing and shipping address and your Corning account number.

Online Orders

In order to purchase Corning products online, please visit the Corning Life Sciences website at www.corning.com/lifesciences. Click on "Order Now, Login" and complete the online registration form. Customers using credit cards may immediately place orders. Full Service Direct accounts with account specific contract pricing will need to establish a direct account with Corning Customer Service before online transactions can be made. You can complete the online registration form or contact Corning Customer Service directly at 1.800.492.1110 in order to establish a direct account with Corning.

To purchase Corning media products, visit www.corning.com/lifesciences/media.

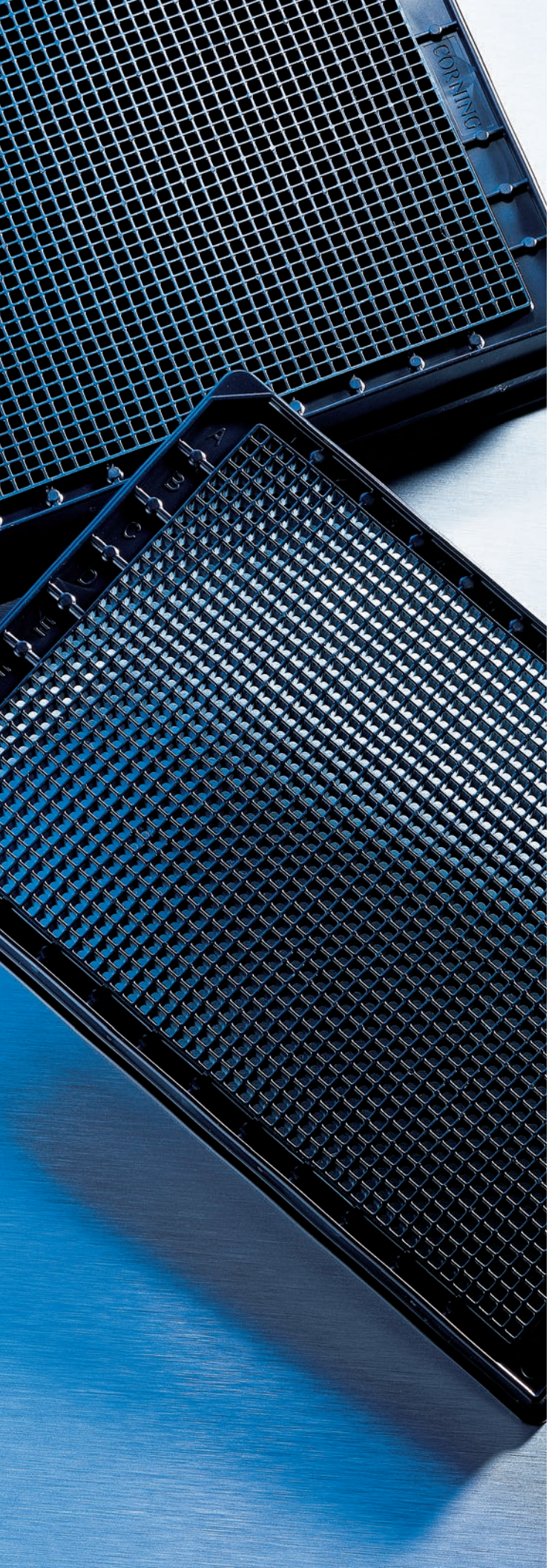
Ordering Products Through our Distribution Partners

Customers can purchase Corning products from any one of our more than 50 authorized distributors. See our complete listing of Corning distributors online at www.corning.com/lifesciences. Our distribution partners can offer our customers a variety of value added services from local inventory and service, to managed services, and preferred programs. Please contact your distributor of choice for more details.

For additional product information, visit **www.corning.com/lifesciences**, or call 1.800.492.1110. Customers outside the United States, call 1.978.442.2200 or contact your local support office.

Abbreviations Used

PDL – Poly-D-Lysine
PLL – Poly-L-Lysine
PLO – Poly-L-Ornithine
NBS – Nonbinding Surface
TC – Tissue Culture
NT – Not Treated
ELISA – Enzyme-linked Immunosorbent Assay
HB – High Bind
MB – Medium Bind
ULA – Ultra-Low Attachment



Corning® and Falcon® Microplates

Overview

DESIGNED FOR PERFORMANCE

Corning has been setting the standard for excellence in life sciences labware for over 85 years. With our comprehensive line of plasticware, including assay products, we continue to be an industry leader. Corning strives for the highest standards in product design and plastics molding.

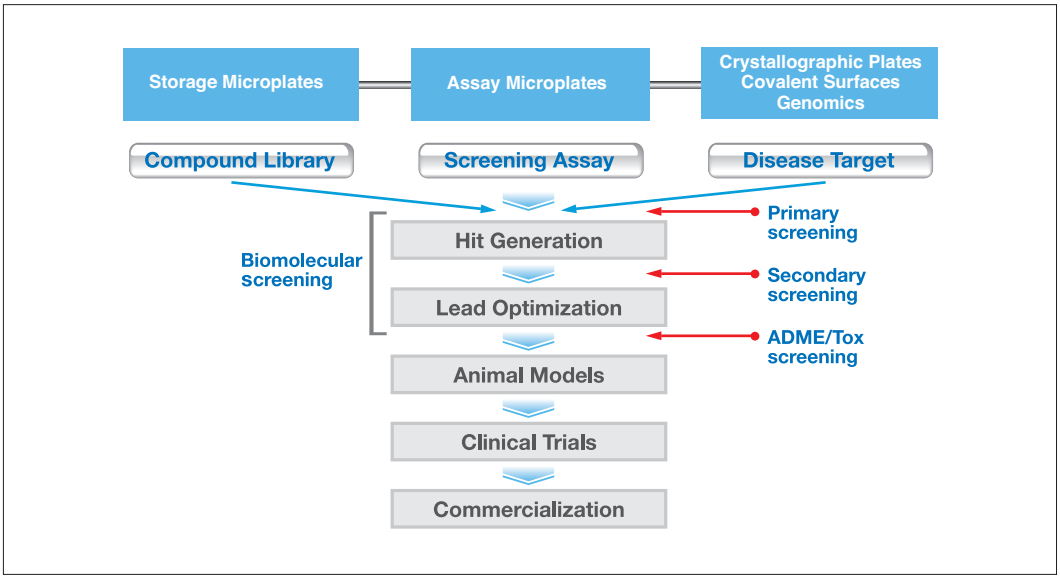
Corning® microplates and accessories are manufactured under strict process controls guaranteeing consistent product performance. Our manufacturing facilities are in compliance with cGMP standards and are ISO 9001 registered.

Customers can request a Certificate of Compliance for any Corning microplate. Also available are detailed product descriptions and drawings that highlight product dimensions and testing procedures. All are available by contacting your local Corning Life Sciences office. See the back cover of this guide for a listing.

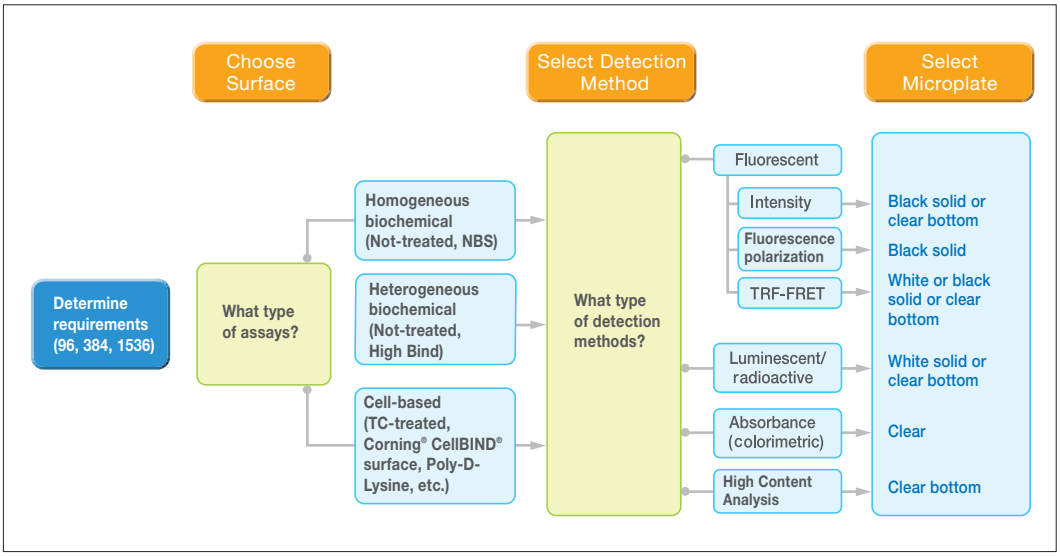
Microplates Selection Process

OVERVIEW

Drug Discovery Process



Microplate Assay Selection Process Summary



SELECTING A MICROPLATE

Choose the Corning® Microplate Material and Color

Corning uses different polymers for microplates to support various application requirements. Selection of the appropriate polymer material and color can improve assay performance. Additional technical information on key polymers can be found in the appendix at the end of this guide.

	Microplate Format					
Microplate Material	**96-well**	**96-well Stripwell**	**Half Area 96-well**	**384-well**	**Low Volume 384-well**	**1536-well**
Clear polystyrene	■	■	■	■		
Solid black or white polystyrene	■	■	■	■	■	■
Clear bottom black or white polystyrene	■		■	■	■	■
Polypropylene	■			■	■	
Solid black or white polypropylene	■			■*		
Cyclic Olefin Copolymer (COC)			■	■		■
Flexible vinyl (PVC)	■					
Ultraviolet (UV) transparent	■		■			

*Only available in black polypropylene.

Choose the Correct Microplate to Enhance Signal-to-Noise Ratio

- Clear
- White
- Black
- White/clear bottom
- Black/clear bottom

Black – Low background fluorescence and low fluorescent cross-talk. The black colorant used in Corning microplates reduces background, as well as light scattering, resulting in higher signal-to-noise ratios.

White – Enhances luminescence signal-to-noise ratio. White reflects light back into the range of the detector.

Surface Treatments Improve Assay Sensitivity

Corning offers various surface treatments for microplates:

- **Not treated (or medium binding) polystyrene surface** is hydrophobic in nature and binds biomolecules through passive interactions. It is suitable primarily for the immobilization of large molecules, such as antibodies, that have large hydrophobic regions that can interact with the surface.
- **High binding surface** is capable of binding medium (>10 kD) and large biomolecules that possess ionic groups and/or hydrophobic regions.
- **Nonbinding surface (NBS)** is a Corning proprietary treatment technology used on polystyrene microplates to create a non-ionic hydrophilic surface (polyethylene oxide-like) that minimizes molecular interactions. Ideal for reducing non-specific binding as a result of protein and nucleic acid binding at low concentrations and increasing assay signal to noise.
- **Corning® CellBIND® surface** is a Corning proprietary treatment which provides improved consistency and even cell attachment.
- **Tissue culture-treated (TC-treated) surface** is used for the attachment and growth of anchorage-dependent cells.
- **Ultra-Low Attachment (ULA) surface** has a covalently bonded hydrogel designed to minimize cell attachment, protein absorption, enzyme activation, and cellular activation. This surface is noncytotoxic, biologically inert, and nondegradable.
- **Poly-D-Lysine (PDL) coated surface** can improve attachment of difficult-to-attach cells.
- **Sulfhydryl (Sulfhydryl-BIND) binding surface** has covalently-linked maleimide groups that covalently couple to sulfhydryl groups via SH moieties. Ideal for assays requiring site-directed orientation of a biomolecule, especially antibodies.
- **Carbohydrate (Carbo-BIND) binding surface** has hydrazide groups covalently coupled to carbohydrate groups. Ideal for assays requiring site-directed orientation of a biomolecule (oxidized antibodies, carbohydrates, and glycosylated proteins) while maintaining enzymatic or immunological activity.

Choose the Corning Surface Treatment

Corning offers polystyrene microplates with a variety of modified surfaces. These surfaces can support binding or covalent immobilization of cells, proteins, nucleic acids, and other biomolecules. Additional information on these surfaces can be found in the Technical Appendix at the end of this guide.

	Microplate Format					
Surface Treatment	**96-well**	**96-well Stripwell™**	**Half Area 96-well**	**384-well**	**Low Volume 384-well**	**1536-well**
For General Assay						
Not treated (medium binding)	■	■	■	■	■	■
High binding	■	■	■	■	■	
Nonbinding	■		■	■	■	■
Sulfhydryl (Sulfhydryl-BIND) binding	■	■				
Carbohydrate (Carbo-BIND) binding	■	■				
For Cell Culture						
Tissue Culture (TC)-treated	■	■	■	■	■	■
Ultra-Low Attachment surface	■			■		
Corning CellBIND surface	■			■		■
Poly-D-Lysine	■			■		
Collagen	■			■		■

Microplate Selection Guide by Surface, Format, and Plate Color

Format and Color	ECM-COATED Corning® BioCoat™											SYNTHETIC Corning PureCoat™	TISSUE CULTURE-TREATED	
	Collagen I	Collagen IV	Poly-D-Lysine	Poly-L-Lysine	Gelatin	Corning Matrigel® matrix – thin layer	Fibronectin	Laminin	Laminin/ Fibronectin	Laminin/ Poly-D-Lysine	Laminin/ Poly-L-Ornithine	Amine	Falcon®	Corning Primaria™
96-well														
Clear	■	■	■	■	■	■	■	■	■	■	■		■	■
White	■		■										■	
Black													■	
White/clear	■		■										■	
Black/clear	■		■									■	■	
384-well														
Clear	■		■										■	
White	■		■										■	
Black													■	
White/clear	■		■										■	
Black/clear	■		■									■	■	
384-well Small Volume														
White														
Black														
Black/clear	■		■									■		
1536-well														
White													■	
Black													■	
White/clear													■	
Black/clear			■									■	■	

Microplate Selection Guide by Assay Type

Assay Type	ECM-COATED Corning® BioCoat™											SYNTHETIC Corning PureCoat™	TISSUE CULTURE-TREATED	
	Collagen I	Collagen IV	Poly-D-Lysine	Poly-L-Lysine	Gelatin	Corning Matrigel® matrix – thin layer	Fibronectin	Laminin	Laminin/ Fibronectin	Laminin/ Poly-D-Lysine	Laminin/ Poly-L-Ornithine	Amine	Falcon®	Corning Primaria™
Ion channel/Calcium flux (FLIPR®)	■		■	■								■	■	■
GPCR (Active/Inactive)	■		■	■								■	■	■
Cell cytoxicity	■	■	■	■	■		■	■	■	■	■	■	■	■
Cell proliferation	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Cell adhesion	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Differentiation (primary cells)	■	■	■	■		■	■	■	■	■	■	■		■
Cell migration							■							
Reporter gene	■	■	■	■			■	■		■		■	■	■
Neurite outgrowth	■					■		■	■	■	■	■		■

Microplate Selection Guide by Cell Type

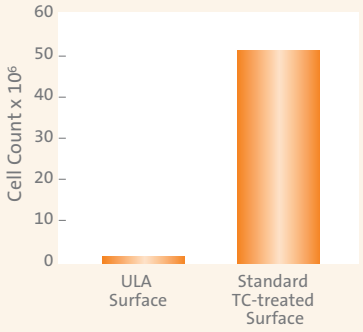
Assay Type	ECM-COATED Corning BioCoat								SYNTHETIC Corning PureCoat	TISSUE CULTURE-TREATED	
	Collagen I	Collagen IV	Poly-D-Lysine	Poly-L-Lysine	Fibronectin	Laminin	Laminin/ Poly-D-Lysine	Laminin/ Poly-L-Ornithine	Amine	Falcon	Corning Primaria
HEK-293	■		■	■	■				■		■
CHO	■		■	■					■	■	■
Primary cells			■	■	■	■	■	■	■		■
HeLa										■	
HEPG2	■								■	■	
COS-7			■	■						■	■
SH5Y	■	■				■	■	■			
CaCo	■									■	
BHK			■	■	■				■	■	
Vero										■	
hMSCs							■	■	■	■	

Note: The above table shows only a representative list of cell types. For additional information please contact Scientific Support at 800.492.1110.

