Cell Culture Products

lumox™ dish - Cell Culture Dish with Gas-Permeable Base

Cell culture dish with gas-permeable base
lumox™ dish is a cell culture dish with a gas-permeable base made of a 25 µm thick lumox™ film (Fig. 1, 2). The cells grow directly on the border between gas and liquid phase, where the culture medium does not act as a diffusion barrier. Therefore an optimal transfer of CO₂ and O₂ is guaranteed.

Cells simply grow better!
The gas permeability of lumox™ dish is an enormous advantage. Cells are efficiently supplied with O₂ and excess CO₂ is effectively removed. The extremely short diffusion path ensures optimal gas exchange. lumox™ dish is available with a diameter of 50 and 35 mm.

Optimal growth conditions
The user can choose between a hydrophilic or a hydrophobic culture surface. Therefore, both adherent (hydrophilic surface) and suspension cells (hydrophobic surface) can be cultivated on lumox™ dish.

lumox™ dish TC
For very sensitive cells we offer lumox™ dish (with ø 50 mm) with a special tissue culture treatment which guarantees extra high adherence for cells.

Applications in lumox™ dish

Flexible base
The film base of lumox™ dish can be cut using a scalpel (Fig. 3). Then the sample can be prepared for further applications, e.g.
- Electron microscopy
- Inverse microscopy
- Phase-contrast microscopy
- Fluorescence microscopy
- Confocal microscopy

Figure 3: Cutting the lumox™ film.

The combination
The use of flexiPERM disc, a multiple-use silicone insert, divides lumox™ dish into four cell culture areas and thus allows parallel studies of a single culture or transfection studies.

Electron microscopy
lumox™ dish is routinely used in electron microscopy applications (Fig. 4). One advantage is that the gaspermeable film base can be easily cut into ultra thin sections. Therefore it is not necessary to enzymatically detach the cells before doing further experiments!

Figure 4: Transmission electron microscopy image of a kidney epithelium cell grown in lumox™ dish hydrophilic.

Growth of dendritic cells (Fig. 5)

Figure 5: Differentiation of human monocytes to dendritic cells within seven days under the influence of cytokines. At the end of the culture period, the cells could, without stress, be removed from lumox™ film after a short cold temperature phase. This is not the case with normal cell-scrapping or enzymatic methods.

lumox™ is a trademark of In Vitro Systems & Services, Germany
### lumox™ dish

**Advantages**
- Non-Pyrogenic
- Gas-permeable
- Crystal-clear
- Non-autofluorescent
- UV-transparent
- Chemically inert
- Microscope friendly

**Applications**
- Macrophages
- Stem cells
- Cardiac muscle cells
- Skin transplants
- Hepatocytes
- Dendritic cells
- Mycoplasma tests

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<table>
<thead>
<tr>
<th>Cat.No.</th>
<th>Description</th>
<th>Surface quality</th>
<th>Working volume [ml]</th>
<th>ø [mm] x height [mm]</th>
<th>Growth area [cm²]</th>
<th>Bottom</th>
<th>Sterile</th>
<th>Quantity per bag/case</th>
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**New**

**non-cytotoxic**

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