

LiveBox1

LiveBox1 (LB1) is a transparent bioreactor suitable to develop 2D or 3D dynamic in-vitro models in attached cell culture conditions. Recently, it has been used also with floating organoids (> 1 mm in diameter).

LB1 is compatible with the cell growth area of a single slot of a multiwell plate.

<i>Compatibility with the slot of</i>	6, 12, 24 plate
<i>Wet volume [mL]</i>	2.5
<i>Transparency</i>	✓



Main features:

- ◆ **Dynamic environment:** the bioreactor is equipped with an inlet and an outlet to assure the flow of the culture medium
- ◆ **Real-time monitoring:** cells can be monitored in real-time due to the transparency of the chamber
- ◆ **Imaging platform compatibility:** LB1 is compatible with standard microscope stative, slide and plate readers
- ◆ **Recollection of biological material:** the glass disc can be easily removed to recollect the attached biological material
- ◆ **Multi-organ approach:** the LiveBox chambers can be interconnected, following a modular approach, to mimic the crosstalk between different tissues
- ◆ The product is **autoclavable** and **reusable**

Available versions:

- ◆ LB1-6 → cell growth area of 9,6 cm²
- ◆ LB1-12 → cell growth area of 4,5 cm²
- ◆ LB1 → cell growth area of 1,8 cm²

LiveBox2

LiveBox2 (LB2) is a transparent bioreactor designed to mimic patho-physiological barriers in dynamic conditions.

LB2 mimics a transwell system: a porous and removable membrane divides the chamber in an apical and a basal compartment.

Liquid-Liquid Interface (*LLI*) and Air-Liquid Interface (*ALI*) are implementable.



Compatibility with the transwell of	6, 12, 24 (*) plate
Interface	LLI, ALI
Transparency	✓

Main features:

- ♥ **Dynamic environment:** the system is equipped with two inlets and two outlets to assure the flow of two different and independent media or one culture medium in a sigmoidal configuration
- ♥ **Real-time monitoring:** cells can be monitored in real-time due to the transparency of the chamber
- ♥ **Imaging platform compatibility:** LB2 is compatible with standard microscope stative, slide and plate readers
- ♥ **Recollection of biological material:** the membrane can be easily removed to recollect the biological material
- ♥ **Multi-organ approach:** the LiveBox chambers can be interconnected, following a modular approach, to mimic the crosstalk between different tissues
- ♥ The product is **autoclavable** and **reusable**

Available versions:

- ♥ LB2-6t → cell growth area of 4,5 cm²
- ♥ LB2 → cell growth area of 1,8 cm²
- ♥ LB2-24isa → cell growth area of 0,6 cm².

(*) Compliance with the stand-alone commercial inserts (e.g., 9 mm i.d.)

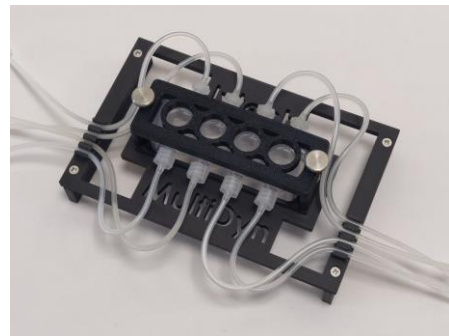
MULTIDyn

MultiDyn (MD) is a compact multi-dynamic-chambers rack, based on the dimensions of a standard 24-well plate.

Each rack is transparent and equipped with 4 wells, designed to reproduce the cell growth area of a classical plate. Each chamber can be autonomously perfused, allowing for the development of 4 parallel and dynamic models. The volume of a single well is 2.5 mL.

MD is a semi-disposable product (3 sterilization with EtOH 70% + UV exposition) and it can be provided with a clamp system and a plate to easily house the tubes.

Dimensions/rack [w×l×h, cm]	8.5×2.8×1.9
Cell growth area/well [cm ²]	1.8
# Independent replicates/rack	4
Transparency	✓



Main features:

- Standard monitoring/cell culture protocols:** MD is designed to reproduce both the bulk dimension as well as the cell growth surface/well of a standard 24-well plate. This characteristic assures the compatibility with automated plate readers as well as standard monitoring and cell culture protocols
- Compatible with LiveBox1 protocols:** considering the cell growth area/well, the protocols developed for a LiveBox1 (by IVTech Srl) are compatible with MD
- Real-time monitorable:** MD is transparent, thus it can be monitored in brightfield, through an inverted microscope in real-time
- Multi-organ approach:** each rack is modular. Therefore, it is possible to join different MD to design, as in a Lego strategy approach, a customized fluidic platform, characterized by several chambers connected in series and, at the same time, 4 replicates (multi-organ model). Moreover, each well can simulate a different tissue. Considering that each tissue communicates with others connected in series by an exchange of liquid, this is suitable to replicate a natural cross-modulation as a response to a stimulus