

Innovation in every detail, inspired design!



# BRANDplates® Insert System

H I G H - T E C H   D I S P O S A B L E S

**Innovative cell culture plates and inserts from BRAND** for manual and automated cell and tissue culture work!

- 24-well standard plate and the 6-well special plate for use with up to six strips of 4 inserts
- Side feed ports in the well for changing media with minimal disruption – without moving inserts
- Perfect for use with pipetting robots
- Especially for tissue culture: Inlet Opening System inserts with inlet channels.
- 4 pore sizes for applications such as co-culture, migration/invasion assays, 3D tissue preparation and more







# BRANDplates® Insert System

The BRANDplates® Insert System, co-developed with the Fraunhofer Society, offers an innovative expansion of the BRAND cell culture product line.

The BRAND Insert System includes two different cell culture plates and two types of cell culture inserts, which can be used in combination.

The cell culture plates and the associated inserts are available in both a 24-well standard and a 6-well special plate. These can be used in a wide variety of applications. The standard model is used in such applications as co-culture, secretion studies, and chemotaxis tests, and the special model finds application in the automated *in vitro* preparation of human tissues (3-D tissue culture). Skin, epidermis, and corneal models, etc., have taken on greater importance due to EU or European legislation restricting animal experimentation to a minimum. These tissues are now employed on a daily basis for tolerance studies, toxicity tests, and irritation tests in the pharmaceutical and cosmetics industries.

For efficient operations!

## Two plates



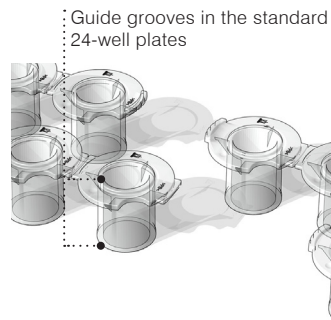
### 24-well standard plate

The plate includes 24 individually fillable wells that can be fitted with strips of 4 inserts and/or individual inserts.

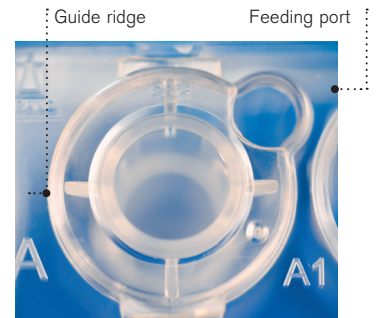


### 6-well special plate

Four wells are all connected as one large, elongated well. This well can be fitted with a strip of 4 inserts so that all 4 of the inserts in the strip can be supplied with medium at the same time. Particularly well suited to the use of insert strips with inlet channels.



Guide grooves in the standard 24-well plates



Guide ridge

Feeding port

### The well and insert are perfectly coordinated:

The guide grooves in the support collars of the wells in the 24-well standard plate hold the guide ridges of the insert in position. This prevents the individual inserts from rotating – ensuring the feed ports on the wells remain open. The guide ridges center also the insert in the well. This allows media changes without cell disruption.

### Automated *in vitro* preparation of human tissues



Automated filling of the wells for tissue culture

(Photo © Fraunhofer IPA)

### Plate specifications

- Manufactured according to the requirements in ANSI/SLAS Standards 1 and 4
- The standard 24-well plate and 6-well special plate both have lids with condensation rings
- pureGrade™ S (untreated) and cellGrade™ plus (hydrophilic cell culture) surfaces

# Two insert strips

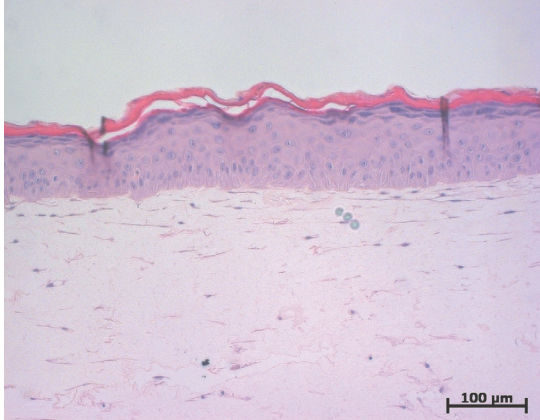


photo © Fraunhofer IGB  
Full thickness skin model

## Insert strip specifications

- Hanging inserts – distance from the well bottom to the insert membrane is 4 mm
- cellGrade™ plus (hydrophilic cell culture) surface
- Individually packaged strips in deep-drawn cups or as a combination with 6 strips each inserted into the 6-well cell culture plate
- Track-etched PC and PET membranes
- Four different pore sizes



## Insert strips, smooth-walled

For standard applications such as secretion studies, co-culture, migration/invasion assays studies, chemotaxis tests, etc.

