

# Corning® BioCoat™ HTS Fibrillar Collagen Multiwell Insert System

## Catalog # 354803 (1 plate) and 354804 (5 plates)

---

### *Product use guidelines for Automated or Manual High Throughput Screening Assays*

- **Increased insert assay productivity** -Save time and labor in High Throughput Screening protocols by automating your cell based assays. Even when used manually, Corning BioCoat HTS Fibrillar Collagen Multiwell Insert Systems simplify insert and media handling.
- **More uniform cell culture conditions** -Grow cells on 24 inserts simultaneously with the unique Feeder Tray included in each Corning BioCoat HTS Fibrillar Collagen Multiwell Insert System. All 24 wells are bathed in the same medium, increasing sample uniformity across the plate and reducing feeding steps.
- **Less insert manipulation** -Handle 24 inserts at once! All 24 wells are in a single unit, that is compatible with all Falcon® 24-well plates (sold separately). Our uniquely designed, single-well Feeder Tray makes media changes a breeze!
- **Easy sampling above & below the membrane** -Each Multiwell insert has a generous automation-compatible sampling port. When used with any Falcon 24-well plate, users can sample above and below the membrane with standard 200 or 1000 microliter pipet tips or automated fluid handler tips.
- **Lower contamination risk** -Unique 24-well automation-friendly insert and single-well Feeder Tray design reduces manipulation of inserts and media, lowering the chances for contamination.
- **Easier microscopic viewing of inserts** -The membrane of each well in an insert plate lies within the same focal plane of most inverted microscopes, permitting viewing of cells with standard optics, and minimal adjustments.

Corning BioCoat HTS Fibrillar Collagen Multiwell Insert Systems have a deposition of fibrillar rat tail collagen Type I on the surface of a 1µm PET membrane. The inserts have been treated with collagen under conditions that allow *in situ* formation of large collagen fibrils with a normal cross-striation pattern; drying results in a thin uniform deposition firmly adherent to the membrane surface. The treatment does not utilize ammonia vapor alkalization or chemical cross-linking. For maximum convenience in high throughput screening assays, each system includes a custom designed media Feeder Tray and automation-friendly lid. Corning BioCoat HTS Fibrillar Collagen Multiwell Insert Systems are specially engineered for use with most robot systems that accept Falcon 24-well plates. The system may also be used manually and with compatible multichannel pipettors, if desired.

## Guidelines for Automated Use

---

Handle all inserts under aseptic conditions.

If you plan to use this product with a robotic fluid handler, please note the following:

1. The sides of the system have been designed so that robotic arms can lift the entire assembly. The lid can also be removed separately from the Feeder Tray and insert plate by suction from the top. For best results, we recommend careful placement of the lid onto the Feeder Tray to prevent "bouncing."
2. Although the lid and Feeder Tray are non-directional, the insert plate is designed to be placed on Falcon 24-well plates in one unique orientation to prevent cross contamination of wells. To properly align the Feeder Tray with any Falcon 24-well plate, make sure the Falcon logos on the top of both pieces face the same direction. The sampling ports on the insert plates face the same direction as the notched side of a Falcon 24-well plate.
3. If desired, the insert plate plus lid can be lifted as a separate unit from the Feeder Tray. Under certain handling conditions, media may drip slightly from the insert plate during this transition. Prior to use, we recommend a thorough "dry-run" of the Corning BioCoat HTS Fibrillar Collagen Multiwell Insert System to minimize these effects and other possible problems prior to use. Use appropriate Safety Precautions during use of this product with any potentially infectious material.

Discovery Labware, Inc., Two Oak Park, Bedford, MA 01730, Tel: 1.978.442.2200 (U.S.)  
CLSTechServ@Corning.com www.corning.com/lifesciences

CORNING

***For Research Use Only. Not for use in diagnostic or therapeutic procedures.***

For a listing of trademarks, visit [www.corning.com/lifesciences/trademarks](http://www.corning.com/lifesciences/trademarks)

© 2013 Corning Incorporated

- When used with a Falcon 24-well plate, sampling of wells beneath each membrane may be done with standard 200 or 1000 microliter pipet tips or automated fluid handler tips. Top sample ports are indexed in a standard 24-well grid.