Surface Properties

Corning® Ultra-Low Attachment (ULA) Surface Microplates

Corning Ultra-Low Attachment Surface Microplate (Cat. No. 3474) has a covalently bonded hydrogel layer to minimize cell attachment, protein absorption, enzyme activation, and cellular activation. The surface is noncytotoxic, biologically inert, and nondegradable.



Comparison of Cell Attachment in Ultra-Low Attachment Surface versus Standard TC-treated Microplates

Vero cells plated at 2.6 x 10^6 cells per well grown for 4 days at 37°C in a 5% CO_2 environment show a 99% reduction in cellular attachment versus standard TC-treated microplates.

Corning High Binding Enzyme Immunoassay/Radioimmunoassay (EIA/RIA) Microplate Certification

Corning offers 96-well EIA/RIA microplates and Corning Stripwell™ microplates manufactured for uniform binding, high optical clarity, and low background absorption.

Certification Standards	High Binding	Medium Binding (Not treated)
Well-to-well coefficient of variation (CV) value	≤3%	≤5%
Average high and low wells from the mean	≤8%	≤15%
Background absorbance units from the mean	±0.005	±0.005

Corning high binding microplates have a binding capacity of approximately 500 ng of mouse IgG/cm^2. The not treated microplates have a binding capacity of approximately 250 ng of mouse IgG/cm^2. Corning tests its EIA/RIA microplates on an audit basis and the certification results for each lot are made available upon request by contacting your local Corning Life Sciences office. In addition, five ELISA Technical Bulletins are available at **www.corning.com/lifesciences**.

Nonbinding Surface (NBS) Binding Performance

NBS microplates have a non-ionic hydrophilic well surface, which make them ideal for minimizing protein binding in homogeneous assays.

Binding in ng/cm^2	^{125}I-IgG	^{125}I-BSA	^{125}I-Insulin	^{32}P-oligo DNA	^{32}P-λ phage DNA
Polystyrene	400	450	310	22	6
Polypropylene	380	440	370	3	<2
NBS on Polystyrene	<2.5	<2.5	5	<2	<2

For additional information on surface properties and applications, see the Technical Appendix on page 41.

Total Volume and Working Volume Recommendations

Microplate	Well Volume	Working Volume
96-well	320 to 360 µL	50 to 200 µL
96 half-well	190 µL	25 to 50 µL (low end)
384-well	125 µL	20 to 75 µL
384-well low volume	35 µL	2 to 20 µL
1536-well	10.7 to 12.8 µL	1 to 10 µL

Fluorescent imaging of a V-shaped well bottom

Well Shape: Why Flat, Round, V-, or Conical Bottom?

- Flat bottom – Usually the best choice for detection
- Round bottom – Washing, retrieving, sample auto-centering (e.g., homogeneous cell-based assay, cells in suspension are read after settling at bottom)
- V-bottom – Retrieving, least dead volume
- Conical bottom – Designed to match shape of light cone to create maximum light efficiency
- Easy Wash bottom – Detection, washing

	Microplate Format					
Well Shape	96-well	96-well Stripwell™	Half Area 96-well	384-well	Low Volume 384-well	1536-well
Flat bottom	■	■	■	■	■	■
Round bottom	■				■	■
V-bottom	■					
Conical bottom	■					
Easy wash bottom	■					

Detailed information about well volume, working volumes, and microplate dimensions for Corning® 96-well, 384-well, and 1536-well microplates are provided throughout this guide.

Assay Types by Detection Method

- Colorimetric Assays – Absorbance
- Luminometric Assays – Luminescence
- Fluorometric Assays – Fluorescence
- High Content Analysis (HCA)

Generic bar code microplate

Bar Code Customization

Generic Bar Codes

Corning now offers a line of generic bar coded microplates to better meet the demands of your screening needs.

- No lead time: microplates are in stock and ready to ship
- Surface identification: The surface treatment of the microplate is identified in the human readable portion of the bar code:

  NT = Not treated
  TC = Tissue culture-treated
  CB = Corning® CellBIND® surface
  NBS = Nonbinding surface
- Labels applied to all 4 sides of the microplate ensure usability regardless of scanner location
- Each microplate is specially treated to reduce the impact of static build-up
- Code 128 bar code format ensures compatibility with most bar code scanning and software systems

Custom Designed Bar Codes

Corning's bar coding service provides high-quality bar code labels affixed to any side of Corning BioCoat™, or Corning PureCoat™ microplates. Bar codes have been quality tested for optimal readability, chemical resistance, and temperature durability.

- Fast delivery
- Bulk-packaged microplates for ease of use in automated systems
- Flexible bar code symbologies, such as CODE 128, Code 3 of 9, and ITF 2 of 5
- Flexible bar code positioning so that labels can be left-aligned, center-aligned, or right-aligned
- Non-repeatable bar code sequence prevents label duplication
- Solvent resistance to methanol, DMSO, methylene choride, and ethyl acetate
- Ability to withstand prolonged exposure to temperatures ranging from -80°C to 121°C
- Sample bar coded plates are provided in order to test compatibility with automated equipment.

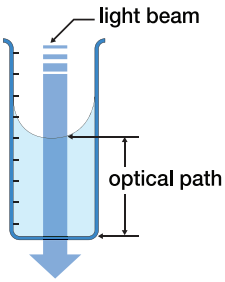
Dependable Durability

Bar codes have been quality tested for optimal readability, chemical resistance, and temperature variation.

Expert Advice

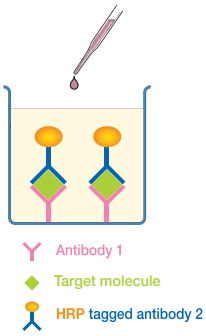
Most Corning microplates are suitable for bar code customization. Contact Corning Life Sciences or your local Corning Sales Representative for more information.

Colorimetric Assays



Overview

- Measuring absorbance change of samples using spectrophotometer
- Enzyme converts colorless substrate to colored product
- Color change indicates positive reaction
- Signal obtained – OD (optical density)
- Desired microplate attributes:
  - Transparent to visible light
  - Low absorption/backgorund
  - All clear plate or clear bottom plate

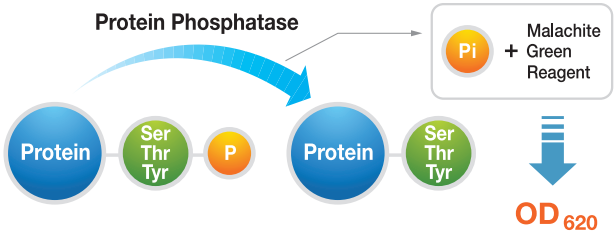


Example Applications

1. Heterogeneous Colorimetric Assay – ELISA

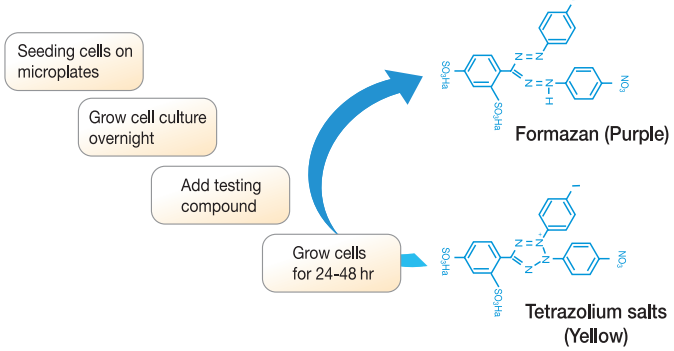
- Applications
  - Detect/measure target molecules from blood or body fluid
  - Analyze target molecules from cell extract
  - Detect DNA molecules released from tissue samples
- Microplate requirements
  - Transparent to visible light
  - Good capacity of binding (high or medium bind microplates)

2. Protein Tyrosine Phosphatase Activity Assay: EMDs PTP1B Kit



- Microplate requirements
  - Transparent to light
  - Low non-specific binding (not treated microplates)

3. MTT Colorimetric Cell Proliferation Assay

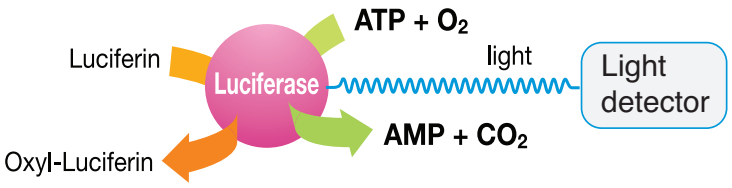


- Microplate requirements
  - Transparent to light
  - Good cell attachment (TC-treated, Corning® CellBIND® surface, Poly-D-Lysine, etc.)

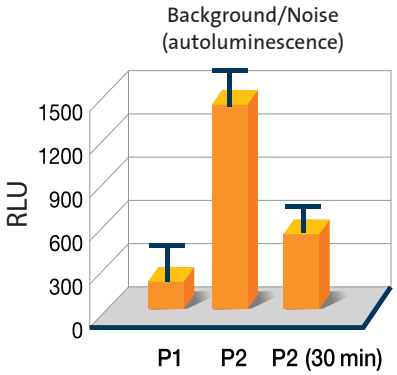
Luminometric Assays

Overview

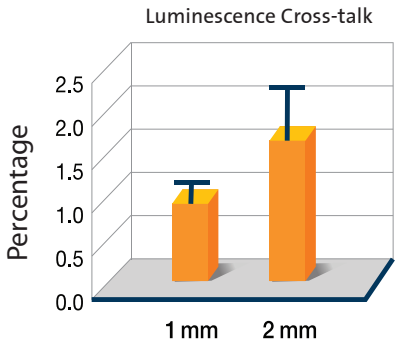
- Signals are the light produced by a chemical or biological reaction
- Signal = RLU (relative luminescent units) or cps (counts per seconds)



Optical Properties of Materials



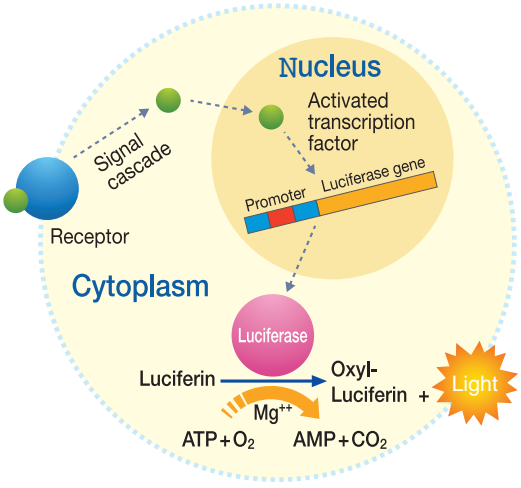
Background luminescence can be reduced by storing microplates in the dark before use.

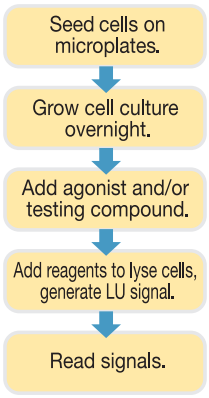


Instrument settings impact cross-talk.

Applications

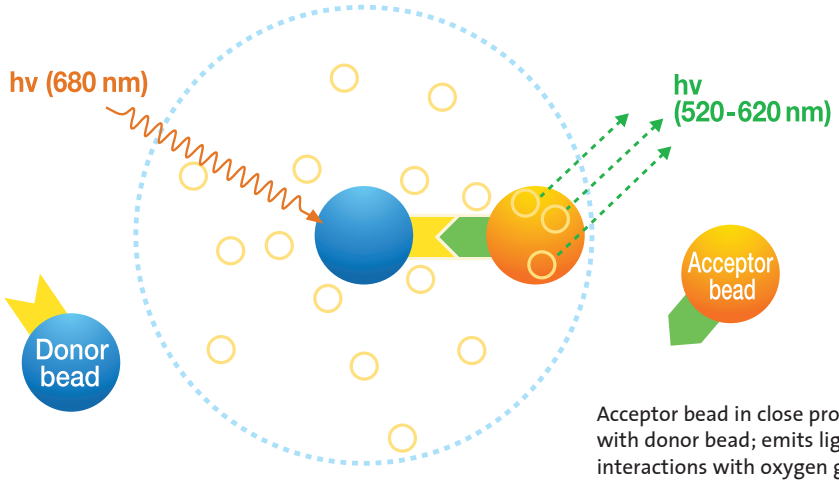
1. Reporter Gene Assay (Cell-based)





- Microplate requirements
  - Solid white microplates
  - Good cell attachment (TC-treated)

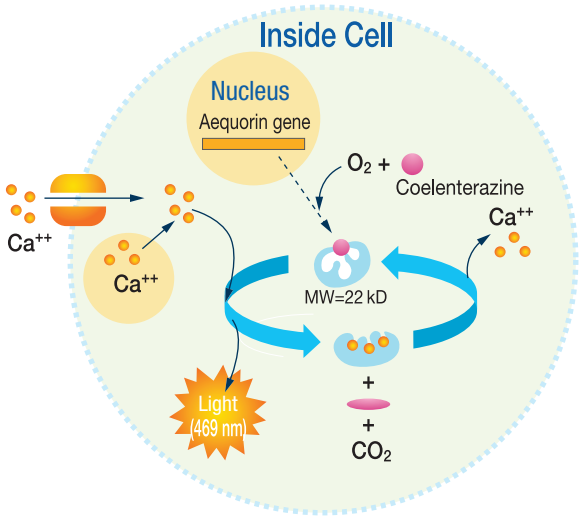
2. Bead-based Homogeneous Assay – PerkinElmer AlphaScreen® Assay

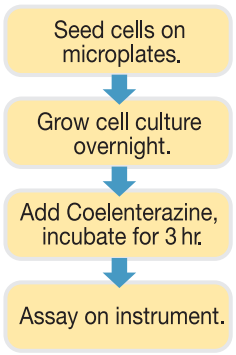


Acceptor bead in close proximity with donor bead; emits light from interactions with oxygen generated by donor bead.

