

Tissue Culture

Percival® model CU-41L4

Standard PetriClear® LED lighting (SciWhite® + infrared)



Applications

- Designed for tissue culture on plates/dishes or in flasks and many more applications

IntellusUltra Controller

The IntellusUltra (C8) control system adapts to nearly any programming style with a large range of options for optimal control over experiments.

- Robust and reliable, industrial-grade integrated hardware design
- Highly flexible programming capabilities for customized configurations and expansion
- Precise, simultaneous control of up to 7 environmental parameters
- Industry-leading experiment protection and system diagnostics

PetriClear LED Lighting System

- Four tiers of lighted shelving
- Intensity programmable up to 200 $\mu\text{moles/m}^2/\text{s}$ of light irradiance measured @ 6" from LEDs
- Programmable through the IntellusUltra real-time controller
- Dimmable output from 10-100% in one-percent increments
- Two-channel SciWhite + infrared LED lighting system designed to minimize condensation by warming Petri dish lids
- 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 to minimize condensation on Petri dish lids
- Direction: vertical
- Airspeed fpm (feet per minute): 50

CU-41L4 specifications (subject to change without notice)

Temp Range with all lights on	Interior Space volume		Total Shelving Floor Area		Maximum Growing Height		Exterior Dimensions						Light Intensity 6" from lamps unless 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	37.2	1.1	27.2	2.5	9.3	23.5	41	104.1	33.6	85.4	77.2	196.1	200	4

Tissue Culture Percival model CU-41L4

Cabinet Construction

- Interior constructed of 26-gauge galvanized steel
- Interior floor constructed of 24-gauge polished stainless steel
- Exterior constructed of 24-gauge Galvannealed extra-smooth steel
- NSF-compliant seam design
- Overall wall thickness is 2" (5.1 cm)
- Integrated floor drain
- Contains casters assembly and adjustable leveling legs
- One 1.25" access port with air-tight plug
- Highly durable and reflective white coating

Insulation

- Construction using 2" high-grade materials, such as closed-cell and non-CFC Urethane insulation

Door

- One door opening 36.8" x 57.5" (93.3 cm x 146.1 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

- 37.2 ft³ (1.1 m³) with shelf area of 27.2 ft² (2.5 m²) provided on four tiers

Shelving

- Four tiers of white epoxy coated steel wire shelving (each shelf is 36.3"W x 27"D [92.1 cm x 68.6 cm])
- Shelves slide in and out easily on stainless steel rail assemblies
- Maximum growing height is 9.3" (23.5 cm)

Refrigeration

- Top-mounted air-cooled condensing unit with hot gas bypass system (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 buildup in coil)
- Extended stem solenoid valves for quiet and long life operation
- Ceiling-mounted evaporator coils incorporate dual air circulation fans in aluminum housing
- Heat rejection to ambient (standard refrigeration system) = 3,445 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/low temperature control, audible alarms and visual indicators)
- Controls shut down all power to the chamber, activating alarms
- System automatically resets when temperature returns to normal range

Options (most popular)

- IntellusUltra Connect (C9)
- Additive CO₂ control
- CO₂ 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 for additional information.

Electrical Service Requirements

- 120/1/60: two grounded cords each with NEMA 5-15P plug provided (with standard chamber)
- Cord #1 RLA=7.1
Cord #2 RLA=9.8 (combined MCA=21.1)

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. We developed our high-quality products through direct partnerships within the scientific community. Our controlled environments are known for their customizable designs and superior, long-lasting performance. Creativity, passion, technical expertise and attention to detail drive our scientific innovation, 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