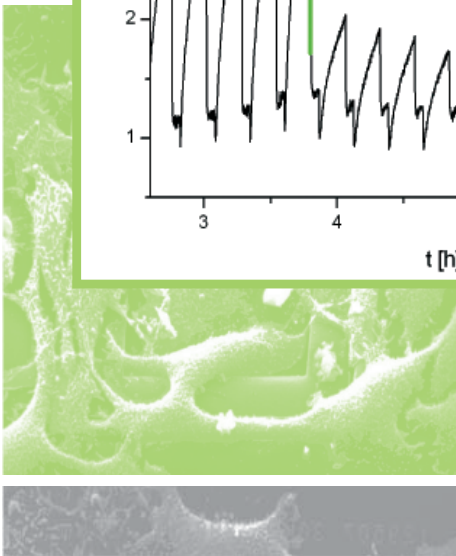
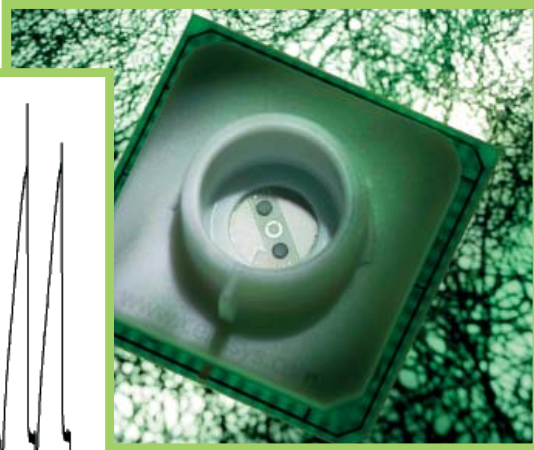
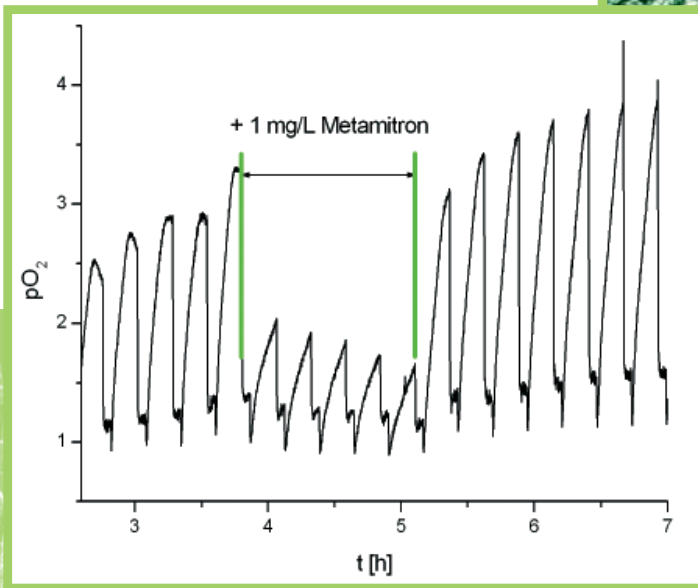


IMOLA - IVD

Intelligent Mobile Lab

Modular lab-on-chip system for vitality monitoring of living cells



Applications

Drug testing on cells or tissue

- Individualized chemotherapy

Use of living cells as sensors

- Environmental monitoring

Quality control of living cells

- Vitality check of transplant

Product development

- Optimization of cell culture media

Toxicity analysis

- Alternative method for animal experiments

IMOLA - IVD

Intelligent Mobile Lab for in-vitro diagnostics

Advantages

- Low priced disposable BioChip-C for pH, pO₂, impedance and temperature
- Continuous long term monitoring of cellular vitality
- Marker-free process for tests on living cells
- Online control of cell based assays
- Online data analysis and visualization
- Closed fluid system
- Portability



6xIMOLA-IVD



BioChip-C: Multiparametric sensor chip

Description

Intelligent mobile lab (IMOLA) is a stand-alone-device which allows to monitor the vitality of living cells. The mobile device can be used at any location. The key-technology of the IMOLA are biohybride multiparametric biochips manufactured in thin film technology. Living cells or tissue can be cultivated directly at the chip.

An integrated fluidic system takes care of adequate supply of the cells with cell culture media respectively a test compound. The BioChips of the IMOLA include different microsensors for measurement of pH (extra-cellular acidification), pO₂ (cellular respiration) and impedance (changes in the morphology of the cells). 6xIMOLA-IVD is a ready to use test system. Six IMOLAs are mounted inside an incubator (for temperature control). Now parallel tests with the BioChips-C can be performed.



Optimized for mobile use

Technical data	
BioChip-C	Extracellular acidification Cellular respiration Morphology / adhesion Temperature
Power supply	Optional battery operation or 230 V
Fluidics	Pump rate and intervals adjustable Modular reservoir and waste tanks Sterilizable
Features	Analog circuitry for sensor control Digital circuitry for data processing Real time clock Wireless data transfer 32kB memory (extendable) 16bit D/A-conversion Low power consumption
Interfaces	Wireless data transfer External power supply Serial data transfer (optional) Sensor chip interface
Product changes and new accessories will be made public on our website in due course	

Parallellizable for up to 256 IMOLAs