- Microplate requirements
  - Solid white microplates
  - Low non-specific binding (not treated or NBS microplates)

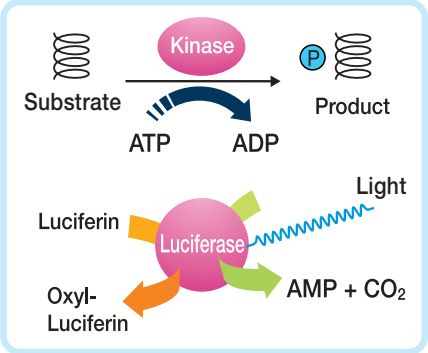
3. Aequorin Ca^{2+} Flux Assay

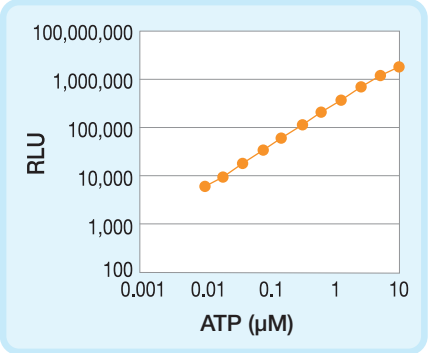




- Microplate requirements
  - White/clear bottom microplates
  - Excellent cell attachment (TC-treated, Corning® CellBIND® surface, Poly-D-Lysine, etc.)

4. Homogeneous Assay – Promega Kinase-Glo® Assay



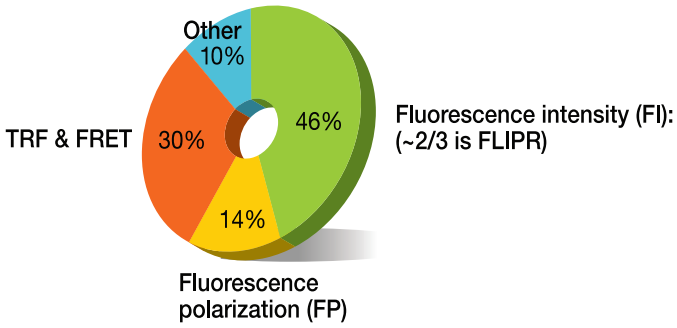


- Microplate requirements
  - Solid white microplates
  - Low non-specific binding (not treated or NBS microplates)

Fluorometric Assays

Overview

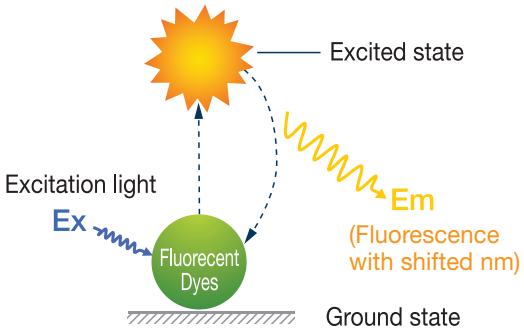
- Fluorescence is the most diverse detection method.
- Signal = RFU (relative fluorescent units)

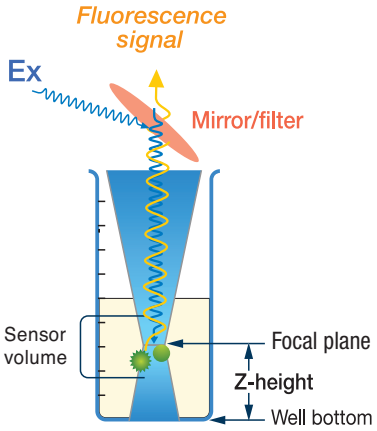


TRF = Time-resolved fluorescence
FRET = Fluorescence Resonance Energy Transfer

Fluorescence Intensity

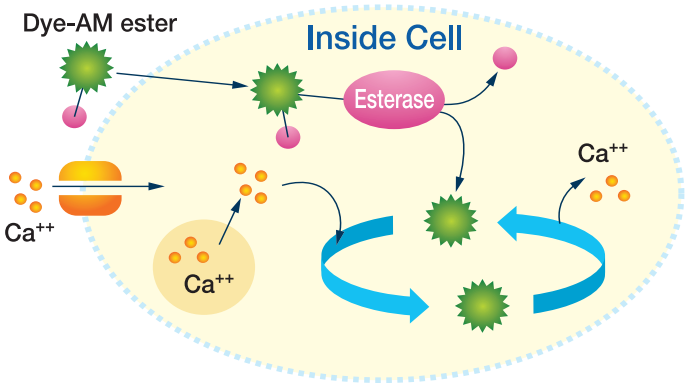
- Involves the use of fluorescent dyes
- Applications
  - FLIPR® assays (Ca^{2+} flux, membrane potential, etc.)
  - Cell viability assays in ADME/Tox screening

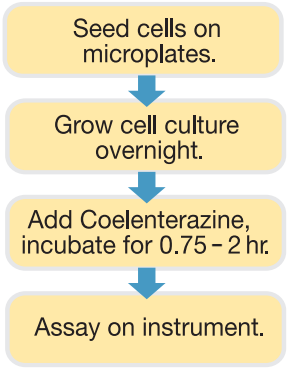




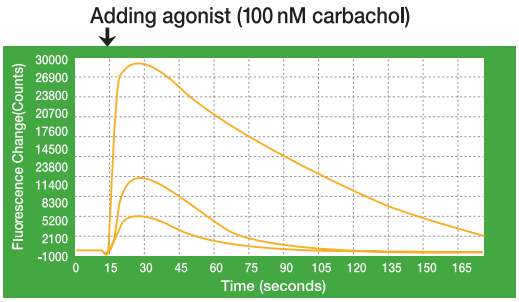
Application

- Calcium Flux Assay



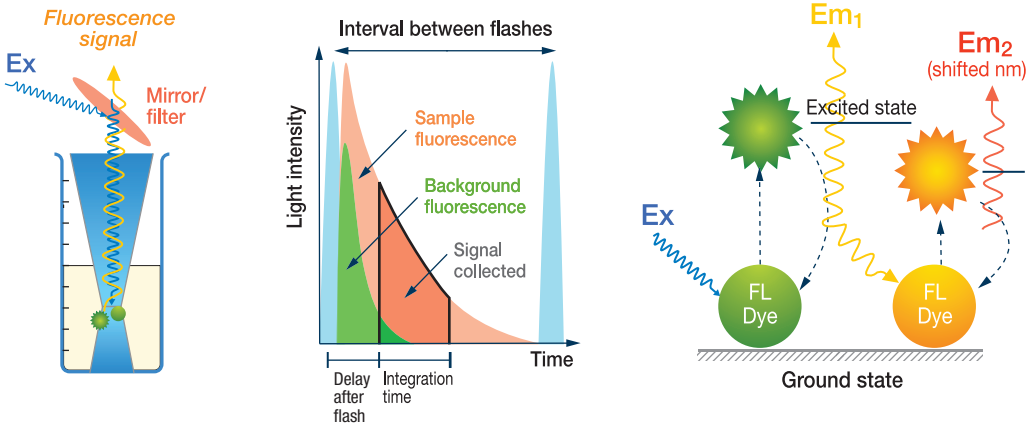


- Microplate requirements
  - Black/clear bottom microplates
  - Excellent cell attachment (TC-treated, Corning® CellBIND® surface, Poly-D-Lysine, etc.)



TRF-FRET Technologies

- Time resolved fluorescence (TRF) is a method of fluorescence signal detection.
- Fluorescence Resonance Energy Transfer (FRET) is a physical phenomenon.



- Advantages
  - No molecular size limitations
  - Signals are specific due to low background fluorescence
  - Signal can be ratiometric:

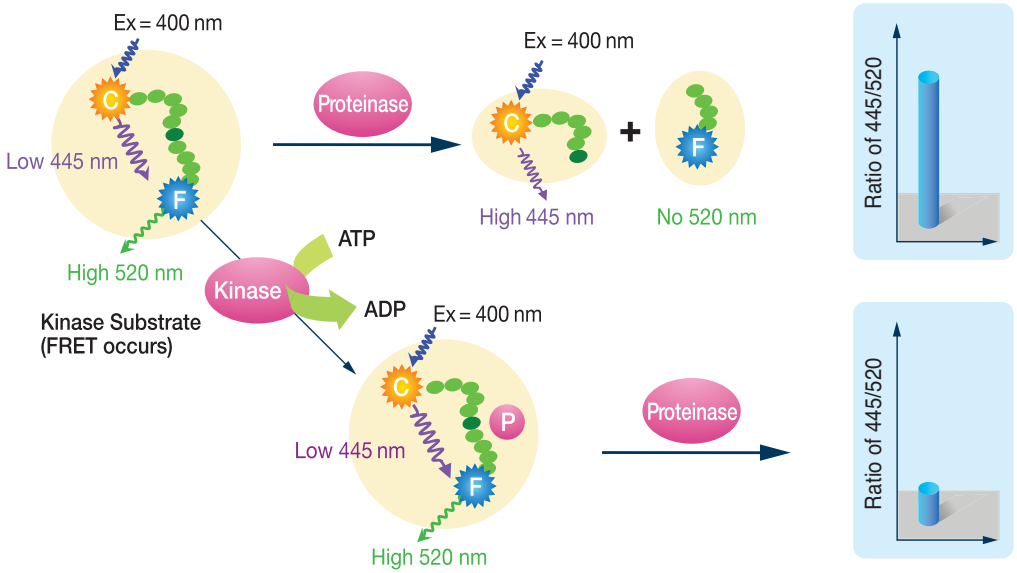
    Signal = Em_2/Em_1 or Em_1/Em_2

    (Dispensing errors can be taken out of the equation)
  - Overall signal level is low
  - Microplate requirements
    - Mostly solid colored microplates
    - Both black and white microplates can be used, but a white microplate is recommended for TRF applications.
    - Clear bottom microplates can work as well.
    - Well design that pushes meniscus close to detectors has advantages.

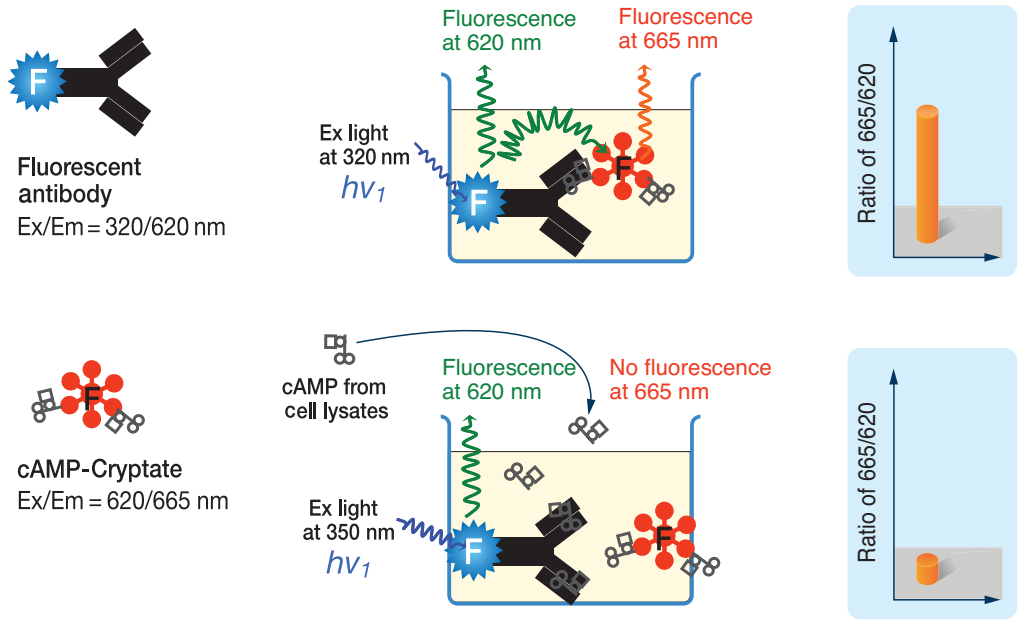
Applications

1. Z-lite Kinase/Phosphatase Assay

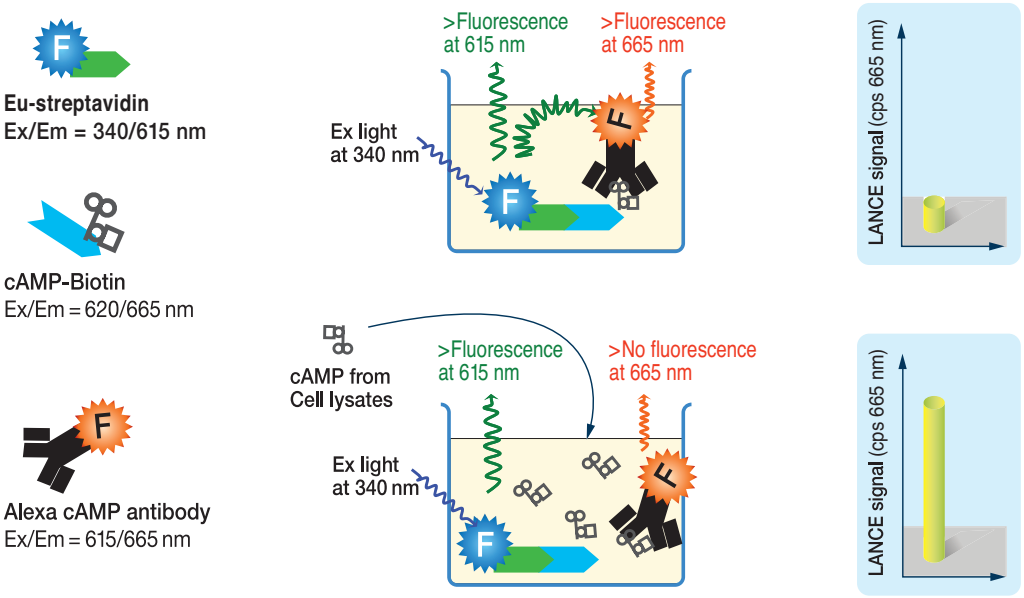
- NBS microplate is required for this assay.



