



InSphero Incubox™

# Product Manual



PM005, Nov 2021

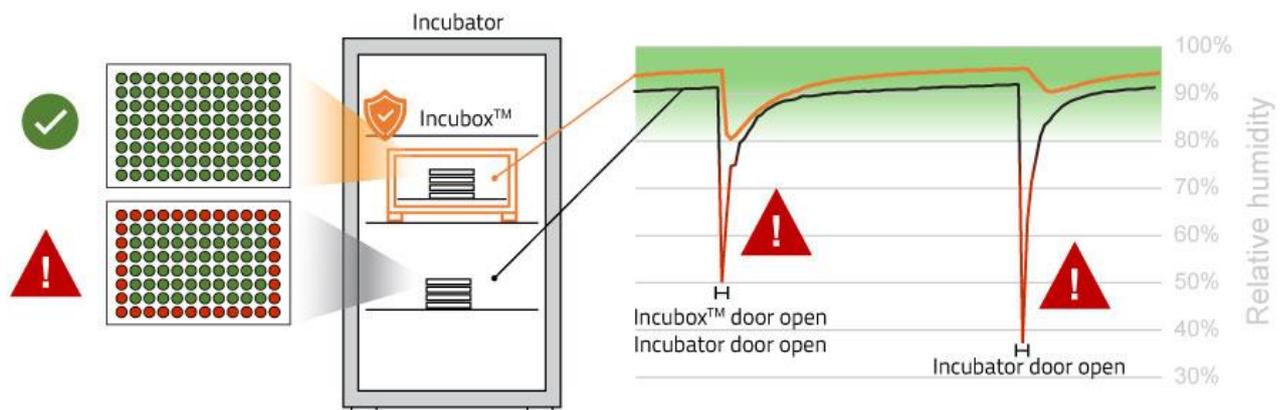
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## Introduction

Edge effects due to media evaporation are a common problem in long-term cell cultures, especially in busy labs with many projects in which incubator doors are frequently opened and closed. The Incubox™ is a specially engineered container which creates a **high-humidity microclimate** inside conventional cell culture incubators and protects your sensitive plates from large humidity drops and fluctuations – the major cause for evaporation effects.



- **Maintain a stable medium volume and accurate compound concentration** due to minimal evaporation over time
- **Reduce well-to-well variation** by minimizing evaporation-induced reagent gradients across the plate
- **Use all wells of your plate** by eliminating edge effects in your culture plate
- **Save on plasticware** by using up to 38% more wells of your plate

## Key Features

1. Incubox™ can accommodate up to 20 microplates and fits on the shelves of a wide range of incubators.
2. Engineered of aluminum, stainless steel and toughened safety glass (ESG), Incubox™ is compatible with a wide range of solvents and can be autoclaved in a standard incubator thereby reducing the risk of contaminations.
3. The Incubox™ is equipped with its own water bath which allows water exchange without disrupting the incubation conditions.

4. A defined number of holes on the backside of the Incubox™ ensures gas exchange and maintains ambient O<sub>2</sub> and CO<sub>2</sub> concentrations while also preventing humidity loss.
5. The magnetic closure system allows quick, safe, and one-handed door handling to access the plates inside the Incubox™.

## Incubox™ Components

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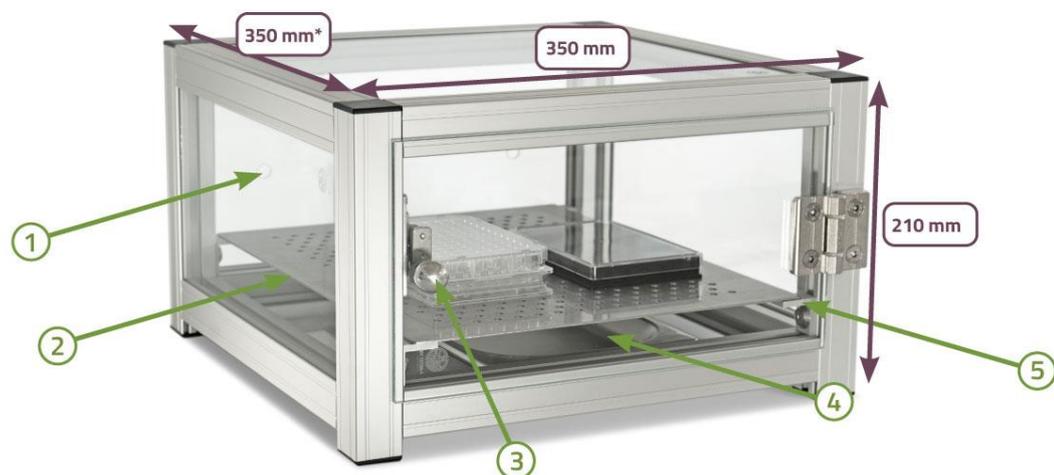


Figure 1: Photo of the Incubox™ including Akura™ Spheroid Microplates.