## Hints for using membrane insert products.

**CAUTION:** The fibrillar collagen coating is susceptible to tearing if touched by pipet tips or other hard objects. Although the collagen is firmly attached to the membrane, it can be dislodged by vigorous injection or aspiration of media.

Prior to seeding inserts and filling Feeder Tray, we recommend to pre-warm media at 37°C.

- Seeding of inserts:** Quickly add cells & media to each insert. For best results, limit volumes per insert to 500µl. To determine the optimal seeding density for your cell type on a porous growth surface, we recommend using a range of seeding densities (cells/cm<sup>2</sup>) that brackets the seeding density used on nonporous surfaces (flasks, dishes and plates). For example, if you currently seed at 10<sup>5</sup> cells/cm<sup>2</sup>, seed at 0.5x10<sup>5</sup>, 10<sup>5</sup> and 5x10<sup>5</sup> cells/cm<sup>2</sup> to determine the optimal initial seeding density.
- Filling Feeder Tray:** Add prewarmed culture media to the Feeder Tray. For best results, we recommend adding 35ml media to the tray. Too little media will prevent contact with the insert. Excess media may slosh out of the Feeder Tray during handling. Note: A Falcon® 24-well plate may be used in place of the Feeder Tray if cells are to be grown with different media in each well. For best results with plates, limit media volume in the lower wells to 1400µl. Excess media (>1400µl) will overflow into the insert.

Insert height:	18 mm	Distance of membrane to top of well:	2.0 mm
Optimal Feeder Tray volume range:	30-40 ml	Extracellular Matrix Source:	Collagen, Type I, rat tail
Effective growth area of membrane:	0.31 cm <sup>2</sup>	Optimal Insert volume range:	300-500µl

- Feeding (using Feeder Tray):** If desired, any of the 24 top access ports may be used for aspirating off old media and adding fresh media. The 24 top access ports will accept an aspirating pipet, 200 or 1000 microliter pipet tip. If used manually, the insert plate may be lifted under aseptic conditions to get direct access to the Feeder Tray. Replacement Falcon Feeder Trays are available separately for added user convenience (Catalog number 351186).
- Retrieving, Staining & Fixing Cells:** To remove cells, follow standard trypsinization or scraping techniques. If desired, cells may be fixed and stained using standard techniques. For further information, see Falcon Technical Bulletins 405 and 406.

**QUALITY CONTROL:** Corning® BioCoat™ HTS Fibrillar Collagen HTS Multiwell Inserts are tested for their ability to induce Caco-2 cells to form tight junctions as measured by mannitol permeability. Each system has been tested and found negative for the presence of bacteria and fungi.

**STORAGE:** Stable when stored at 2-8°C. **DO NOT FREEZE**

**SAFETY RECOMMENDATION:** Handle in accordance with good industrial hygiene and laboratory safety practices

Corning BioCoat HTS Fibrillar Collagen Multiwell Insert Systems may be used with the following Falcon 24-well Plates: (not included)							
Growth Surface	Qty/Pkg	Qty/Case	Cat #	Growth Surface	Qty/Pkg	Qty/Case	Cat #
Standard TC	1/tray	50	353047	Corning Primaria™ TC	1/tray	50	353847
Standard TC	6/bag	36	353226	Nontreated surface	1/tray	50	351147

**Start increasing your productivity now!**

To place an order in the U.S., contact Customer Service at:  
tel: 800.492.1110, fax: 978-442-2476; email: [CLSCustServ@Corning.com](mailto:CLSCustServ@Corning.com)

Outside the U.S., contact your local distributor or visit:  
[www.Corning.com/lifesciences](http://www.Corning.com/lifesciences) to locate your nearest Corning office.  
Discovery Labware, Inc., Two Oak Park, Bedford, MA 01730, Tel: 1.978.442.2200 (U.S.)  
[CLSTechServ@Corning.com](mailto:CLSTechServ@Corning.com) [www.corning.com/lifesciences](http://www.corning.com/lifesciences)

**CORNING**

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

For a listing of trademarks, visit [www.corning.com/lifesciences/trademarks](http://www.corning.com/lifesciences/trademarks)  
© 2013 Corning Incorporated