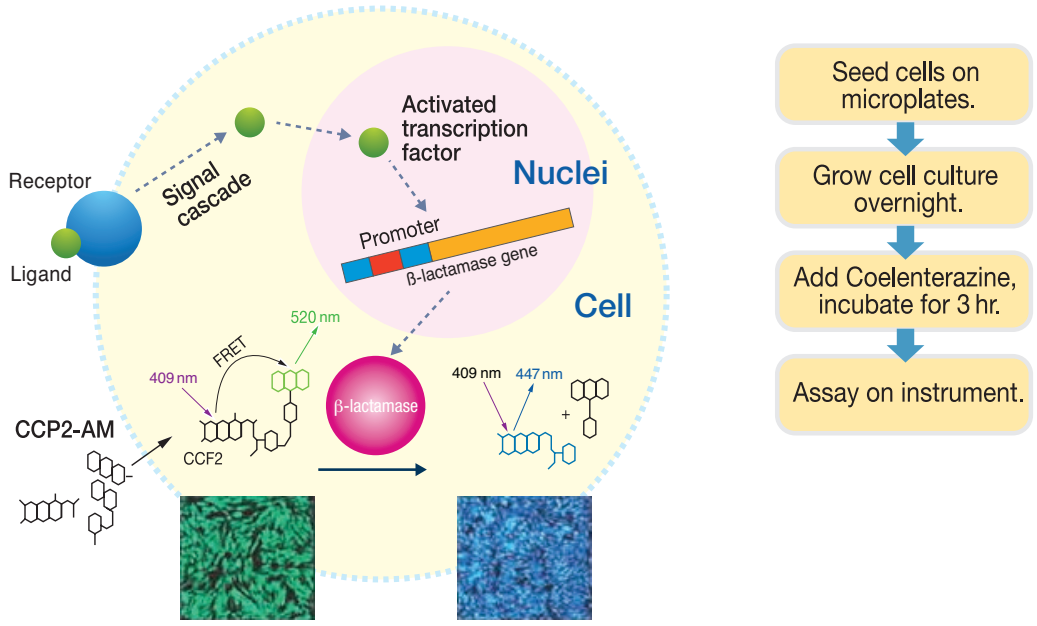
2. HTRF cAMP Detection Assay



3. LANCE® cAMP Detection Assay



4. Beta-Lactamase Reporter Gene Assay



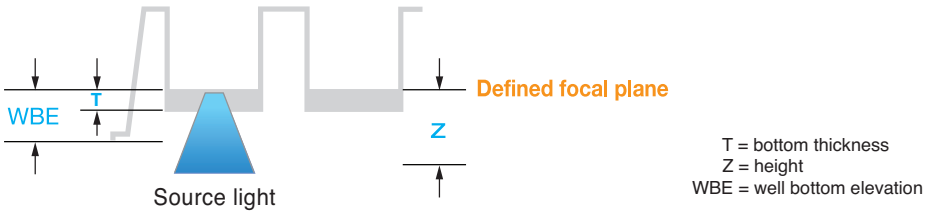
- Microplate requirements
  - Can be used with both black and white microplates
  - Excellent cell attachment (TC-treated, Corning® CellBIND® surface, Poly-D-Lysine, etc.)

High Content Analysis

Overview

- Cell-based assays using adherent cells
- Almost all high content imagers are fluoresence readers (e.g., confocal, laser scanning).
- Important microplate attributes
  - Flatness
  - Thickness
  - Well bottom elevation (WBE)
  - Surface
- Applications
  - Morphology changes
  - Molecular localization
  - Signal translocation (temporal changes)
  - Molecular interaction (FRET)

Important Microplate Attributes for High Content Analysis

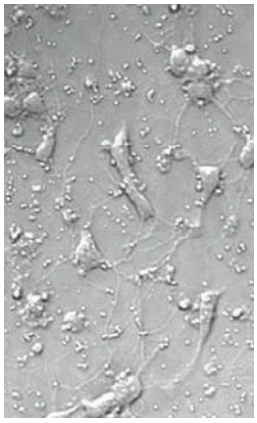


Applications

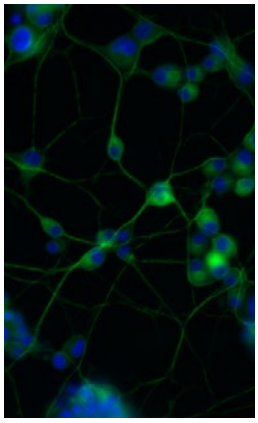
1. Morphology Changes

- Neurite outgrowth assays

Bright Field



Fluorescent Image



Seed microplates with primary neuronal cells from frozen stocks (-80°C).

↓

Stimulate cells with growth factors and let grow for 3 days.

↓

Fix and stain cells.

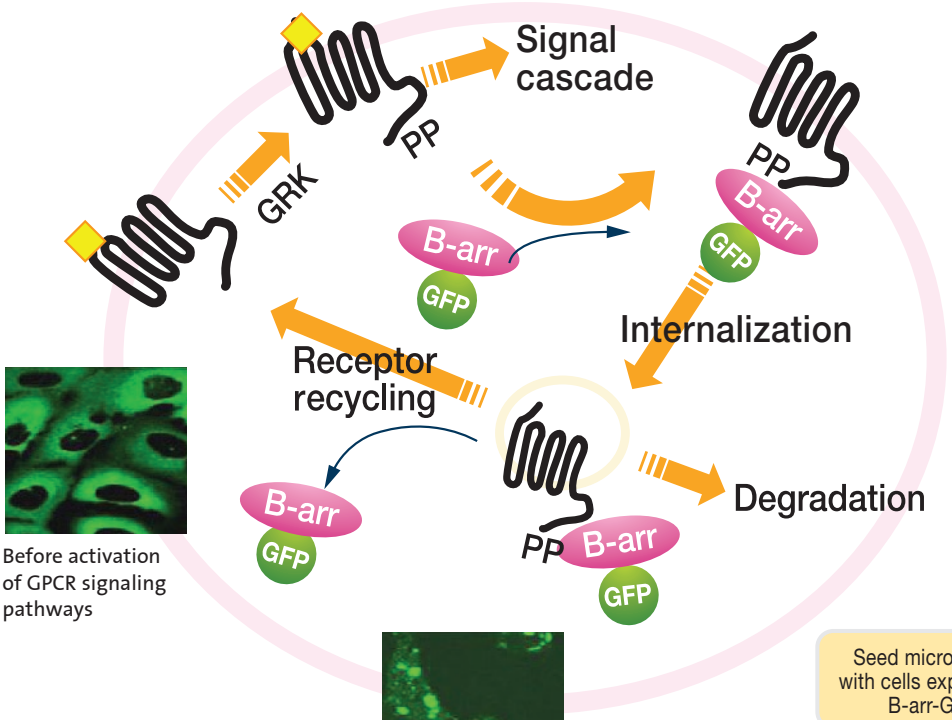
↓

Image cells and quantify the length of neurites, branch points, or cross points.

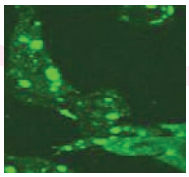
- Microplate requirements
  - Clear bottom microplates
  - Excellent cell attachment (TC-treated, Corning® CellBIND® surface, or Poly-D-Lysine, etc.)

2. Signal translocation

- Transfluor® Technology (Molecular Devices®)



Before activation of GPCR signaling pathways



After activation of GPCR signaling pathways

Seed microplates with cells expressing B-arr-GFP.

Grow cells overnight.

Stimulate cells for 30 min, then fix cells.

Image cells and quantify the signals (spot count).

- Microplate requirements
  - Black/clear bottom microplates
  - Good cell attachment (TC-treated, Corning® CellBIND® surface, or Poly-D-Lysine, etc.)

Microplate Selection Guide

CORNING® AND FALCON® 96-WELL MICROPLATES

Corning offers a complete line of 96-well microplates for laboratory miniaturization and automation. These microplates are available for different applications:

- 96-well assay microplates
  - General assays – Not treated, nonbinding surface, covalent binding, high binding, flexible vinyl (PVC), and UV microplates
  - Cell-based assays – Tissue culture (TC)-treated, Corning® CellBIND® surface, Poly-D-Lysine, and Ultra-Low Attachment (ULA) surface polystyrene microplates
  - Immunoassays – EIA/RIA polystyrene microplates (medium and high binding)
- 96-well polystyrene Corning Stripwell™ microplates
- 96-well polypropylene storage microplates and cluster tubes

This selection guide does not include 96-well microplates for PCR and genomics. Please refer to the **Corning Genomics Selection Guide** for information on these products.

For additional microplate information, refer to the Microplate Selection Process section at the beginning of this guide.

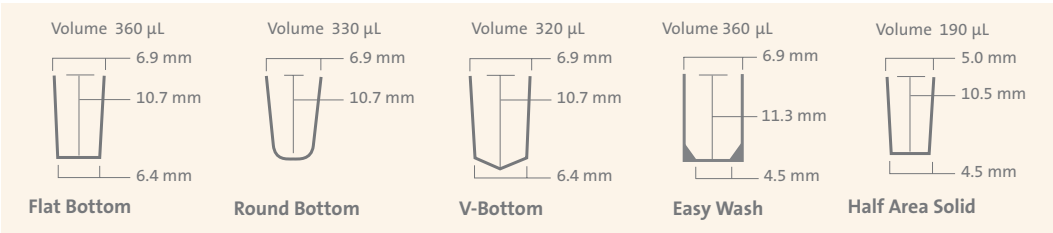
Corning offers a wide variety of 96-well assay microplates. They are organized into five groups:

- Clear polystyrene microplates
- Solid black and white polystyrene microplates
- Black/clear and white/clear bottom polystyrene microplates
- UV microplates
- Clear flexible vinyl (PVC) microplates

Corning 96-well polystyrene microplates are offered in standard volume formats and in lower volume format (Corning half area microplates). Corning 96-well polystyrene microplates have plate dimensions (length x width x height) of 127.76 x 85.48 x 14.22 mm that meet standard ANSI/SBS footprint dimensions for microplates.

96-well Plate Types	Well Bottom	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard	Flat	360	75 – 200
Standard	Round	330	75 – 200
Standard	V	320	75 – 200
Standard	Easy Wash	360	75 – 200
Half area, solid	Flat	190	25 – 125
Half area, clear bottom	Flat	205	25 – 125

96-well Geometry and Dimensions



Corning tissue culture-treated microplates have the same surface treatment used on other Corning culture vessels. In addition to this traditional surface, Corning offers three additional surfaces: Corning CellBIND surface treatment for improving consistency and even cell attachment, a Poly-D-Lysine coating for enhancing attachment of difficult-to-attach cell lines, and an Ultra-Low Attachment surface for minimizing cell attachment.

Corning® 96-well Clear Polystyrene Microplates

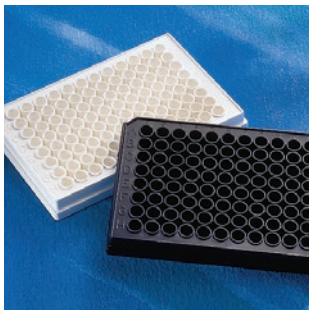
- Cell culture microplates are sterile and nonpyrogenic.
- Lids available where indicated (Information on lids and other microplate accessories can be found beginning on page 39).

Cat. No.	Format	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3360	Standard	Round	TC-treated	Yes	25	100
3366	Standard	Round	High binding	No	25	100
3367	Standard	Round	Not treated	Yes	1	50
3788	Standard, with lid	Round	Not treated	Yes	20	100
3795	Standard	Round	Not treated	Yes	25	100
3798	Standard	Round	Not treated*	No	25	100
3797	Standard	Round	Not treated	No	25	100
3799	Standard, with lid	Round	TC-treated	Yes	1	50
7007	Standard, with lid	Round	ULA	Yes	1	24
3894	Standard, with lid	V	TC-treated	Yes	1	50
3896	Standard	V	Not treated	Yes	1	48
3897	Standard	V	Not treated	No	25	100
3898	Standard	V	Not treated*	No	25	100
2507	Standard	Flat	Carbo-BIND	No	1	50
2509	Standard	Flat	Sulfhydryl-BIND	No	1	50
3300	Standard, with lid	Flat	Corning CellBIND	Yes	5	50
3361	Standard, with lid	Flat	High binding	Yes	20	100
3370	Standard, with lid	Flat	Not treated	Yes	20	100
3474	Standard, with lid	Flat	ULA	Yes	1	24
3585	Standard, with lid**	Flat	TC-treated	Yes	5	50
3590	Standard	Flat	High binding	No	1	100
3591	Standard	Flat	Not treated	No	1	50
3595	Standard, with lid**	Flat	TC-treated	Yes	1	50
3596	Standard, with lid	Flat	TC-treated	Yes	1	50
3598	Standard, with lid	Flat	TC-treated	Yes	5	100
3599	Standard, with lid	Flat	TC-treated	Yes	1	100
3628	Standard, with lid	Flat	TC-treated	Yes	20	100
3641	Standard	Flat	NBS	No	25	100
3841	Standard, with lid	Flat	Poly-D-Lysine	Yes***	20	100
3997	Standard, with lid	Flat	TC-treated	Yes	10	50
9017	Standard	Flat	Not treated	No	25	100
9018	Standard	Flat	High binding	No	25	100
3690	Half Area	Flat	High binding	No	25	100
3695	Half Area	Flat	Not treated	No	25	100
3696	Half Area, with lid	Flat	TC-treated	Yes	1	50
3697	Half Area, with lid	Flat	TC-treated	Yes	20	100
3368	Standard	Easy Wash	Not treated	No	25	100
3369	Standard	Easy Wash	High binding	No	25	100

* Processed to improve hydrophilicity for hemagglutination and similar assays.
** Special low evaporation lid.
*** Aseptically manufactured.

Corning CellBIND® Surface for Optimizing Cell-based Assay Performance

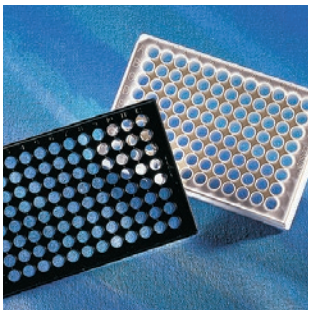
- Available in 96- and 384-well black/clear bottom microplates and 96-well clear microplates
- Surface treatment provides consistent cell attachment and may improve attachment of difficult-to-attach cell lines.
- Not a coating; requires no special handling, and is stable at room temperature
- Sterile
- Nonpyrogenic



Corning® 96-well Solid Black and White Polystyrene Microplates

- Designed to reduce well-to-well cross-talk
- White microplates enhance luminescent signals and have low background luminescence.
- Black microplates have low background fluorescence and minimize light scattering.

