

# Tissue Culture

## Percival® model CU-22L

Standard SciWhite® PetriClear® lighting

Specifications, excluding exterior dimensions, are per compartment only.

### Applications

- This chamber is specifically designed for tissue culture on plates/dishes or in flasks
- Many other applications exist for this product

*Please compare your own requirements to the specifications listed below.*

### Percival's IntellusUltra Controller

The IntellusUltra control system (C8) was purpose-built for controlled environments and is standard on all Percival chambers.

- Robust and reliable, industrial-grade integrated hardware design
- Highly flexible architecture facilitates configuration, expansion and customization
- Precise, simultaneous control of up to 7 environmental parameters
- Industry-leading experiment protection and system diagnostics

### PetriClear LED Lighting System

- Two tiers of lighted shelving, lit by PetriClear LEDs
- Intensity programmable up to 170  $\mu\text{moles/m}^2/\text{s}$  of light irradiance measured @ 6" from LEDs
- Programming and control of the lighting is done via IntellusUltra real time controller
- Dimmable between 10-100% output
- New SciWhite + Infrared technology lighting system designed to prevent condensation from forming on petri dishes
- Two channel tile design with white and infrared LEDs. Infrared LEDs provide warmth to the lid of the petri dishes to keep it above the dew point.
- Reduced condensation compared to fluorescent lighting
- The infrared lighting will not be visible when energized
- More efficient when compared to fluorescent lighting and white LEDs alone



### Airflow/Circulation

- Conditioned air circulates through a rear wall duct and is picked up by a specially designed fixed air diffuser located at the bottom of each tier (air is then delivered vertically upward at a slow speed through each shelf)
- Air diffuser insulates shelf level experiments from heat generated by underlying light fixture (this design minimizes condensation on petri dish lids)

### CU-22L specifications

Specifications, excluding exterior dimensions, are per compartment only. (subject to change without notice)

| Temp Range<br>with all lights on | Interior Space<br>volume |     | Total Shelving<br>Floor Area |    | Maximum<br>Growing Height |      | Exterior Dimensions |      |       |    |        |       | Light Intensity<br>6" from lamps unless<br>otherwise noted | Tiers |
|----------------------------------|--------------------------|-----|------------------------------|----|---------------------------|------|---------------------|------|-------|----|--------|-------|--|-------|
|                                  |                          |     |                              |    |                           |      | width               |      | depth |    | height |       |  |       |
| °C                               | ft³                      | m³  | ft²                          | m² | in                        | cm   | in                  | cm   | in    | cm | in     | cm    | µmoles/m²/s  |       |
| 10-44±0.5                        | 14.6                     | 0.4 | 10.8                         | 1  | 7.5                       | 19.1 | 33.5                | 85.1 | 36.6  | 93 | 77.9   | 197.8 | 170  | 2     |

# Tissue Culture Percival model CU-22L

## Cabinet Construction

- Interior constructed of 22-gauge galvanized steel
- Interior floor constructed of 22-gauge polished stainless steel
- Exterior constructed of 18-gauge Galvannealed extra-smooth steel
- NSF-compliant seam design
- Overall wall thickness is 2" (5.1 cm)
- Integrated floor drain in each compartment
- Contains casters assembly and adjustable leveling legs
- One 1.25" access port with air-tight plug per compartment
- Highly durable and reflective coating

## Insulation

- Woodless construction using 2" thick foamed-in-place non-CFC Urethane insulation with 97% closed cell-structure density of 2.2 lbs/ft<sup>3</sup>

## Door

- One door opening 29.3" x 27.8" (74.3 cm x 70.5 cm) provides full access to the chamber interior
- Magnetic gasket provides a tight seal to door frame
- Lift-off hinge design allows for simple removal of door

## Interior Space

- 14.6 ft<sup>3</sup> (0.4 m<sup>3</sup>) with shelf area of 10.8 ft<sup>2</sup> (21 m<sup>2</sup>) provided on two shelves

## Shelving

- Two tiers per compartment of white epoxy coated steel wire shelving (each shelf is 28.8"W x 27"D [73 cm x 68.6 cm])
- Shelves slide in and out easily on stainless steel rail assemblies
- Maximum growing height is 7.5" (19.1 cm)

## Refrigeration

- Twin air-cooled condensing units, each with hot gas bypass system for continuous compressor operation, extended life and close temperature control (this continuous running condensing unit ensures precise temperature control by alternately cycling refrigerant and hot gas to coil; this also prolongs life of compressor, and eliminates risk of ice build up in coil)
- Solenoid valves have an extended stem for quiet and long life operation
- Ceiling mounted evaporator coils incorporate dual air circulation fans in aluminum housing (heat rejection to ambient [standard chamber] = 1,565 BTU/hr.)

## Temperature Range

- 10°-44°C (±0.5°C) lights on and 2°-44°C (±0.5°C) lights off

## Temperature Safety Limit Controls

- (Experiment Protection) Adjustable high and low temperature controls, audible alarms, and visual indicators provided
- Controls shut down all power to the chamber, activating alarms
- System automatically resets when temperature returns to normal range

## Options (most popular) Per Compartment

- IntellusUltra Connect (C9)
- Additive CO<sub>2</sub> control
- CO<sub>2</sub> removal system
- Self-contained water-cooled condensing unit
- Dry alarm contacts
- Open loop dimmable lighting per tier (Q23+)
- Extended temperature ranges available
- Convenience receptacles

Contact [info@percival-scientific.com](mailto:info@percival-scientific.com) with questions or for additional information.

## Electrical Service Requirements

- 120/1/60 with NEMA 5-15P plug provided (with standard chamber)
- RLA=9.9, MCA=12.4 (per compartment)

## Regulatory Standards

- Electrical Safety: UL-508A, certified and labelled by Percival Scientific under UL file number E340161
- Quality System: ISO 9001:2015, certified under DQS, Inc. under certification number 10017261

## Helping You Create Better Science

Percival Scientific controlled environment systems are the culmination of over 60 years of design and manufacturing experience. Our high quality products have been developed through direct partnerships with the scientific community and offer platforms that are highly customizable and provide superior performance. We understand that scientific innovation is bred through creativity, passion, technical expertise and attention to detail, and we are proud to help you create better science.



Percival Scientific, Inc.

505 Research Drive • Perry, IA 50220 USA

800.695.2743 • 515.465.9363 • Fax: 515.465.9464

[www.percival-scientific.com](http://www.percival-scientific.com)