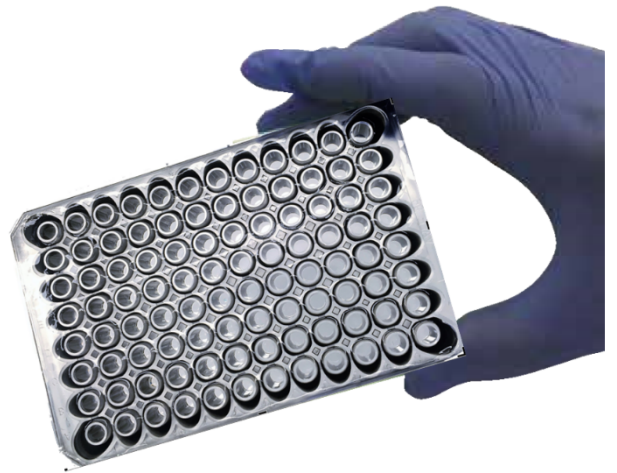




Introducing the next evolutionary step in microplate technology

- Engineered to eliminate edge effects
- Unparalleled microwell environment protection
- Unprecedented volume range (10nl to 150µL)
- Improved cell viability and growth
- Solid state environmental buffering technology.
- Protects cells against Evaporation and fluctuations in Temperature and pH
- Miniaturized assays up to 1000 X
- Compatible for high resolution microscopy (63X using High NA water immersion lens)



The BioClime+™ 96 has been created to provide a simple, effective, 96-well microplate that saves time and money and improves the reproducibility of experiments.

Engineered to eliminate edge-effect, the patented design features a solid-state environmental buffering technology which provides unprecedented well-to-well protection against fluctuations in multiple environmental factors (**Evaporation, Temperature and pH (CO₂)**).





BioClime+™ 96 Anti-Evaporation Results

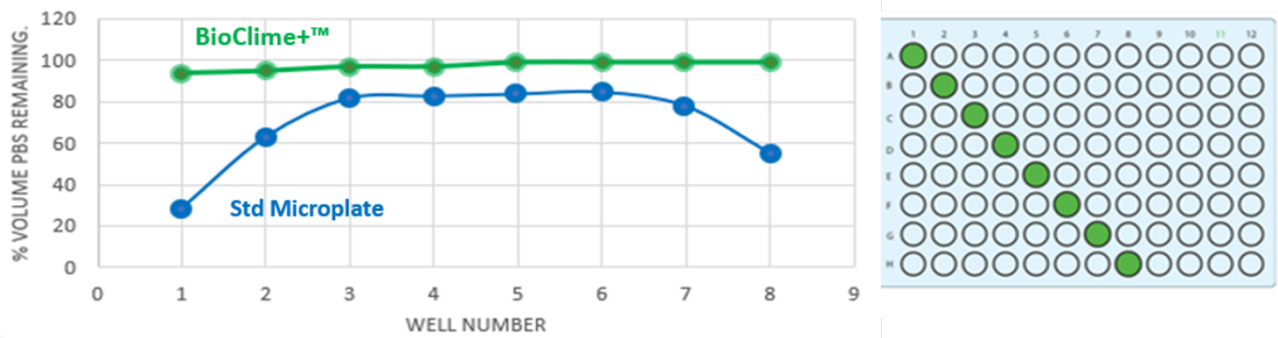
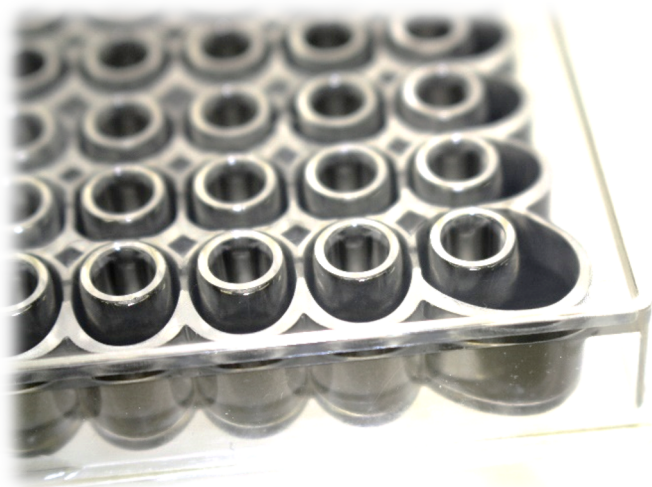


Figure showing experiment to assess the anti-evaporative effects of the buffering gel.

Wells of 96-well plates were filled with 140 ul serum free culture medium and then maintained in a standard drying oven set at 50°C for 48 hours. (Data expressed as a percentage volume remaining after incubation time).



The BioClime+™ 96-well microplate solid state buffering system prevents evaporation even in the most extreme conditions, resulting in minimum media loss and high consistency across wells, even with the lid off.