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3605	Standard	White	Round	NBS	No	25	100
3789A	Standard	White	Round	Not treated	No	25	100
3792	Standard	Black	Round	Not treated	No	25	100
4590	Standard	Black	Round	Carbo-Bind	No	1	50
4591	Standard	Black	Round	ULA	Yes	1	24
3362	Standard	White	Flat	TC-treated	Yes	25	100
3600	Standard	White	Flat	NBS	No	25	100
3650	Standard	Black	Flat	NBS	No	25	100
3912	Standard	White	Flat	Not treated	No	25	100
3915	Standard	Black	Flat	Not treated	No	25	100
3916	Standard, with lid	Black	Flat	TC-treated	Yes	20	100
3917	Standard, with lid	White	Flat	TC-treated	Yes	20	100
3922	Standard	White	Flat	High binding	No	25	100
3925	Standard	Black	Flat	High binding	No	25	100
3990	Standard	White	Flat	NBS	No	5	25
3991	Standard	Black	Flat	NBS	No	5	25
3642	Half area	White	Flat	NBS	No	25	100
3686	Half area	Black	Flat	NBS	No	25	100
3688	Half area, with lid	White	Flat	TC-treated	Yes	20	100
3693	Half area	White	Flat	Not treated	No	25	100
3694	Half area	Black	Flat	Not treated	No	25	100
3875	Half area, with lid	Black	Flat	TC-treated	Yes	20	100
3992	Half area	White	Flat	NBS	No	5	25
3993	Half area	Black	Flat	NBS	No	5	25



Tip for Improving Optical Performance in Fluorescent Assays

Corning® Special Optics 96-well microplates have black walls with ultra thin, clear bottoms for sharp, clear images and minimal background in fluorescent assays.

Corning® 96-well Black/Clear and White/Clear Bottom Polystyrene Microplates

- Bottoms are 60% thinner than conventional polystyrene microplates, resulting in lower background fluorescence and enabling readings down to 340 nm.
- Opaque walls prevent well-to-well cross-talk.
- Optically clear flat bottom permits direct microscopic viewing.

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3340	Standard, with lid	Black/clear	Flat	Corning CellBIND®	Yes	5	50
3372	Standard, with lid	Black/clear	Flat	Poly-D-Lysine	Yes	10	50
3601	Standard	Black/clear	Flat	High binding	No	25	100
3603	Standard, with lid	Black/clear	Flat	TC-treated	Yes	1	48
3604	Standard	White/clear	Flat	NBS	No	25	100
3610	Standard, with lid	White/clear	Flat	TC-treated	Yes	1	48
3614	Special Optics	Black/clear	Flat	TC-treated	Yes	25	100
3615	Special Optics	Black/clear	Flat	Not treated	No	25	100
3631	Standard	Black/clear	Flat	Not treated	No	25	100
3632	Standard	White/clear	Flat	Not treated	No	25	100
3651	Standard	Black/clear	Flat	NBS	No	25	100
3720	Special Optics	Black/clear	Flat	TC-treated	Yes	5	25
3843	Standard, with lid	White/clear	Flat	Poly-D-Lysine	Yes*	20	100
3842	Standard, with lid	Black/clear	Flat	Poly-D-Lysine	Yes*	20	100
3903	Standard, with lid	White/clear	Flat	TC-treated	Yes	20	100
3904	Standard, with lid	Black/clear	Flat	TC-treated	Yes	20	100
4594	Standard	Black /clear	Flat	Fibronectin	No	20	100
3995	Standard	White/clear	Flat	NBS	No	5	25
3809	Standard	White /clear	Flat	Corning CellBIND	Yes	20	100
3721	Half area	Black/clear	Flat	TC-treated	Yes	5	25
3880	Half area	Black/clear	Flat	Not treated	No	25	100
3881	Half area	Black/clear	Flat	NBS	No	25	100
3882	Half area, with lid	Black/clear	Flat	TC-treated	Yes	20	100
3883	Half area	White/clear	Flat	Not treated	No	25	100
3884	Half area	White/clear	Flat	NBS	No	25	100
3885	Half area, with lid	White/clear	Flat	TC-treated	Yes	20	100
3886	Half area	White/clear	Flat	TC-treated	Yes	25	100
3887A	Half area	Black/clear	Flat	TC-treated	Yes	25	100
3994	Half area	White/clear	Flat	NBS	No	5	25

*Aseptically manufactured.

Falcon® 96-well Polystyrene Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
353072	Standard, with lid	Clear	Flat	TC-treated	Yes	1	50
353075	Standard, with lid	Clear	Flat	TC-treated	Yes	5	50
353916	Standard, with lid	Clear	Flat	TC-treated	Yes	25	100
353376	Standard, with lid	Black	Flat	TC-treated	Yes	8	32
353077	Standard, with lid	Clear	Round	TC-treated	Yes	1	50
353296	Standard, with lid	White	Flat	TC-treated	Yes	5	50
353377	Standard, with lid	White/clear	Flat	TC-treated	Yes	8	32
353219	Standard, with lid	Black/clear	Flat	TC-treated	Yes	8	32
353936	Standard, with lid	Clear	Flat	TC-treated	Yes	14	84
353227	Standard, with lid	Clear	Round	TC-treated	Yes	5	50
353872	Standard, with lid	Clear	Flat	Corning Primaria™	Yes	1	50
351172	Standard, with lid	Clear	Flat	Not treated	Yes	1	50
351177	Standard, with lid	Clear	Round	Not treated	Yes	1	50
353910	Standard	Clear	Round	Not treated	No	1	50

Corning® 96-well BioCoat™ and Corning PureCoat™ Microplates

- Corning BioCoat is offered in a variety of surface treatments to provide enhanced cell attachment and growth.
- The novel Corning PureCoat Amine is a positively charged surface that provides enhanced cell attachment of primary, transfected, transformed, and fastidious cells in standard, serum-free, or serum-reduced conditions.
- Coated in a highly controlled, aseptic manufacturing environment to ensure lot-to-lot consistency, assay reproducibility, and contamination control.

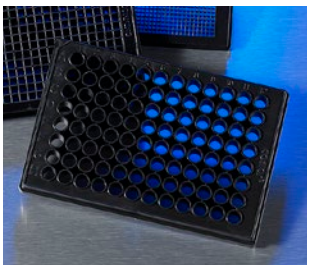
Corning BioCoat Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
354407	BioCoat, with lid	Clear	Flat	Collagen I	No	5	5
356407	BioCoat, with lid	Clear	Flat	Collagen I	No	5	50
356698	BioCoat, with lid	Clear	Flat	Collagen I	No	20	80
354429	BioCoat, with lid	Clear	Flat	Collagen IV	No	1	50
354461	BioCoat, with lid	Clear	Flat	Poly-D-Lysine	No	5	5
356461	BioCoat, with lid	Clear	Flat	Poly-D-Lysine	No	5	50
356690	BioCoat, with lid	Clear	Flat	Poly-D-Lysine	No	20	80
354409	BioCoat, with lid	Clear	Flat	Fibronectin	No	1	5
354689	BioCoat, with lid	Clear	Flat	Gelatin	No	1	5
356689	BioCoat, with lid	Clear	Flat	Gelatin	No	1	50
354410	BioCoat, with lid	Clear	Flat	Laminin	No	1	5
354670	BioCoat, with lid	Clear	Flat	Laminin/Fibronectin	No	1	5
354596	BioCoat, with lid	Clear	Flat	Laminin/Poly-D-Lysine	No	1	5
354657	BioCoat, with lid	Clear	Flat	Laminin/ Poly-L-Ornithine	No	1	5
354516	BioCoat, with lid	Clear	Flat	Poly-L-Lysine	No	5	5
356516	BioCoat, with lid	Clear	Flat	Poly-L-Lysine	No	5	50
354607	BioCoat, with lid	Clear	Flat	Corning Matrigel® matrix	No	5	5
354519	BioCoat, with lid	White	Flat	Collagen I	No	5	5
356519	BioCoat, with lid	White	Flat	Collagen I	No	5	50
356699	BioCoat, with lid	White	Flat	Collagen I	No	20	80
354620	BioCoat, with lid	White	Flat	Poly-D-Lysine	No	5	5
356620	BioCoat, with lid	White	Flat	Poly-D-Lysine	No	5	50
356691	BioCoat, with lid	White	Flat	Poly-D-Lysine	No	20	80
354650	BioCoat, with lid	White/clear	Flat	Collagen I	No	5	5
356650	BioCoat, with lid	White/clear	Flat	Collagen I	No	5	50
356701	BioCoat, with lid	White/clear	Flat	Collagen I	No	20	80
354651	BioCoat, with lid	White/clear	Flat	Poly-D-Lysine	No	5	5
356651	BioCoat, with lid	White/clear	Flat	Poly-D-Lysine	No	5	50
356693	BioCoat, with lid	White/clear	Flat	Poly-D-Lysine	No	20	80
354649	BioCoat, with lid	Black/clear	Flat	Collagen I	No	5	5
356649	BioCoat, with lid	Black/clear	Flat	Collagen I	No	5	50
356700	BioCoat, with lid	Black/clear	Flat	Collagen I	No	20	80
354640	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	5
356640	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	50
356692	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	20	80

Corning PureCoat Microplates

354717	PureCoat, with lid	Black/clear	Flat	Amine	Yes	5	5
356717	PureCoat, with lid	Black/clear	Flat	Amine	Yes	5	50

Corning® Multi-coated Microplate



- Corning 96-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- Useful when determining the correct surface for your assay requirements
- Single surface microplates can then be used for the full screen or experiment.
- Surfaces include Poly-D-Lysine, collagen type I, gelatin, fibronectin, laminin, and tissue culture-treated.

Cat. No.	Description	Lid	Qty/Cs
3823	96-well, black/clear bottom, multi-coated microplate	Yes	10

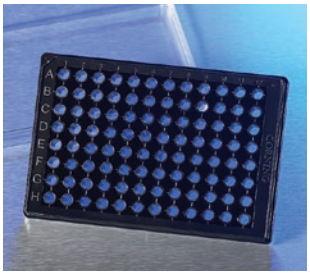
Corning 96-well Spheroid Microplates

With their novel and proprietary design, these microplates are ideal for generating and analyzing 3D multicellular spheroids in the same microplate. The Ultra-Low Attachment (ULA) surface enables uniform and reproducible 3D multicellular spheroid formation. The black opaque microplate body shields each optically clear, round bottom well from well-to-well cross-talk.

- Optically clear round bottom with black opaque microplate body
- Covalent attachment of Ultra-Low Attachment surface to reduce cellular adhesion to well surface
- Novel well geometry aids in the generation of uniform, single spheroids across all wells, which enables automated visualization.
- Unique design shields each well to minimize well-to-well cross-talk.
- You can culture and assay spheroids in the same microplate, without the need for transfer to a new microplate.

Cat. No.	Description	Qty/Pk	Qty/Cs
4520	96-well spheroid microplate, black/clear round bottom, ULA surface, sterile	10	50
4515	96-well spheroid microplate, black/clear round bottom, ULA surface, sterile	1	5

Corning 96-well High Content Screening Microplates with Film Bottom

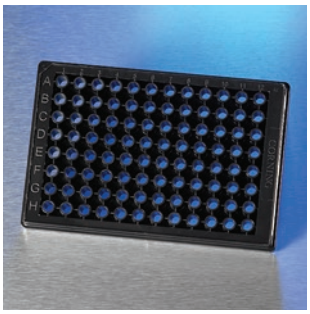


With an ultra-clear film, a 127 µm film thickness, and an unprecedented flatness (whole plate and intra-well), these microplates are ideal for high resolution cellular imaging applications. The microplate and film are manufactured from cyclic olefin copolymer (COC), which has excellent optical properties, chemical resistance, and mechanical stability.

- COC material allows for broad chemical resistance (including DMSO) and high mechanical stability.
- Ultra-clear film with 127 µm thickness is well suited for imaging micropscopy.
- Inter- and intra-well film bottom flatness within 50 µm and 10 µm, respectively, optimized for high content applications
- Low auto-fluorescence and birefringence

Cat. No.	Description	Qty/Pk	Qty/Cs
4680	Half area, COC film bottom, black/clear flat bottom microplate, with lid, TC-treated, sterile	4	16
4517	Half area, low base, COC film bottom, black/clear flat bottom microplate, with lid, TC-treated, sterile	20	20

Corning® 96-well High Content Screening Microplates with Glass Bottom



High optical quality, glass bottom, black microplates are ideal for performing high content cell-based assays using imaging systems. The glass bottom provides a flat and optically clear surface that reduces autofocus time, increases throughput, and is ideal for cell growth.

- High optical quality and scratch resistant glass
- Glass bottom thickness of 200 µm is well suited for imaging microscopy.
- Bottom flatness <50 µm to ensure planarity for imaging devices
- Low background fluorescence and minimal cross-talk provides the highest possible optical quality for cell-based assays.
- Half area 96-well microplate reduces reagent consumption.

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
4580	96-well half area glass bottom microplate, uncoated, with lid	Yes	1	10
4582	96-well half area, glass bottom microplate, Collagen I-coated, with lid	No	1	10
4584	96-well half area, glass bottom microplate, Fibronection-coated, with lid	No	1	10
4586	96-well half area, glass bottom microplate, Poly-D-Lysine-coated, with lid	No	1	10

Corning 96-well UV Microplates

Corning 96-well UV microplates have a UV-transparent well bottom and are ideal for determining protein and/or nucleic acid concentrations.

- RNase-/DNase-free
- UV-transparent bottom is molded directly to an acrylic base for greater strength and maximum leak resistance.
- Total well volume: flat bottom – 360 µL; recommended working volume of 75 µL to 200 µL
- UV half area microplate has well volume of 205 µL; working volume of 25 µL to 125 µL.
- Allows UV absorbance readings with low background, especially at 260 nm to 280 nm
- Lids are available separately. (Information on lids and other microplate accessories can be found beginning on page 39).

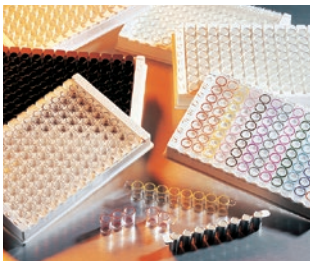
Cat. No.	Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3635	Standard	Flat	No	25	50
3679	Half area	Flat	No	25	50

Corning 96-well Clear Flexible Vinyl (PVC) Microplates

- Not treated PVC microplates are economical microplates for solution-based assays, serial dilutions, and general storage applications.
- Well volume of 250 µL (260 µL for V-bottom); working well volume of 50 µL to 150 µL
- Lids are not available.

