INSTRUCTIONS FOR USE

CELLEDISC
With closed filling caps (-CF1/ -CF2)

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SIMPLIFY YOUR CELL CULTURE WORK PROCESS

CELLEDISC
The Greiner Bio-One CELLdisc is a ready-to-start, multi-layer device, as easy to use as a T-flask. The innovative ergonomic CELLdisc design provides a versatile system for the propagation of adherent mammalian cells from research scale to industrial batches. It is available either with the standard tissue culture surface (TC; red screw cap) or the Advanced TC surface (blue screw cap) identical to all Greiner Bio-One cell culture products to assure consistent performance from lot to lot and from format to format.

INTENDED USE
General laboratory products for cell culture to be used by qualified personnel in a laboratory environment.

CELLEDISC WITH CLOSED FILLING CAPS
Working in a GMP surrounding requires maximal security on sterility and hence a closed system for fluid transfer which excludes any opening of a cell culture disposable during cell cultivation. For such applications Greiner Bio-One has developed the new CELLdisc versions with closed filling caps. These consist of flexible USP class VI certified silicone tubes attached to the CELLdisc screw cap which can be safely connected to liquid reservoirs like media bags using the included MPC connector. For each CELLdisc two versions are available:

/ Closed filling cap with single tubing (-CF1)
/ Closed filling cap with double tubing with included dip-in tube (-CF2)

Figure 1: CELLdisc 4 layers with closed filling cap (-CF1)

Figure 2: CELLdisc 16 layers with closed filling cap (-CF2)
**1/ SINGLE LAYER CELLDISC WITH CLOSED FILLING CAP**

Unpack the single layer CELLDisc and place it in a laminar air flow cabinet in order to work in sterile conditions. Prepare cell suspension in accordance with the concentration (cells/cm²) used with other disposables for adherent cell culture.

Remove the plug of the filling tube of -CF1 version and connect it to your media bag or the corresponding counterpart.

Fill the CELLDisc with the appropriate liquid volume. Information on emptying the CELLDisc, can be found in 2/ section 10.

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**WARNING**

The media or cell suspension should not touch the filter. If the filter has absorbed fluid, this will inhibit any gas transfer into and out of the CELLDisc. In this case the disposable has to be discarded and a new CELLDisc device has to be used.

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**RECOMMENDED HANDLING**

Tilt the single layer CELLDisc gently from one side to the other to assure that media and cells distribute evenly.
2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP

1. Unpack the CELLDisc and place it in a laminar air flow cabinet in order to work in sterile conditions. The CELLstage can be used to achieve the perfect filling angle of 30° (4-24 layers) or 20° (40 layers).

   The filling process described in the following section is equivalent for both CELLDisc versions (-CF1 and -CF2).

2. Hold the CELLDisc with the screw cap at a position of approximately 105° for right-handed or 255° for left-handed users.

3. Remove the plug of the filling tube of -CF1 or -CF2 version and connect it to your media bag or the corresponding counterpart. The media will fill the topmost layer first and then move slowly to each layer underneath.

WARNING

To obtain equivalent cell growth in all layers, formation of air bubbles must be avoided during CELLDisc processing. Therefore, an exact angle of 30° and a specific position of the central filling channel (see Fig. 1 and Fig. 2) must be maintained during filling of 4-, 8-, 16- and 24-layer CELLDisc. While the position of the screw cap/filling channel and the general filling procedure is identical a smaller angle of 20° must be maintained during filling of a 40-layer CELLDisc. This handling procedure guarantees that the pressure is equalized through the central gas channel (indicated in blue in Fig. 3) without contact with the filled in liquid. Thus, the air does not flow through the liquid and does not cause foaming. In addition to the filling process, any generation of air bubbles should be avoided. Vigorous shaking of the CELLDisc is not recommended. Larger volumes of liquids should be mixed outside the CELLDisc and then added to the disposable as described above. Small amounts can be pipetted directly into the CELLDisc and then distributed to all layers by repeating the equilibration process.
2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP

4. Keep CELLDisc in the indicated position until CELLDisc is filled with the intended amount. After filling is completed, MPC connector can be disconnected and plug re-inserted to close connector.

5. To start liquid equilibration, lay the CELLDisc down horizontally and turn it as displayed to assure that the media and all layers are in contact through the filling channel. The media will now distribute evenly over all layers.

6. Turn the CELLDisc as indicated to disconnect media flow from the filling channel. Do not rotate the CELLDisc any further, as this could lead to wetting of the filter.

7. To guarantee an equal distribution of small volumes of liquid (e.g. trypsin) the CELLDisc must be positioned horizontally with the opening port at the lowest position.

From this position raise the CELLDisc upright and place the disposable on a horizontal surface.
2/ CELLDISC WITH 4-40 LAYERS WITH CLOSED FILLING CAP

During transport, tilt the CELLDisc slightly backward to assure that there is no liquid contact with the filling channel or accidental media flow to another layer.

Place the CELLDisc inside an incubator. Proceed with the cultivation based on the appropriate protocol.

For liquid removal of a -CF1 variant, remove plug-in and tilt the CELLDisc slowly 90° with the large opening port at the lowest possible position and pour out the media.

For liquid removal of a -CF2 variant, remove plug from MPC connector of the Dip-in tube and connect it to your vaccum pump. To avoid any dead volume tilt CELLDisc slightly as indicated. After draining, disconnect MPC connector and re-insert plug.
### CELLdisc with TC surface

**Sterility SAL 10⁻⁶**

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### CELLdisc with Advanced TC surface

**Sterility SAL 10⁻⁶**

|----------|--------|---------|-------------------|--------------------------|--------------------------|--------|----------|

### CELLdisc with external filter

**Sterility SAL 10⁻⁶, triple packed**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Layers</th>
<th>Surface</th>
<th>Description</th>
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<td>CELLdisc with external filter</td>
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<td>6789xx-EXF</td>
<td>1-40</td>
<td>Adv. TC</td>
<td>CELLdisc with external filter</td>
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### CELLdisc with closed filling caps

**Sterility SAL 10⁻⁶, triple packed**

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<th>Surface</th>
<th>Description</th>
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<td>1-40</td>
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<td>6781xx-CF2</td>
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<td>CELLdisc with closed filling cap, double tubing and external filter</td>
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<td>6789xx-CF1</td>
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<td>Adv. TC</td>
<td>CELLdisc with closed filling cap, single tubing and external filter</td>
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<tr>
<td>6789xx-CF2</td>
<td>4-40</td>
<td>Adv. TC</td>
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### CELLdisc Accessories

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<th>Item No.</th>
<th>Description</th>
<th>Material</th>
<th>Measure [mm]</th>
<th>Weight [kg]</th>
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<tbody>
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