



AeroLung™

AeroLung is a system for uniform, high throughput aerosol delivery for the OrganoPlatforms and can expose up to 128 lung tissues at a time. It uses a pump and an air distributor for consistent deposition and offers programmable control for precise, spatially targeted dosing. AeroLung generates a fine aerosol by oscillating a piezoelectric mesh that atomizes any liquid formulation or particle suspension. A peristaltic pump then creates a steady downward airflow, driving the aerosols toward an air distributor that contains an array of nozzles that

precisely align with the wells of an OrganoPlatform. Each nozzle has a fixed inner diameter and protrude into the wells to ensure a localized delivery of aerosol with controlled dose at the apical surface of the airway epithelial air-liquid interface. The device is customizable and compatible with **IFlowPlate**, **AngioPlate**, and **UniPlate**. Together, AeroLung enables reproducible inhalation studies under near-physiological conditions.



KEY FEATURES

- **REPRODUCIBLE:**

Even distribution of aerosols (CV<7%) across an entire IFlowPlate384.

- **HIGH THROUGHPUT:**

Simultaneous aerosol delivery to 128 tissues

- **PROGRAMMABLE AND AUTOMATED:**

Up to six programmable protocols for a variety of applications

- **LOCALIZED DELIVERY:**

Spatially controlled delivery to apical side of epithelial barrier only

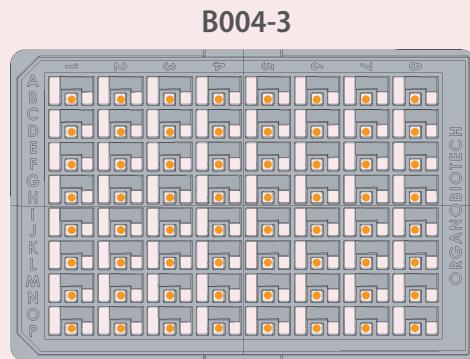
- **PRECISE DOSAGE:**

Adjustable aerosol exposure dosages with exposure time and drug concentration

- **TARGETED DELIVERY AND CONCENTRATION GRADIENT GENERATION:**

Spatially controlled delivery to selected wells and concentration gradient with customized air distributor or repeated exposure

Customizable air distributor design for gradient generation



- Air distributor nozzle position and size

Specifications

Product code	B004, B004-2
Power requirement	24 VDC; 2.5 Amp
Operating relative humidity	5 – 90% non-condensing
Operating temperature	20 - 30°C
Altitude	<2000m
Storage temperature	-40 to 50°C
Compatibility	Works with IFlowPlate, AngioPlate, UniPlate
Nebulizer parameter	108KHz (+/-3KHz), compatible with low viscosity fluid
Operational space requires	+/-30 degrees tilt with single shelf: minimal height of 20 cm; 37.5cm of width; and 39cm in depth
Weight of equipment	0.5kg
Warranty	1 year
Certification	CE
Programmable User Interface	--->