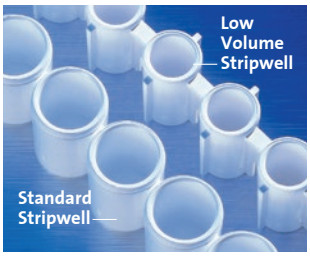
Cat. No.	Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
2797	Standard	Round	No	25	100
2897	Standard	V	No	25	100
2595	Standard	Flat	No	25	100

Corning® Stripwell™ 96-well Polystyrene Microplates



Corning Stripwell microplates are designed for *in vitro* diagnostic assays. The flat bottom strips are designed to easily break apart and are pre-assembled in an "egg-crate" style strip holder that allows each individual well to be positioned back into the microplate once broken.

- Stripwell microplates have 96-well flat bottom polystyrene format.
- Low volume and standard Stripwell microplates have well volumes of 190 µL and 360 µL, respectively.
- 1 x 8 strips are designed to fit only one way into the strip holder, eliminating the chance of misorientation.
- Accessories can be found beginning on page 39.



Low Volume Stripwell Microplates

Big cost savings!

- Save 70% or more on antibody costs
- Save 50% or more on reagent costs

Features:

- Total well volume: 190 µL
- Recommended working volume: 75 – 125 µL
- Same height/path length as a standard strip
- Standard 96-well center-to-center spacing

Custom Colors

White	Dark blue
Light green	Light blue
Teal	Dark green
Yellow	Purple
Red	Orange
Pink	Black
Brown	Grey

Low Volume Stripwell Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2480	Clear	Medium	25	100
2481	Clear	High	25	100
2482	Black	Medium	25	100
2483	Black	High	25	100
2484	White	Medium	25	100
2485	White	High	25	100

Standard Stripwell Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2592*	Clear	High	25	100
2593*	Clear	Medium	25	100
2580**	Clear	High	200	800
9102***	Clear	TC-treated, sterile	1	50
3913	White	Medium	25	100
3923	White	High	25	100
3914	Black	Medium	25	100
3924	Black	High	25	100

*Product has a certified medium or high bind surface chemistry.
**Individual 1 x 8 strips without frame, bulk packed.
***Microplates individually packaged with lid.

Surface Modified Stripwell Microplates, Clear

Cat. No.	Description	Surface Chemistry	Well Volume (µL)	Qty/Pk	Qty/Cs
2506	DNA-BIND® surface	N-oxysuccinimide	360	1	50
2508	Carbo-BIND surface	Hydrazide	360	1	50

Strip Accessories

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
2572	Strip holder "egg crate"	No	5	20
2578	96-well strip ejector	No	5	5

Color Coding

Corning offers customers the ability to color code their Stripwell microplates. Currently there are 14 colors available from which to choose on both our certified high and medium binding Stripwell microplates. In addition to the clear strip, two other colors can be applied to the same microplate. Color-coded Stripwell microplates are made to order and minimum order requirements do apply. If interested, please contact your local Corning representative.

Corning® 96-well Polypropylene Microplates and Storage Blocks

Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

- Flat, round, or V-shaped well bottom
- Features uniform skirt heights for greater robotic gripping surface
- Solvent resistant polypropylene provides compatibility with many common organic solvents (e.g., DMSO, ethanol, methanol)
- RNase-/DNase-free
- Available sterile or nonsterile
- Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats (beginning on page 39).

96-well Polypropylene Microplate and Storage Block Dimensions and Well Volumes

Format/Well Shape	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
96-well flat bottom	360	10.67	6.86	127.76 x 85.48 x 14.22
96-well round bottom	360	11.3	6.86	127.76 x 85.48 x 14.22
96-well V-bottom	320	11.13	6.86	127.76 x 85.48 x 14.22
96-well V-bottom, expanded volume	450	12.43	8.50	127.76 x 85.48 x 14.35
96-well 0.5 mL block	500	25.3	6.86	127.76 x 85.48 x 27.18
96-well 1 mL block	1,000	39.9	6.86	127.76 x 85.09 x 41.66
96-well 2 mL block	2,000	42.04	8.13 (width)	128.27 x 85.85 x 43.94

96-well Polypropylene Microplate

Cat. No.	Format	Color	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3355	Standard	White	Round	No	25	100
3356	Standard	Black	Round	No	25	100
3359	Standard*	Clear	Round	Yes	25	100
3365	Standard*	Clear	Round	No	25	100
3364	Standard	Clear	Flat	No	25	100
3343	Expanded volume	Clear	V	No	10	50
3344	Expanded volume	Clear	V	Yes	10	50
3357	Standard	Clear	V	Yes	25	100
3363	Standard	Clear	V	No	25	100

*Upgraded features include virgin clear polypropylene, lowered perimeter ridge for improved sealing, and added rigidity and dimensional stability for improved automated handling.

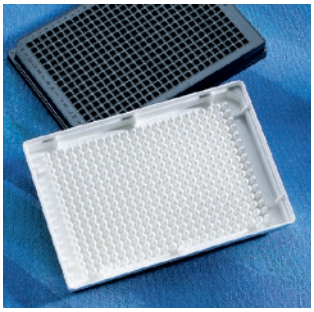
96-well Polypropylene Storage Block

Cat. No.	Format	Well Volume (mL)	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3958	Round well block	1	Round	Yes	5	25
3959	Round well block	1	Round	No	5	100
3956	Round well block	0.5	V	Yes	10	50
3957	Round well block	0.5	V	No	10	100
3960	Square well block	2	V	Yes	5	25
3961	Square well block	2	V	No	5	100

Falcon® 96-well Polypropylene Storage Plates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
351190	Standard	Clear	Round	Not treated	No	25	100
353263	Standard	Clear	Conical	Not treated	No	25	100

CORNING® AND FALCON® 384-WELL MICROPLATES



Low Volume 384-well Solid Round Bottom Microplates

Unique well design for optimal assay performance:

- Raised well bottom for higher sensitivity
- Raised rim for decreased wicking and contamination
- Round bottom for better Z factor and minimized trapped air
- Conical well molded in the shape of a light cone for efficiency

Corning offers a variety of 384-well microplates for high throughput assays and storage. Microplates are grouped by application:

- 384-well assay microplates
  - General assays – Not treated, nonbinding surface, high binding, and UV microplates
  - Cell-based assays – Tissue culture-treated, Corning® CellBIND® surface, Ultra-Low Attachment surface, and Poly-D-Lysine coated polystyrene microplates
- 384-well polypropylene storage microplates

This selection guide does not include 384-well microplates for PCR and genomics. Please refer to the Corning Genomics Selection Guide or **www.corning.com/lifesciences** for more information on these products. For additional microplate information, refer to the *Microplate Selection Process* section at the beginning of this guide.

Corning offers a wide variety of assay microplates. They are organized into four groups:

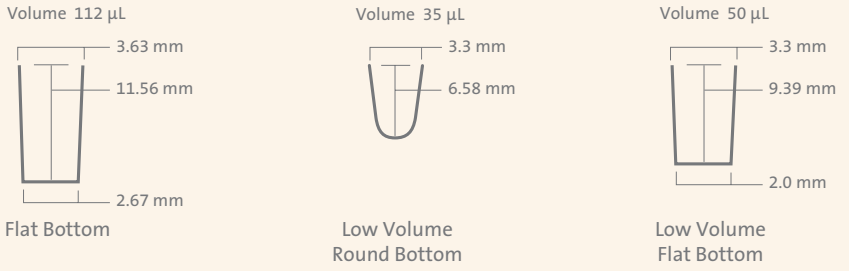
- Clear polystyrene microplates
- Solid black and white polystyrene microplates
- Black/clear and white/clear bottom polystyrene microplates
- UV microplates

For assays performed in reduced volumes, Corning 384-well low volume polystyrene microplates are available in solid round bottom and in black/clear bottom formats.

384-well Microplate Types	Well Bottom	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard	Flat	112	20 – 80
Low Volume, solid	Round	35	5 – 20
Low Volume, clear bottom	Flat	50	5 – 40

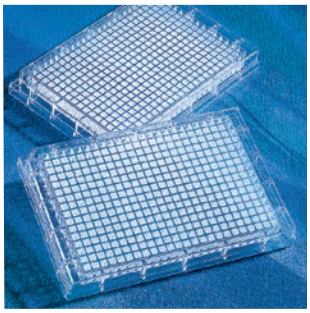
Corning 384-well polystyrene microplates have microplate dimensions (length x width x height) of 127.76 x 85.48 x 14.22 mm that meet proposed industry standards.

384-well Geometry and Dimensions



Corning 384-well microplates for cell culture include tissue culture-treated, Corning CellBIND surface, and Poly-D-Lysine coated microplates. The tissue culture-treated microplates have the same surface treatment used on other Corning cell culture vessels, while the Poly-D-Lysine treatment improves attachment of anchorage-dependent cells. The Corning CellBIND surface treatment can provide improved consistency and even cell attachment.

Corning® 384-well Clear Polystyrene Microplates



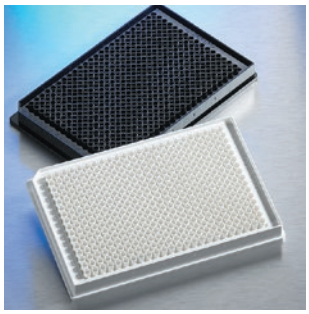
- Total well volume of 112 µL; working well volume of 20 µL – 80 µL
- Cell culture microplates are sterile and nonpyrogenic.
- The 384-well Universal Optics NBS microplate is manufactured using an advanced polymer with high clarity and improved chemical resistant properties.
- Lids available as indicated. (Information on lids and other microplate accessories can be found beginning on page 39).

Cat. No.	Format	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3640	Standard	Flat	NBS	No	25	100
3640BC	Standard, with bar code labels	Flat	NBS	No	25	100
3844	Standard, with lid	Flat	Poly-D-Lysine	Yes*	20	100
3847	Standard, with lid	Flat	Fibronectin	No	20	100
3680	Standard, with lid	Flat	Not treated	Yes	20	100
3700	Standard	Flat	High Bind	No	25	100
3701	Standard, with lid	Flat	TC-treated	Yes	20	100
3702	Standard	Flat	Not treated	No	25	100
3702BC	Standard, with bar code labels	Flat	Not treated	No	25	100
3723	Universal Optics (standard)	Flat	NBS	No	25	100

*Aseptically manufactured.

Corning 384-well Solid Black and White Polystyrene Microplates

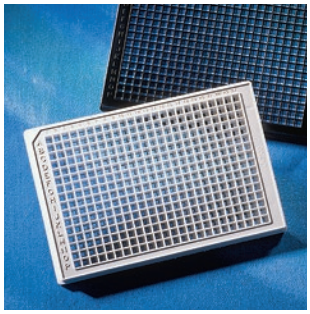
384-well solid low flange microplates



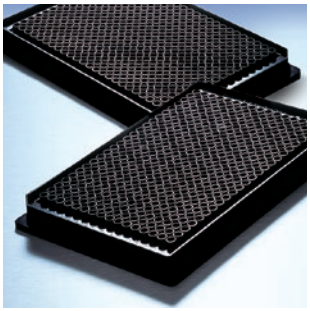
384-well low volume solid microplates

Designed to reduce well-to-well cross-talk during fluorescent and luminescent assays.

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3570	Standard, with lid	White	Flat	TC-treated	Yes	10	50
3571	Standard, with lid	Black	Flat	TC-treated	Yes	10	50
3572	Standard, low flange	White	Flat	Not treated	No	10	50
3573	Standard, low flange	Black	Flat	Not treated	No	10	50
3574	Standard, low flange	White	Flat	NBS	No	10	50
3574BC	Standard, low flange, with bar code labels	White	Flat	NBS	No	10	50
3575	Standard, low flange	Black	Flat	NBS	No	10	50
3575BC	Standard, low flange, with bar code labels	Black	Flat	NBS	No	10	50
3820	Low volume	Black	Flat	NBS	No	10	50
3821	Low volume	Black	Flat	Not treated	No	10	50
3821BC	Low volume, with bar code labels	Black	Flat	Not treated	No	10	50
3822	Low volume, with lid	Black	Flat	TC-treated	Yes	10	50
3824	Low volume	White	Flat	NBS	No	10	50
3824BC	Low volume, with bar code labels	White	Flat	NBS	No	10	50
3825	Low volume	White	Flat	Not treated	No	10	50
3826	Low volume, with lid	White	Flat	TC-treated	Yes	10	50
3826BC	Low volume, with lid, bar code labels	White	Flat	TC-treated	Yes	10	50
4510	Low volume	Black	Round	High Bind	No	10	50
4511	Low volume	Black	Round	Not treated	No	10	50
4512	Low volume	White	Round	Not treated	No	10	50
4513	Low volume	White	Round	NBS	No	10	50
4514	Low volume	Black	Round	NBS	No	10	50



384-well black/clear and white/clear bottom microplates



384-well low volume black/clear bottom microplates

Corning® 384-well Black/Clear and White/Clear Bottom Polystyrene Microplates

Suited for fluorescent and luminescent assays using either top or bottom detection microplate readers.

