

Stress Free 3D cell culture system

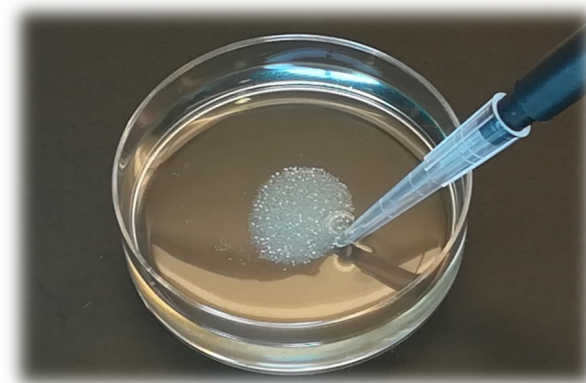
CelVivo 3D cell structures

Proprietary designed bioreactor vessel

BAM system for high throughput and easy maintenance

Applications

Technical specification



Stress Free 3D



CelVivo
3D cell structures

The Bioreactor

Ultra-low shear forces

Spheroids or organoids have been grown in clinostat bioreactors from over 100 different cell types

Fixed volume

10 mLs, the design prevents evaporation which would affect the concentrations of salts and other media components

Stable cultures

Spheroids have been cultivated for up to one year

Built in unique separate reservoir

No net evaporation from culture chamber

Mimetic tissue

Spheroids and organoids mimic tissue *in vivo*

Many cell lines take ~18 days to recover from trypsinisation

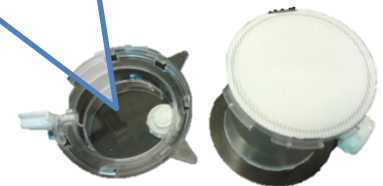
Spheroids reach a dynamic equilibrium - and recover to this equilibrium after treatment

High yield

Each mature bioreactor contains more than 300 spheroids, each constructed from 80-100,000 cells

Can be opened and closed

Access to Petri dish-like cell chamber allows easy handling



Active diffusion allows large spheroid size

Movement of media past spheroids allows them to reach sizes of 1-2 mm (depending on cell type) without developing a necrotic centre. This makes handling easy

If you were a spheroid you would like to live here for a year!

Stress Free 3D

The BioArray Matrix - BAM

16 independent growth cultures

Flexibility and capacity!

Smooth rotation

16 microcomputers control rotation precisely

From 1 to 60 rpm

The speed can be adjusted in steps of 0.1 rpm to perfectly suit spheroid growth

Reduced risk of infection

Use the BAM in a non-humidified incubator to reduce the risk of infection.

Thermally neutral drive

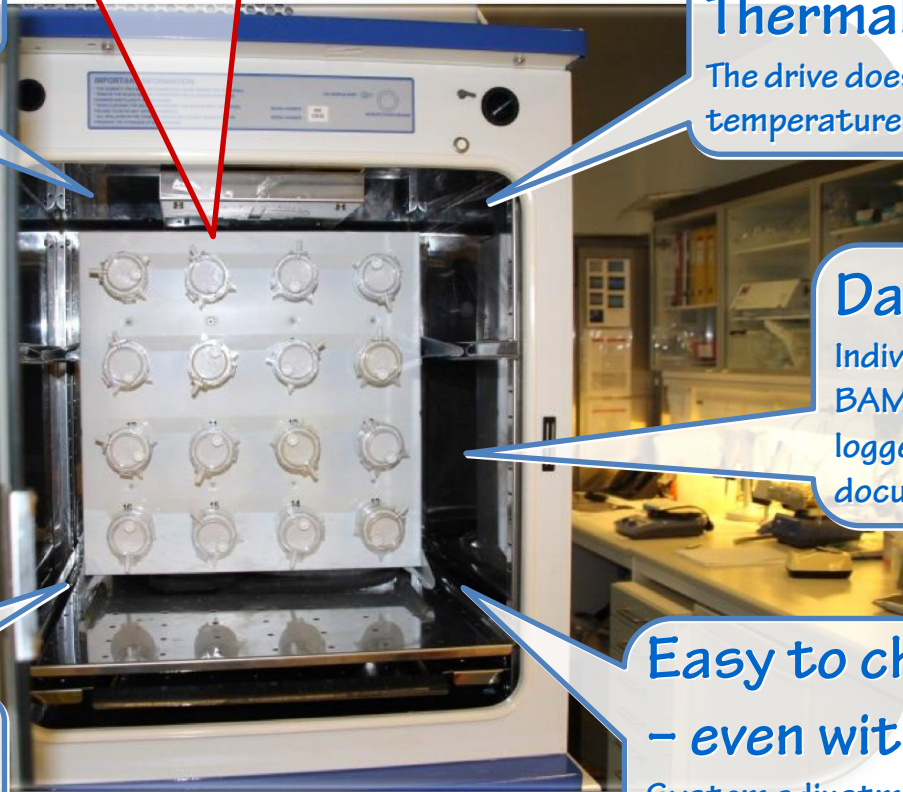
The drive does not affect the temperature inside the incubator

Data is logged

Individual drive settings and BAM system status are logged and can be used to document performance.

Easy to change settings – even with gloves on

System adjustments can be made using the tablet (or android mobile phone) from anywhere in the lab.



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Stress Free 3D



CelVivo
3D cell structures

Applications

Predictive Toxicology

Regenerative
medicine

Organogenesis

Interactions between
different cell types

Bone formation

Diabetes

Cancer development
and treatment

Viability
'Omics
Pathway mapping
immunofluorescence

... and your application !!!!!



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Stress Free 3D

BAM Technical Specifications

Size

Driver 49 x 44 x 21 cm
Controller 28 x 30 x 69 cm,
Umbilical 4 m x 24 mm diam.
Fits into most CO₂ incubators
Requires 26 mm diam. access port

Router

Driver

Controller

BAM 02

BAM 02

Weight

Driver 14 Kg
Controller 10 kg

Power

110 - 230V
50-60 Hz
5 amps

Tablet

Router and Tablet

Specifications vary

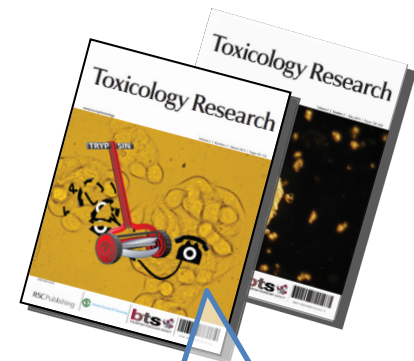
Software

Pre-loaded, proprietary software

Questions?

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Publications

Highly documented system
performance (over 20 scientific
publications – end of 2017)

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