The Incubox™ consists of an Aluminum frame and all sides made of toughened safety glass (ESG) for increased mechanical strength and resistance to changes in temperature. The components on the inside, the shelf and the water bath are made of stainless steel or materials resistant to heat and chemicals.

1. Three holes on backside for gas exchange
2. Stainless steel shelf
3. Magnetic doorknob
4. Stainless steel water bath
5. Shelf ledge

\*Depth incl. doorknob 375 mm

## Step-by-step Protocol

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Please follow the steps below to ensure proper function of the Incubox™ and optimal culturing conditions:

- Carefully clean all components of the Incubox™ with Ethanol to remove dust.
- Place the Incubox™ directly on a shelf inside your incubator. Make sure it stands stable and at least 5 cm away from the backside of the incubator. Don't block the hole on the backside. We recommend placing the Incubox™ on one of the center shelves for easy access of your plates and to avoid blocking the ventilator on the top of some incubator models.
- Optional: Use the high-temperature sterilization cycle of your incubator to ensure complete elimination of microbial contaminants.
- Remove the shelf from the Incubox™ and fill water bath with approximately 500 ml of sterile water including a water bath stabilizer, e.g., Aqua resist. (To re-fill water bath, remove plates, lift the shelf to one side and re-fill water bath).
- Place the shelf back onto the ledge.
- Close Incubox™ and incubator. Wait at least one hour to ensure stable temperature and high relative humidity.
- Add your plates and/or culture dishes and start your experiment.

## Technical Specifications

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Figures 2 and 3 show the technical dimensions of the Incubox™:

### Material:

Incubox™: Aluminum frame; all sides made of toughened safety glass (ESG)

Shelf, water container: Stainless steel

Sterility: Non-sterile

### Incubox™ Dimensions:

Box depth: 350 mm (375 mm including door knob)

Box height: 210 mm

Box width: 350 mm

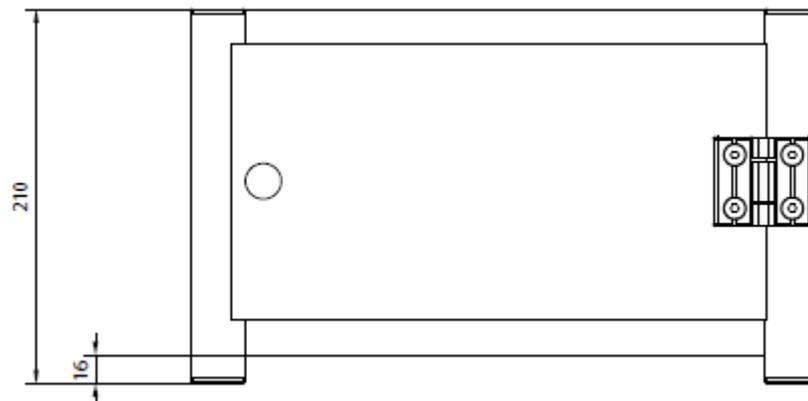
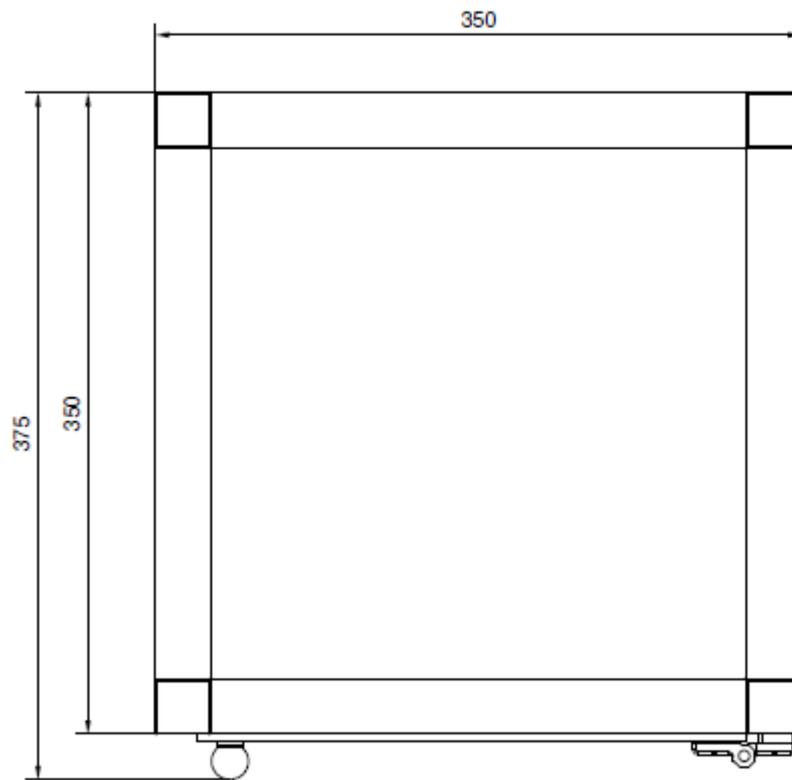


Figure 2: Front view



*Figure 3: Top view*



InSphero AG  
Schlieren, Switzerland

InSphero Inc.  
Brunswick, ME, USA

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