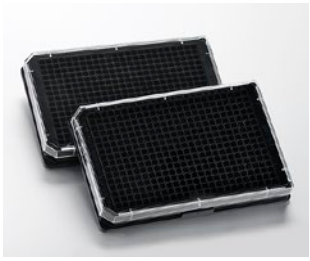
Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3540	Low volume	Black/clear	Flat	Not treated	No	10	50
3542	Low volume, with lid	Black/clear	Flat	TC-treated	Yes	10	50
3544	Low volume	Black/clear	Flat	NBS	No	10	50
3643	Low volume	Black/clear	Flat	Poly-D-Lysine	Yes	10	50
3767	Standard	White/clear	Flat	NBS	No	25	100
3769	Standard, with lid	White/clear	Flat	Poly-D-Lysine	Yes*	20	100
3768	Standard, with lid	Black/clear	Flat	Poly-D-Lysine	Yes*	20	100
3766	Low flange	Black/clear	Flat	NBS	No	25	100
3770	Low flange, with lid	Black/clear	Flat	Corning CellBIND®	Yes	20	100
3770BC	Low flange, with lid, with bar code labels	Black/clear	Flat	Corning CellBIND	Yes	20	100
3763	Low flange	White/clear	Flat	Not treated	No	25	100
3765	Standard, with lid	White/clear	Flat	TC-treated	Yes	20	100
3762	Low flange	Black/clear	Flat	Not treated	No	25	100
3764	Low flange, with lid	Black/clear	Flat	TC-treated	Yes	20	100
3764BC	Low flange, with lid, with bar code labels	Black/clear	Flat	TC-treated	Yes	20	100
4588	Standard, with lid	Black/clear	Flat	ULA	Yes	20	100
4596	Standard, with lid	Black/clear	Flat	Fibronectin	No	20	100
4690	Standard, with lid	Black/clear	Flat	Collagen	No	20	100
3985	Optical imaging, with lid	Black/clear	Flat	TC-treated	Yes	20	100
3985BC	Optical imaging, with lid, with bar code labels	Black/clear	Flat	TC-treated	Yes	20	100

*Aseptically manufactured

Falcon® 384-well Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
353961	Standard, with lid	Clear	Flat	TC-treated	Yes	5	50
353988	Standard, with lid	White	Flat	TC-treated	Yes	5	50
353963	Standard, with lid	White/clear	Flat	TC-treated	Yes	5	50
353962	Standard, with lid	Black/clear	Flat	TC-treated	Yes	5	50

Corning® 384-well BioCoat™ and Corning PureCoat™ Microplates



- Corning BioCoat is offered in a variety of surface treatments to provide enhanced cell attachment and growth.
- The novel Corning PureCoat Amine is a positively charged surface that provides enhanced cell attachment of primary, transfected, transformed, and fastidious cells in standard, serum-free, or serum-reduced conditions.
- Coated in a highly controlled, aseptic manufacturing environment to ensure lot-to-lot consistency, assay reproducibility, and contamination control

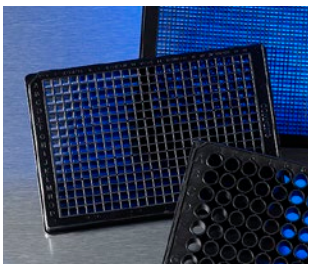
Corning BioCoat Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
354666	BioCoat, with lid	Clear	Flat	Collagen I	Yes	5	5
356666	BioCoat, with lid	Clear	Flat	Collagen I	Yes	5	50
354662	BioCoat, with lid	Clear	Flat	Poly-D-Lysine	No	5	5
356662	BioCoat, with lid	Clear	Flat	Poly-D-Lysine	No	5	50
354665	BioCoat, with lid	White	Flat	Collagen I	Yes	5	5
356665	BioCoat, with lid	White	Flat	Collagen I	Yes	5	50
356703	BioCoat, with lid	White	Flat	Collagen I	No	20	80
354661	BioCoat, with lid	White	Flat	Poly-D-Lysine	No	5	5
356661	BioCoat, with lid	White	Flat	Poly-D-Lysine	No	5	50
354664	BioCoat, with lid	White/clear	Flat	Collagen I	Yes	5	5
356664	BioCoat, with lid	White/clear	Flat	Collagen I	Yes	5	50
356702	BioCoat, with lid	White/clear	Flat	Collagen I	No	20	80
354660	BioCoat, with lid	White/clear	Flat	Poly-D-Lysine	No	5	5
356660	BioCoat, with lid	White/clear	Flat	Poly-D-Lysine	No	5	50
354667	BioCoat, with lid	Black/clear	Flat	Collagen I	Yes	5	5
356667	BioCoat, with lid	Black/clear	Flat	Collagen I	No	5	50
356705	BioCoat, with lid	Black/clear	Flat	Collagen I	No	20	80
354663	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	5
356663	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	50
356697	BioCoat, with lid	Black/clear	Flat	Poly-D-Lysine	No	20	80
354397	BioCoat, small volume, with lid	Black/clear	Flat	Collagen I	No	5	5
356397	BioCoat, small volume, with lid	Black/clear	Flat	Collagen I	No	5	50
354396	BioCoat, small volume, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	5
356396	BioCoat, small volume, with lid	Black/clear	Flat	Poly-D-Lysine	No	5	50

Corning PureCoat Microplates

354719	PureCoat,with lid	Black/clear	Flat	Amine	No	5	5
356719	PureCoat,with lid	Black/clear	Flat	Amine	No	5	50

Corning Multi-coated Microplates



- Corning 384-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- Useful when determining the correct surface for your assay requirements
- Single surface microplates can then be used for the full screen or experiment.
- Surfaces include Poly-D-Lysine, collagen type I, gelatin, fibronectin, laminin, and tissue culture-treated.

Cat. No.	Description	Lid	Qty/Cs
4589	384-well, black/clear bottom, multi-coated microplate	Yes	10

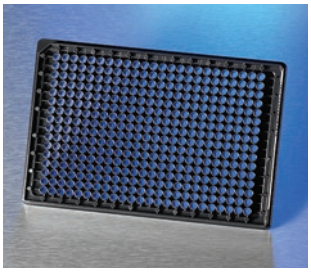
Corning® 384-well Spheroid Microplates

With their novel and proprietary design, these microplates are ideal for generating and analyzing 3D multicellular spheroids in the same microplate. The Ultra-Low Attachment surface enables uniform and reproducible 3D multicellular spheroid formation. The black opaque microplate body shields each optically clear, round bottom well from well-to-well cross-talk.

- Optically clear round bottom with black opaque microplate body
- Covalent attachment of Ultra-Low Attachment (ULA) surface to reduce cellular adhesion to well surface
- Novel well geometry aids in the generation of uniform, single spheroids across all wells, which enables automated visualization.
- Unique design shields each well to minimize well-to-well cross-talk.
- You can culture and assay spheroids in the same microplate without the need for transfer to a new microplate.

Cat. No.	Description	Qty/Pk	Qty/Cs
3830	Spheroid microplate, black/clear round bottom, ULA surface, sterile	10	50
4516	Spheroid microplate, black/clear round bottom, ULA surface, sterile	1	5

Corning 384-well High Content Screening Microplates with Film Bottom

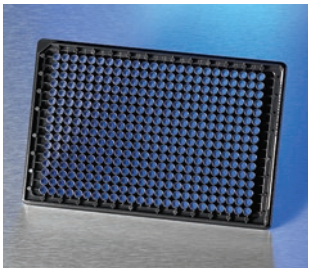


With an ultra-clear film, a 127 µm film thickness, and an unprecedented flatness (whole plate and intra-well), these microplates are ideal for high resolution cellular imaging applications. The microplate and film are manufactured from cyclic olefin copolymer (COC), which has excellent optical properties, chemical resistance, and mechanical stability.

- COC material allows for broad chemical resistance (including DMSO) and high mechanical stability.
- Ultra-clear film with 127 µm thickness is well suited for imaging micropscopy.
- Inter- and intra-well film bottom flatness within 50 µm and 10 µm, respectively, optimized for high content applications
- Low auto-fluorescence and birefringence

Cat. No.	Description	Qty/Pk	Qty/Cs
4681	COC film bottom microplate, black/clear flat bottom, with lid, TC-treated, sterile	10	20
4518	COC film bottom microplate, low base, black/clear flat bottom, with lid, TC-treated, sterile	20	20

Corning 384-well High Content Screening Microplates with Glass Bottom



High optical quality, glass bottom black microplates are ideal for performing high-content cell-based assays using imaging systems. The glass bottom provides a flat and optically clear surface that reduces autofocus time, increases throughput, and is ideal for cell growth.

- High optical quality and scratch resistant glass
- Glass bottom thickness of 200 µm is well suited for imaging microscopy.
- Bottom flatness <50 µm to ensure planarity for imaging devices
- Low background fluorescence and minimal cross-talk provide the highest possible optical quality for cell-based assays.

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
4581	Glass bottom microplate, uncoated, with lid	Yes	1	10
4583	Glass bottom microplate, Collagen I-coated, with lid	No	1	10
4585	Glass bottom microplate, Fibronectin-coated, with lid	No	1	10
4587	Glass bottom microplate, Poly-D-Lysine-coated, with lid	No	1	10

Corning® 384-well Polypropylene Storage Microplates

Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

Well bottom	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
Round bottom	95	11.56	3.63	127.76 x 85.48 x 14.22
Round bottom block	180	25.11	3.63	127.76 x 85.48 x 27.81
V-bottom block	240	22.31	3.30*	127.76 x 85.48 x 24.73

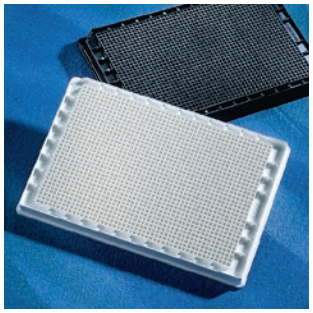
*Width of square well.

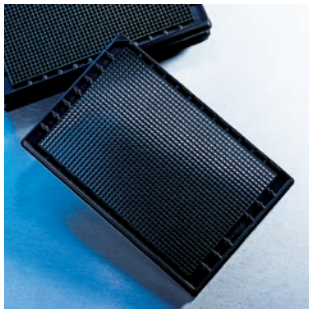
- Resistant to many common organic solvents (e.g., DMSO, ethanol, methanol)
- Black polypropylene microplate (Cat. No. 3658) is ideal for fluorescent assays requiring solvent resistance
- RNase-/DNase-free
- Refer to the Microplate Accessories section for information about microplate accessory products including sealing tapes and mats (beginning on page 39).

Cat. No.	Format	Well Bottom	Well Volume (µL)	Sterile	Qty/Pk	Qty/Cs
3656	Standard, clear	Round	95	Yes	25	100
3657	Standard, clear	Round	95	No	25	100
3658	Standard, black	Round	95	No	25	100
3964	384-well block, clear	Round	180	Yes	5	25
3965	384-well block, clear	Round	180	No	5	100
3342	384-well block, clear	V	240	Yes	5	50
3347	384-well block, clear	V	240	No	5	50

CORNING® 1536-WELL MICROPLATES

Corning 1536-well microplates are our highest density microplates available for high throughput screening. The microplates conform to standard microplate footprint and dimensions. These microplates are offered in solid black and white polystyrene, with round or flat bottoms, and in black-clear bottom formats.





Corning 1536-well Standard Polystyrene Microplates

- Total well volume of 10 µL for round well microplates and 12.8 µL for flat bottom microplates
- Recommended working volume up to 8 µL
- Round well bottom for reduced air entrapment and improved CV values and Z factor
- Raised well bottom for higher sensitivity
- Flood reservoir on four sides to reduce instrument contamination
- Lids are available separately. Corning lid (Cat. No. 3098) is compatible with these microplates. (Information on lids and other microplate accessories can be found beginning on page 39.)

1536-well Polystyrene Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3936	Standard	Black	Round	Not treated	No	10	50
3937	Standard	White	Round	Not treated	No	10	50
3724	Standard	Black	Flat	Not treated	No	10	50
3724BC	Standard, with bar code labels	Black	Flat	Not treated	No	10	50
3725	Standard	White	Flat	Not treated	No	10	50
3725BC	Standard, with bar code labels	White	Flat	Not treated	No	10	50
3726	Standard, with lid	Black	Flat	TC-treated	Yes	10	50
3726BC	Standard, with lid, bar code labels	Black	Flat	TC-treated	Yes	10	50
3727	Standard, with lid	White	Flat	TC-treated	Yes	10	50
3727BC	Standard, with lid, bar code labels	White	Flat	TC-treated	Yes	10	50
3728	Standard	Black	Flat	NBS	No	10	50
3728BC	Standard, with lid, bar code labels	Black	Flat	NBS	No	10	50
3729	Standard	White	Flat	NBS	No	10	50
3729BC	Standard, with bar code labels	White	Flat	NBS	No	10	50
3731	Standard	White	Flat	Corning CellBIND®	Yes	10	50
3731BC	Standard, with bar code labels	White	Flat	Corning CellBIND	Yes	10	50
3549	Standard, with lid	White	Flat	Collagen	No	10	50
7246	High base, without logo or lettering	Black	Flat	Not treated	No	10	50
7247	High base, without logo or lettering	White	Flat	Not treated	No	10	50
7248	High base, without logo or lettering	Black	Flat	TC-treated	Yes	10	50
7249	High base, without logo or lettering	White	Flat	TC-treated	Yes	10	50

Continued on next page

1536-well Polystyrene Microplates (Continued)

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3891	Standard	Black/clear	Flat	Not treated	No	10	50
3891BC	Standard with bar code labels	Black/clear	Flat	Not treated	No	10	50
3893	Standard, with lid	Black/clear	Flat	TC-treated	Yes	10	50
3893BC	Standard, with lid, bar code labels	Black/clear	Flat	TC-treated	Yes	10	50
3895	Standard	Black/clear	Flat	NBS	No	10	50

1536-well Low Base Polystyrene Microplates

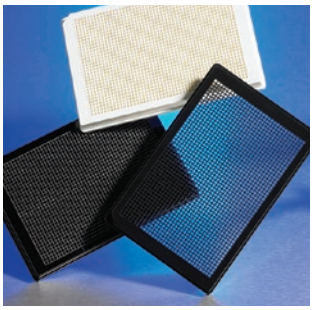
Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3835	Low base, without logo or lettering	Black/clear	Flat	Not treated	No	20	100
3836	Low base, without logo or lettering	Black/clear	Flat	TC-treated	Yes	20	100
3833	Low base, without logo or lettering	Black/clear	Flat	Corning® CellBIND®	Yes	20	100
3831	Low base	Black/clear	Flat	Not treated	No	10	50
3838	Low base	Black/clear	Flat	TC-treated	Yes	10	50
3838BC	Low base, with lid, bar code labels	Black/clear	Flat	TC-treated	Yes	10	50
3832	Low base	Black/clear	Flat	Corning CellBIND	Yes	10	50
3832BC	Low base, with lid, bar code labels	Black/clear	Flat	Corning CellBIND	Yes	10	50

Corning® 1536-well BioCoat™ and PureCoat™ Microplates

- Unique well design for optimal assay performance
- Corning BioCoat is offered in a variety of surface treatments to provide enhanced cell attachment and growth.
- The novel Corning PureCoat Amine is a positively charged surface that provides enhanced cell attachment of primary, transfected, transformed, and fastidious cells in standard, serum-free, or serum-reduced conditions.
- Coated in a highly controlled, aseptic manufacturing environment to ensure lot to lot consistency, assay reproducibility, and contamination control

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ /Cs
354022	BioCoat, with lid (high base)	Black/clear	Flat	Poly-D-Lysine	No	5	5
356022	BioCoat, with lid (high base)	Black/clear	Flat	Poly-D-Lysine	No	5	50
354771	PureCoat, with lid (high base)	Black/clear	Flat	Amine	Yes	5	5
356771	PureCoat, with lid (high base)	Black/clear	Flat	Amine	Yes	5	50

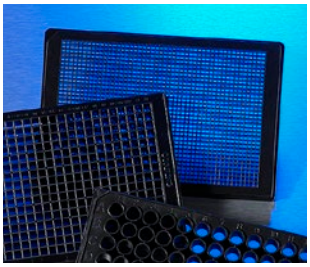
Corning® 1536-well Cyclic Olefin Copolymer (COC) Microplates



