

## CellCrown™96 inserts

CellCrown™96 is a unique and novel cell culture insert for standard 96-well plates and it applies structure of rows instead of single inserts. CellCrown™ immobilizes a sample (e.g. fibre, foil, membrane, textile, block-like or tissue sample) in the well of a well plate.

- Material is medical grade polycarbonate
- The samples are placed in little row of “cups” and row of inner parts is pushed on the top (Figure 1).
- Samples can be attached as one entity and cut between insert parts.
- Little round areas on the inner part allow markings of the single samples.
- Row of CellCrown™96 can be cut into smaller, even single parts as simple bending.
- Single CellCrown™96 insert maintains its position in the well even alone.
- The inserts are available as sterile (gamma-irradiated) and non-sterile.
- CellCrown™96 insert is disposable, for single use, only. The small parts are difficult to clean and may cause cross-contamination if reused.
- This is the only cell culture insert in the market, which is provided as empty and which is easy to load with the researchers own sample material.
- Package of CellCrown™96 contains 6 strips of 8 wells, i.e. it covers half of the wells of 96-well plate.
- Even though standard lids of well plates can be used with CellCrown™96 inserts, follow-up of the sufficient level of media in wells is recommended. The recommended volume of media is 170 - 200 µl, depending on the size of sample.
- This is the first insert in the market, which allows easy attachment of thicker samples, up to 2 mm in the insert (Figure 1). Also attachment of rigid samples is possible between the holding cup and insert part.
- Holding cup can be used alone and it prevents attachment of the sample to the bottom of the well.
- Insert part can be placed two ways in deeper and higher position. When two holes on the edge of cup and cusps in the inner part are matching the insert is suitable for thin samples (Figure 2). When they are not in the same position, combination is suitable for samples of 2 mm in thickness. Please note that fit of cup and inner part is slightly looser in this position and insert need to be handled with care.

Table 1. CellCrown™96 product selection

CellCrown	Non-sterile	Sterile
CellCrown™96	x	x



Figure 1. CellCrown™96

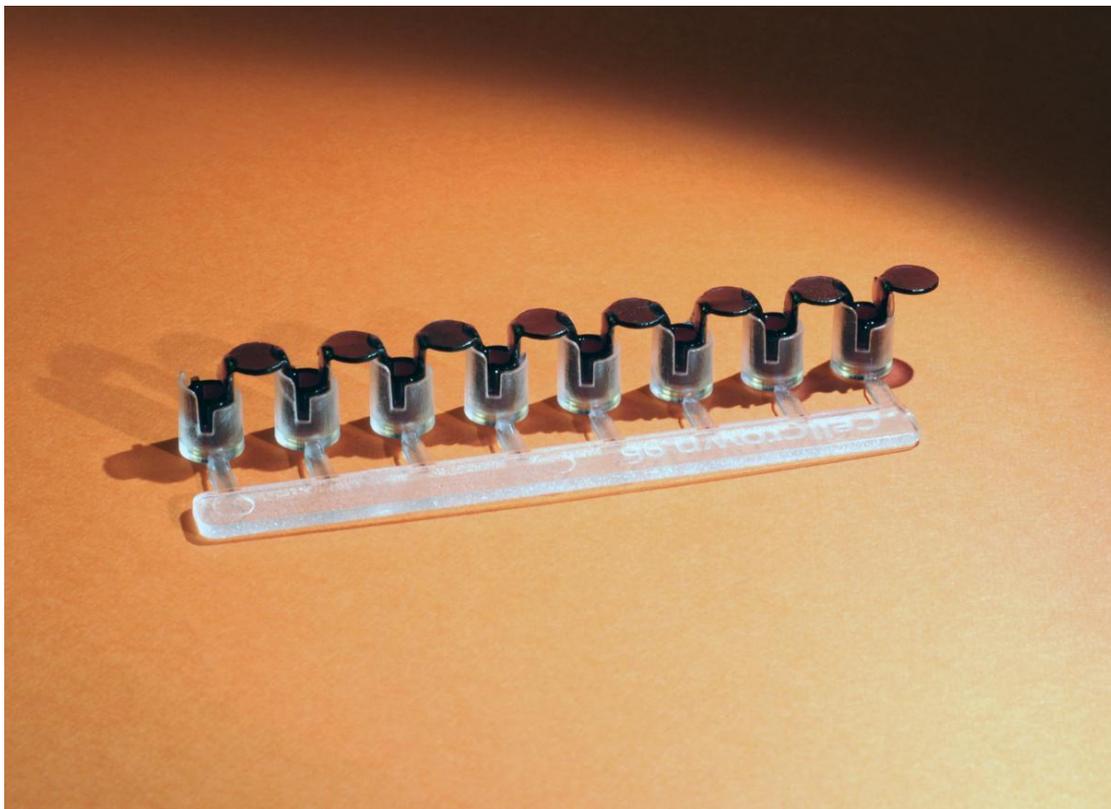


Figure 2. Installation of cups and cusps for thin samples. Please, note black version is not available for sales.

After installation of the samples cups are cut off from their frame (Figure 3) and the insert is ready to be used in well plate (Figure 4).



Figure 3. Cutting off the frame of cups



Figure 4. CellCrown™96 insert ready for culturing

### Applications

Up to date CellCrown™ cell culture inserts have been used in cell culturing experiments in the research of biomaterials, tissue engineering, regenerative medicine, pharmaceuticals, cancer models, and skin substitutes for animal free testing. The studied materials have been varying from biological tissue samples to completely synthetic ones, these studies are listed in Scaffdex web site.

Table 2. CellCrown™96 dimensions

Dimensions	CellCrown™96
Outer diameter of the cup	6 mm
Inner diameter of the cup	3.0 mm
Inner surface area	0.071 cm <sup>2</sup>
Height of the combined insert	10.2 mm
Inner diameter of the cusp	2.7 mm
Height of the cusp	5.5 mm
Suitable sample sizes in diameter	Thick samples: 3 - 4.5 mm Thin samples: > 5 mm
The recommended thickness of sample (mm)	0.05-2 mm
The applicable well plate	Standard 96-well plate, like Nunc and Corning
Structural feature	8 inserts in a row