

DISCOVER

**NEW CONCEPT**

# A BIOMEDICAL DEVICE FOR MICRO-ENVIRONMENTAL CULTURES

BioStation for the preservation  
and observation of all living biological material  
and artificial constructions.

Developed by :

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# A REVOLUTION IN CELL-CULTURE

To cultivate cells, what a biological scientist is looking for ?

## A classical incubator ?

- quite often the imaging devices are placed in the incubator, this means that there's only one culture condition
- an incubator can't monitor multiple conditions in real-time, to do so several incubators are necessary
- an incubator isn't versatile and to mimick a biological environment the conditions should be variable on fine request

So an incubator isn't practical, its use is limited, it's bulky and static and isn't able to mimick a biological niche and its micro-environment

## Or an advanced solution ?

### MiBA the ALL-IN-ONE miniaturized incubator

- **Real-time observation** without disruption of the cell culture: intermittent or continual perfusion.
- **Multi-time monitoring** for long-term cell culture: from 1 until 21 days or more.
- **Independant monitoring** for each micro-incubator: variable parameters: pH, hypoxia, T°C...
- **Multi-imaging:** suitable for right-inverted microscopies/macrosopies
- **Multi-units:** incubators can be connected to each other in serial ou parallel configuration to mimick additive co-culture.
- **Multi-samples:** inserted chambered coverglass for multi-conditions analyses.
- **Multiplexed:** 1-3-6-9 or more units can be connected and monitored with feedback or loop control (paracrine effect, releasing...)
- **Multiparameters:** to mimick biological microenvironmental niches for cells and tissues (differentiation / maturation / growth/senescence/death)
- **Mechanical Stress:** applied shear stress to simulate specific laminar flow (vessel, capillary...)
- **Mobility:** suitable for culture at the office, core facility, ... powersupply 110-120 V
- **Sharing:** suitable for personal use or between collaborators
- **Economic:** all applications in one device for all
- **Specific development for a special need:** very fast change of medium / microenvironment / materials suitable for MRI ...



# MiBA

## Miniaturization: multi-pathways

### Specifications:

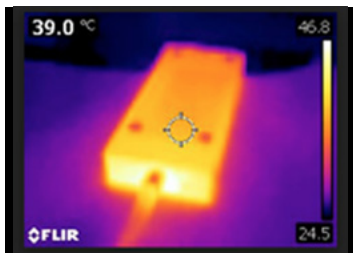
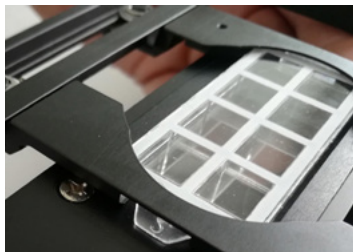
Monitored Single channel thermostation

Multipathways: 3 MiBA can be monitored independently

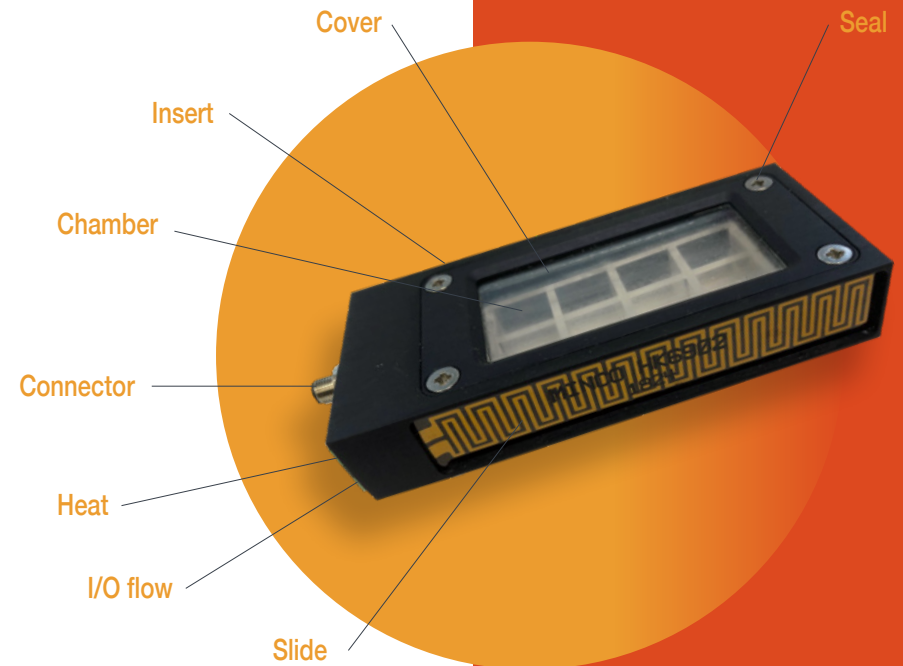
- Gradual opacity of the walls /darkness
- Optical specifications thin coverslip
- Tightness to nutrient media
- Sterility of the compartment
- Inert / biological toxicity
- Parameters (Temperature, oximetry, fluidics)
- Independent sterile inserts
- Multiplexing

### COMPATIBILITIES: Micro/Macro/DHM

- Stage Microscope (Leica Microsystems, Zeiss, Olympus, Nikon, DHM...)
- Material compatible (UV - Vis and IR)
- Cell culture (chambered coverglass)



Miniaturization  
(9 x 4 cm<sup>2</sup>)





## For more information or a special need

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