- Cyclic Olefin Copolymer material
- 127 µm film thickness
- 1536-well low base, black/clear or white/clear bottom microplates
- Bar coded
- Custom bar codes available for compatibility with the Kalypsys system and with UHTS systems
- Low auto-fluorescence
- Broad chemical resistance including DMSO and alcohol
- High mechanical stability
- Optimized for flatness and uniformity
- Low birefringence
- Bar coded

Cat. No.	Format	Color	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
4560	Low base	Black/clear bottom	Not treated	No	20	100
4561	Low base	Black/clear bottom	TC-treated	Yes	20	100
4563	Low base	Black/clear bottom	Corning CellBIND®	Yes	20	100
4564	Low base	Black/clear bottom	Poly-D-Lysine	No	20	100
4565	High base	Black	Not treated	No	10	50
4566	High base	Black	TC-treated	Yes	10	50
4567	High base	Black	NBS	No	10	50
4570	High base	White	Not treated	No	10	50
4571	High base	White	TC-treated	Yes	10	50
4572	High base	White	NBS	No	10	50

Corning 1536-well Multi-coated Microplates

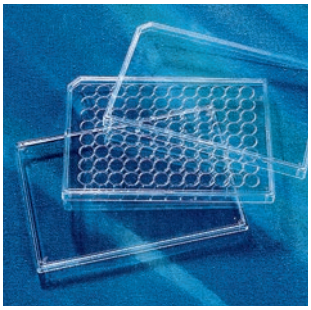


- Corning 1536-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- Useful when determining the correct surface for your assay requirements
- Single surface microplates can then be used for the full screen or experiment
- Surfaces include Poly-D-Lysine, Collagen Type I, Gelatin, Fibronectin, Laminin, and Tissue Culture-treated

Cat. No.	Description	Lid	Qty/Cs
3829	1536-well, black/clear bottom, multi-coated microplate	Yes	10

MICROPLATE ACCESSORIES

Microplate Lids



- All lids are made of rigid polystyrene except where indicated.
- All lids have a corner notch on the A1 corner (except where indicated) to correspond to the corner notches found on all Corning® microplates.
- The universal lid without a corner notch (Cat. No. 3098) does not need to be oriented in any particular direction to be placed on Corning microplates. The lid also has a shorter skirt than standard lids.
- The black universal lid (Cat. No. 3935) is suitable for fluorescent and other light-sensitive assays.
- The DMSO-resistant cyclic olefin copolymer (COC) lid (Cat. No. 3085) is tinted amber in color for light-sensitive assays and is 100% DMSO-resistant.

Cat. No.	Description	Plate Compatibility	Sterile	Qty/ Pk	Qty/ Cs
3930	Low evaporation lid with corner notch and condensation rings	96-well microplates only (not 2 mL block)	Yes	1	100
3931	Low evaporation lid with corner notch and condensation rings	96-well microplates only (not 2 mL block)	Yes	25	50
3098	Universal lid without corner notch	All microplates	Yes	25	100
3099	Universal lid with corner notch	All microplates	Yes	25	50
3935	Black universal lid with corner notch	All microplates	Yes	25	50
3085	DMSO-resistant COC lid without corner notch	All microplates	No	25	50

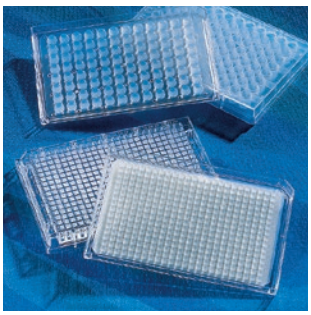
Optimizing Sealing Conditions on Corning Polypropylene Microplates

Corning offers an application note (Corning Literature No. ALSP-AN-011) describing effective sealing with the ABgene® ALPS-100 automated microplate sealer.

Storage Mats and Accessories

- Multiple formats are offered for specific and precise fit on 96-well and 384-well microplates and blocks.
- Storage mats (Cat. Nos. 3080 and 3083) are manufactured from DMSO-resistant EVA (ethyl vinyl acetate) polymer.
- RNase-/DNase-free
- Can be applied manually or with storage mat applicator (Cat. No. 3081)

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3080	Round well storage mat for 96-well microplates and blocks	No	25	100
3083	Square well storage mat for 2 mL square blocks	No	1	50
3346	Storage mat for expanded volume 96-well microplates	No	10	50
3341	Storage mat for 384-well V-bottom blocks	No	10	50

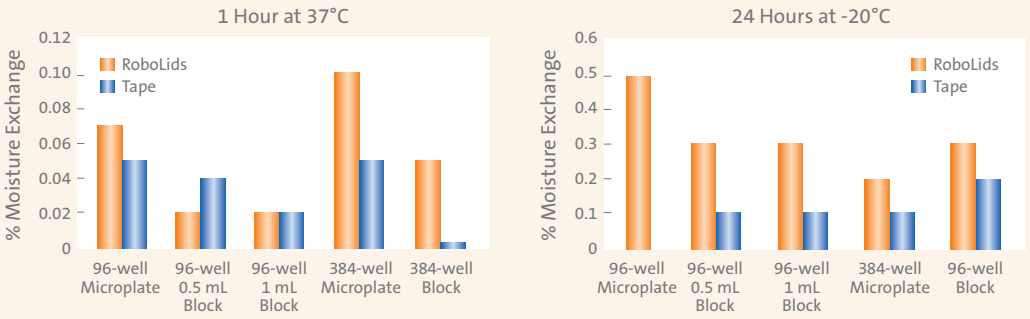


Corning® Robolids

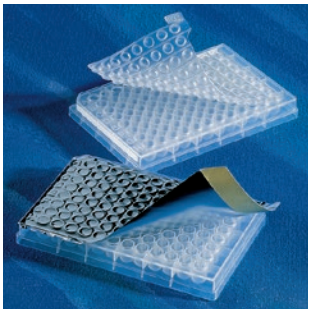
- Combines the sealing ability of a storage mat with the rigidity of a plastic lid
- Designed for repeated application and removal by automation and for preventing short-term evaporation
- Silicone sealing plugs for organic solvent resistance and low extractables
- Can be used manually or with automation

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3090	96-well Robolid with corner notch	No	25	50
3089	384-well Robolid with corner notch	No	25	50

Moisture Exchange with Corning Robolids



Using 100% DSMO, graphs represent the percentage of moisture exchange over a period of time and at various temperatures using aluminum sealing foil and the Robolid. Results show the 96-well and 384-well Robolid having comparable results with the aluminum foil. Robolids validated for low percentage of moisture exchange similar to that of foil. The product is not recommended to be used in applications requiring an integral seal.



Sealing Tapes

- Easy application and removal for short- and long-term storage
- Provides tight seal to minimize evaporation and condensation
- Aluminum sealing tape (Cat. Nos. 6569 and 6570) is suitable for use between -80°C and 150°C, is not transparent, and is pierceable.
- Breathable sealing tape (Cat. No. 3345) allows gas exchange across the surface.
- Universal Optical sealing tape (Cat. No. 6575) is suitable for use between -70°C and 100°C, and is transparent.

Sealing Tapes

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
6524	Polyethylene sealing tape	No	100	100
6570	Aluminum sealing tape for 96-well microplates	No	100	100
6569	Aluminum sealing tape for 384-well microplates	No	100	100
3345	Breathable sealing tape	Yes	50	500
6575	Universal optical sealing tape	No	100	100

Technical Appendix

Surface Properties and Applications

Corning® Surface	Applications	Binding Interaction	Sample Properties	Performance Criteria
FOR BIOCHEMICAL ASSAYS				
Nonbinding (NBS) coated polystyrene	◗ SPA assays ◗ Homogeneous assays	None – Inhibits hydrophobic and ionic interactions	Significantly reduces (<2 ng/cm²) protein and nucleic acid binding	95% reduction of nonspecific binding of protein compared to untreated polystyrene
Medium binding (Not treated) modified polystyrene	◗ Homogeneous (HO) and heterogeneous (HT) assays	Hydrophobic	Large biomolecules >20kD with large or abundant hydrophobic regions	96-well clear: Well-to-well CV ≤5% 96-well black: Well-to-well CV ≤15% (HT) Well-to-well CV ≤3% (HO) 96-well white: Well-to-well CV ≤8% (HT) Well-to-well CV ≤5% (HO) 384-well clear: Well-to-well CV ≤10% (HT) 384-well black: Well-to-well CV ≤15% (HT) Well-to-well CV ≤5% (HO) 384-well white: Well-to-well CV ≤15% (HT) Well-to-well CV ≤5% (HO)
High binding modified polystyrene	◗ ELISA and other heterogeneous assays	Hydrophobic and ionic interactions (negatively charged)	Improves binding of medium to large biomolecules (>10kD) that are positively charged with or without hydrophobic regions	96-well clear: Well-to-well CV ≤3% 96-well black: Well-to-well CV ≤8% 96-well white: Well-to-well CV ≤10% 384-well clear: Well-to-well CV ≤10% 384-well black and white: Well-to-well CV ≤15% 384-well black and white: Well-to-well CV ≤15%
Sulfhydryl-BIND modified polystyrene	◗ Assays requiring site-directed orientation of a particular biomolecule, especially antibodies	Allows covalent immobilization via SH moieties on maleimide groups	Biomolecules possessing an accessible sulfhydryl group or reducible disulfide bond	CV ≤15% Activated/non-activiated ≥ 2.0 Activated = reduced disulfide bonds
Carbo-BIND modified polystyrene	◗ Assays requiring site-directed orientation of a particular biomolecule (oxidized antibodies, carbohydrates, and glycosylated proteins) while maintaining enzymatic or immunological activity	Allows covalent immobilization via binding to hydroxide groups	Biomolecules possessing carbohydrate moieties available for periodate activation	CV ≤15% Activated/non-activated ≥ 3.0 Activated = periodate activation
FOR CELL-BASED ASSAYS				
Standard Tissue Culture-treated	◗ Assays using standard attachment-dependent cell lines	Hydrophilic and ionic interactions (negatively charged)	Allows cell attachment and binding	≥95% confluency (attachment-dependent cell line)
Corning CellBIND®	◗ Assays for difficult to attach cells ◗ Help cells stay attached during washing steps	Hydrophilic and ionic interactions (negatively charged)	Enhances cell attachment uniformity and binding to polystyrene	96-well: CV ≤10% 384-well: CV ≤20%
Poly-D-Lysine-coated	◗ Assays for difficult to attach cells ◗ Help cells stay attached during washing steps	Hydrophilic and ionic interactions (positively charged)	Enhances cell attachment and binding	96-well: CV ≤15% 384-well: CV ≤20%
Ultra-Low Attachment (ULA)	◗ Assays where preventing cell attachment is required ◗ Hybridoma production and clonal isolation by limiting dilution	Non-ionic hydrogel layer reduces or eliminates ionic and hydrophobic binding	Prevents or reduces cell attachment and binding	≥95% cell attachment inhibition

Selected Corning Technical Literature

Literature is available in PDF file format at **www.corning.com/lifesciences**.

Assay Microplates

Fluorescent Polarization Kinase Assay Miniaturization in Corning 96-well Half Area and 384-well Microplates (ALSP-AN-008)

This 4-page technical note examines assay miniaturization in Corning 96-well, 96-well half area, and 384-well microplates using fluorescence polarization tyrosine kinase assays.

Comparative Analysis of Corning Microplates using the PerkinElmer® EnVision® Multilabel Microplate Reader (CLS-AN-131)

This document compares and contrasts various 96-well and 384-well microplate formats in fluorescent and luminescent biochemical assays using the PerkinElmer EnVision multilabel microplate reader.

Impact of Microplate Choice on HTRF® Assay Performance (CLS-AN-096)

This document compares and contrasts the importance of microplate color and geometry in determining HTRF assay performance.

Corning NBS 384-well Low Volume Microplates Perform Well in Fluorescence Polarization Based Assays (CLS-AN-056)

This brief 2-page technical report shows that NBS microplates do not interfere with the binding affinity of neurotensin receptors and perform well in FP-based receptor-ligand binding assays.

Performance Advantage of Corning Nonbinding Surface (NBS) Microplates in Homogeneous Biochemical Assays (CLS-AN-055)

This brief 2-page technical report shows that NBS microplates provide the widest signal dynamic range and most stable fluorescence signals for this HTS assay versus not treated microplates.

Bar Code Basics Technical Bulletin (CLS-AN-021)

This 3-page bulletin is a reference tool that provides the anatomy of a bar code and terminology pertaining to the bar code structure.

Understanding the Relationship Between Automation and Microplates (CLS-AN-182)

Understanding the relationship between microplates and the instruments used to handle them is critical to performing any type of microplate-based asssay. This document uses 384-well microplates (e.g., white solid bottom, black solid bottom, low volume, etc.) to illustrate the importance of choosing the correct microplate for an assay, as well as optimizing the reader for the microplate.

Cell Culture Microplates

Helpful Hints to Manage Edge Effects of Cultured Cells for High Throughput Screening (CLS-AN-038W)

This technical note is a compendium of techniques, collected from Corning cell culture facilities and customers, to reduce the occurrence of irregular patterns of cell adhesion or “edge effect” in microplates.

Poly-D-Lysine Coated Microplates (ALSP-AN-015)

This 2-page application report describes binding and performance characteristics, as well as operating protocols for Corning Poly-D-Lysine microplates.

Corning® CellBIND® Surface: an Improved Surface for Enhanced Cell Attachment (CLS-AN-057)

The Corning CellBIND surface is a plasma surface treatment for tissue culture vessels. This optimized tissue culture surface treatment increases the oxygen content of the polymer surface resulting in improved hydrophilicity and wettability, which is known to improve cell spreading and attachment.

Miniaturization of a Calcium Mobilization Assay in 384-well Format (CLS-AN-068)

In this study, we show a calcium mobilization assay that has been miniaturized to 25 µL to 40 µL using a 384-well low volume (LV) black/clear bottom (BCB) microplate from Corning. The results demonstrate that the quality of the data and assay performance on this LV microplate are comparable to that obtained from 384-well normal volume (NV) microplates.

Miniaturization of a Luciferase Reporter Gene Assay Show Enhanced Assay Performance with Considerable Cost Savings (CLS-AN-093)

This short application note describes cost savings and cell-based assay improvement made possible by moving from a normal to a low volume 384-well format.

Considerations When Using Frozen Cells for High Throughput Cell-based Assays (CLS-AN-117)

This document discusses the advantages and disadvantages of using batch-frozen versus continuously cultured cells in multiple assay formats.

Instrument and Microplate Considerations to Improve Image Capture and Data Generation During High Content Screens (CLS-AN-081)

Optimization of several parameters is essential during the development of a robust and informative high content screen, particularly when considering the complexity involved in cell-based assays. This 8-page report evaluates the impacts of instrument settings and microplate characteristics on assay robustness and data validity and provides a guide for significantly improving results when conducting a high content screen.

Catalog Number Index

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Drug Discovery

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