

Advanced in vitro exposure systems

VITROCELL® Cloud ALI Starter Kit



VITROCELL® Cloud ALI Starter Kit

For exposure to liquid aerosols

This system is specifically designed for dose-controlled and spatially uniform deposition of liquid aerosols on cells cultured at the air-liquid interface. The aerosol is applied during a short time of approx. 3 minutes. The setup is designed for 6, 12 and 24-well sized inserts. The cultivation module is made of electropolished stainless steel. It can be heated by water circuit with an optional water bath.

The VITROCELL® Cloud ALI Starter Kit can be used for aerosols generated from liquids and suspensions.

Possible fields of application are screening for inhaled drugs and toxicity testing of inhaled substances including nanoparticle suspensions. There is a choice among 4 options of Aeroneb® nebulizers:

- 4.0 – 6.0 µm
- 2.5 – 6.0 µm
- 2.5 – 4.0 µm
- 10 µm (special version)

The Cloud aerosol chamber is made of Polycarbonate.

Please download the VITROCELL® Cloud demonstration video from our website.

Adaptor sets included for:

- 12-well sized inserts
- 24-well sized inserts



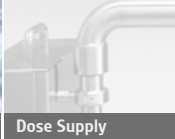
VITROCELL® Cloud ALI Starter Kit
for 1 insert (6/12/24-well size)



VITROCELL® Cloud ALI Starter Kit QCM
for 1 insert (6/12/24-well size)
and optional microbalance sensor



Exposure Systems



Dose Supply



Dilution



Racks & Carts



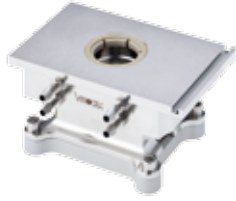
Dose Monitoring



Skin Exposure



Auxiliary Equipment



Base module



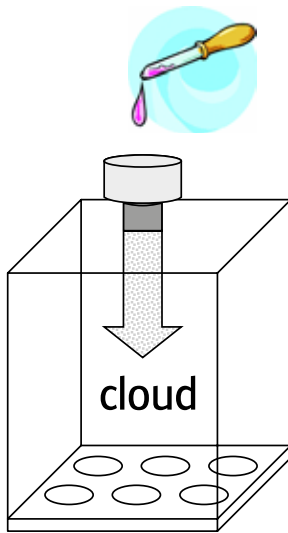
for 6-well sized inserts



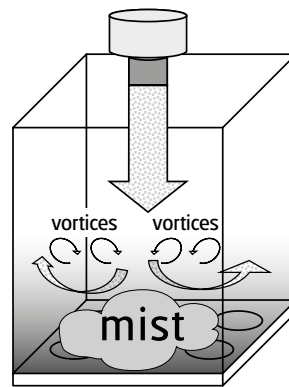
for 12-well sized inserts



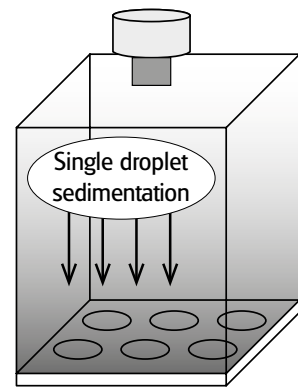
for 24-well sized inserts



Phase 1
Emission Of Cloud



Phase 2
Homogeneous Mixing



Phase 3
Gravitational Settling

Features

- Exposure system for liquid aerosols
- High droplet output rate – cloud dynamics
- No external air-flow required (simple)
- No humidity control required
- Dose-controlled and spatially uniform aerosol deposition
- Small residual volume in nebulizer reservoir
- Easy handling
- Clinically relevant

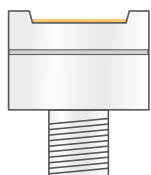


Optional
microbalance
sensor for dose
monitoring

VITROCELL® Cloud Quartz Crystal Microbalance Sensor

The microbalance sensor can be fitted in the VITROCELL® Cloud ALI Starter Kit QCM, VITROCELL® Cloud 6, and VITROCELL® Cloud 12.

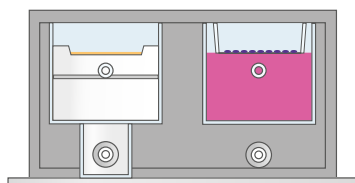
It is capable of measuring the deposition in the module at a resolution of 10 nanogram/cm² and second.



Removable Sensor Holder

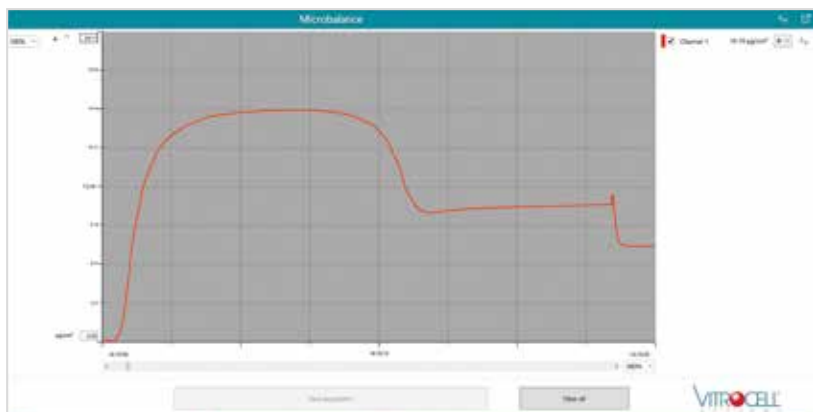


Quartz Crystal Sensor Plate



The VITROCELL® Microbalance Controller is available as laptop version (for 1 sensor) or PC version (for 3, 6 or 9 sensors).

VITROCELL® Monitor Software



The VITROCELL® Monitor software shows the deposition in ng/cm² online for max. 9 microbalances. The data is logged into a .csv file which can be opened with Excel®.

About VITROCELL®

VITROCELL® exclusively concentrates on the developing, producing, installing, training and servicing of advanced *in vitro* exposure systems.

The VITROCELL® Systems' team is driven by their vision for new in-vitro standards through state-of-the-art technology, highly qualified workmanship and absolute client dedication. VITROCELL® has successfully collaborated with clients from leading research institutes, contract research organizations, regulatory authorities or industrial laboratories across the world. Working with our team experts, all modules have been tailored to create durable and complete turnkey-systems for *in vitro* inhalation toxicology. Gases, environmental atmospheres, nano particles and complex mixtures are analyzed on lung cells at the air/liquid interface using these systems. VITROCELL® technologies are also applicable to solutions for skin research.

Over a decade of devotion to research in this specific field has given our team of design & precision manufacturing specialists the opportunity to mentor highly diversified and complex projects **from conception to completion**. We strive to become a constructive member of each research team, providing support when it is needed, advice when it is required and modules of the highest quality, which are even polished by hand before leaving here to be integrated into your workspace. Every piece of our German engineered equipment is manufactured to the highest of standards – yours.

VITROCELL® Systems GmbH
Fabrik Sonntag 3
79183 Waldkirch
Germany

Tel. +49 7681 497 79-50
Fax +49 7681 497 79-79
Email: info@vitrocell.com
www.vitrocell.com