# Four pore sizes

## Membrane / pore size application examples

Pore size	Application range
0.4 μm	Co-culture, transport studies, secretion studies, cell polarity studies, etc.
1.0 μm	Co-culture, transport studies, secretion studies, etc.
3.0 μm	Migration studies, chemotaxis studies, metastasis experiments, etc.
8.0 μm	Migration studies, chemotaxis studies, metastasis experiments, etc. See also the construction of full-thickness skin models by the Fraunhofer IGB ( <a href="http://www.tissue-factory.com">www.tissue-factory.com</a> )



## Insert strips with special inlet channels (the Inlet Opening System\*)

For automated *in vitro* preparation of human tissues. The Inlet Opening System\* enables rapid, consistent changing of media, from submersion culture to air-lift culture. The special inlet channels enable adjustment of the medium level without damage to the skin model.  
\*Patent pending

## Membrane pore size and density

Properties	PC	PET
Optical properties	translucent	transparent
Cell visibility under Light Microscopy	–	+
<b>Membrane thickness</b>		
Pore size 0.4 μm	10 μm	12 μm
Pore size 1.0 μm	11 μm	12 μm
Pore size 3.0 μm	9 μm	15 μm
Pore size 8.0 μm	7 μm	23 μm
<b>Pore density (pores per cm<sup>2</sup>)</b>		
Pore size 0.4 μm	1 x 10 <sup>8</sup>	2 x 10 <sup>6</sup>
Pore size 1.0 μm	2 x 10 <sup>7</sup>	2 x 10 <sup>6</sup>
Pore size 3.0 μm	2 x 10 <sup>6</sup>	6 x 10 <sup>5</sup>
Pore size 8.0 μm	1 x 10 <sup>5</sup>	6 x 10 <sup>4</sup>

## Comparison of individual insert vs. individual well in the 24-well plate

	Individual insert	Individual well
Growth surface	59 mm <sup>2</sup>	184 mm <sup>2</sup>
Maximum volume	772 μl	3.1 ml



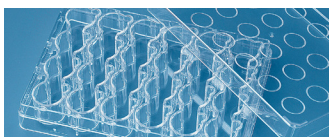
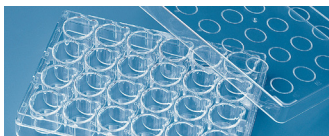


# Ordering information

- Non-cytotoxic according to ISO 10993-5, endotoxins-free (< 0.01 EU/mL), free from DNA, DNase, and RNase.
- Sterile according to ISO 11137 and AAMI Guidelines, SAL 10<sup>-6</sup>

## BRANDplates® Microplates

### 24-well standard plates or 6-well plates



PS. pureGrade™ S or cellGrade™ plus surface, sterile, includes lid with condensation rings.

Description	Surface	Pack of	Cat. No.
24-well standard plate	pureGrade™ S	10 (individually wrapped, with lid)	<b>782880</b>
6-well plate	pureGrade™ S	10 (individually wrapped, with lid)	<b>782881</b>
24-well standard plate	cellGrade™ plus	10 (individually wrapped, with lid)	<b>782890</b>
6-well plate	cellGrade™ plus	10 (individually wrapped, with lid)	<b>782891</b>

## BRANDplates® Insert Strips

### Insert Strips, smooth-walled or with inlet channels (Inlet Opening System\*)

PS. cellGrade™ plus surface, sterile. Strips of 4 inserts (divisible).



Description	Pore size µm	Pack of	PC membrane	PET membrane
			Cat. No.	Cat. No.
smooth-walled	0.4	12 (individually wrapped)	<b>782800</b>	<b>782810</b>
	1	12 (individually wrapped)	<b>782820</b>	<b>782830</b>
	3	12 (individually wrapped)	<b>782840</b>	<b>782850</b>
	8	12 (individually wrapped)	<b>782860</b>	<b>782870</b>
with Inlet Opening System*	0.4	12 (individually wrapped)	<b>782801</b>	<b>782811</b>
	1	12 (individually wrapped)	<b>782821</b>	<b>782831</b>
	3	12 (individually wrapped)	<b>782841</b>	<b>782851</b>
	8	12 (individually wrapped)	<b>782861</b>	<b>782871</b>

\* Patent pending

## BRANDplates® Insert System

### 6-well plates filled with 6 insert strips

PS. cellGrade™ plus surface, sterile. Insert strips, smooth-walled or with inlet channels (the Inlet Opening System\*) includes lid with condensation rings.



Description	Pore size µm	Pack of Plates with lid	PC membrane	PET membrane
			Cat. No.	Cat. No.
smooth-walled	0.4	5 (30 insert strips)	<b>782802</b>	<b>782812</b>
	1	5 (30 insert strips)	<b>782822</b>	<b>782832</b>
	3	5 (30 insert strips)	<b>782842</b>	<b>782852</b>
	8	5 (30 insert strips)	<b>782862</b>	<b>782872</b>
with Inlet Opening System	0.4	5 (30 insert strips)	<b>782803</b>	<b>782813</b>
	1	5 (30 insert strips)	<b>782823</b>	<b>782833</b>
	3	5 (30 insert strips)	<b>782843</b>	<b>782853</b>
	8	5 (30 insert strips)	<b>782863</b>	<b>782873</b>

\* Patent pending

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