BioClima+™ 96 - Excellent Thermal Buffering

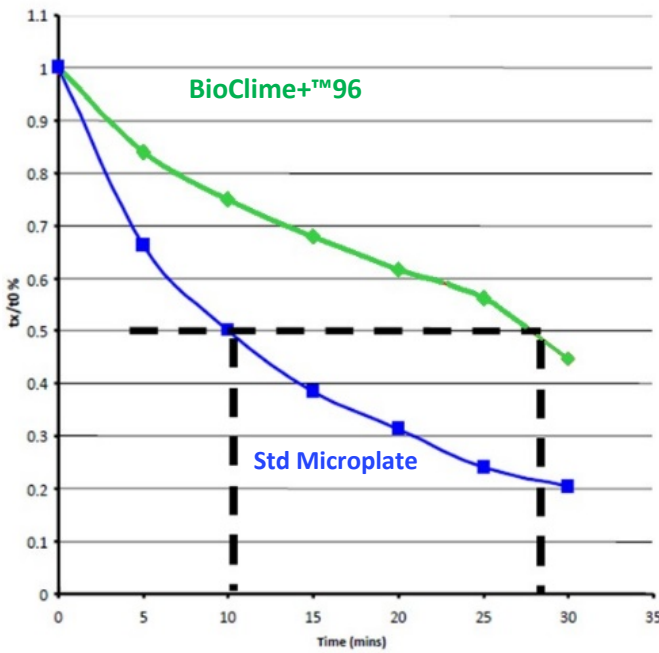


Figure showing results of an experiment where the thermal retention properties of BioClima+™ 96 were compared with a standard microplate.

Reduced Coefficient of variation of cooling

Time (min)	CV%	
	BioClima+	Std Microplate
T0	0.00	0.00
T5	6.38	7.59
T10	6.24	13.84
T15	8.44	19.92
T20	10.90	22.87

Figure showing the results of an experiment where the coefficient of variation of cooling was compared between BioClima+™ 96 and standard microplates.





Improved Reproducibility and Cell Growth

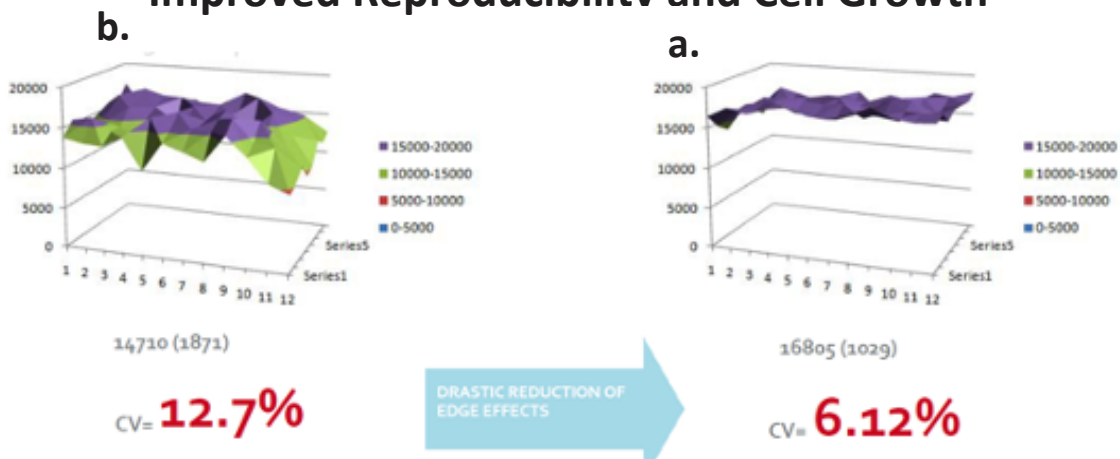
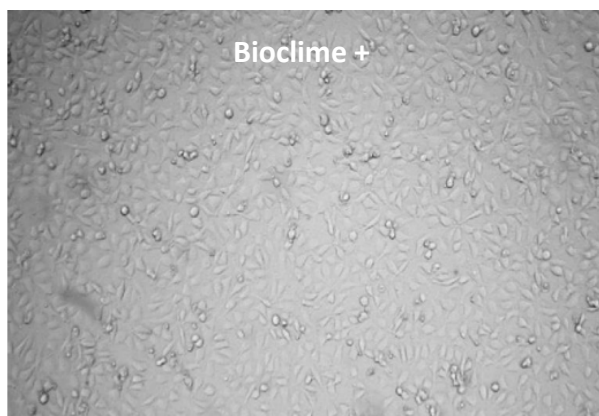
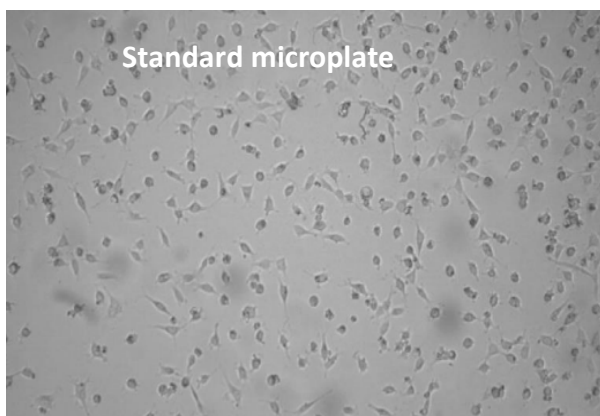


Figure showing Edge Effects on Cell Growth in (a) STD 96 well plates Vs (b) BioClime+™96.

A549 cells were incubated under standard tissue culture conditions (37°C 5% CO₂ >95% Relative Humidity) for 7 days. Cells were then stained with the nuclear dye Hoechst, counted and the edge effect coefficient of variation (cv cell number) was determined. BioClime+™96 showed a consistently lower CV than STD microplates.



Photos showing representative images of a comparison of cells seeded into BioClime+™96 vs Standard Microplates – Cells were Imaged at Well Position D6 in both BioClime+™96 and a Standard Microplate

96 well plates were seeded at (equally) low density with cells of immortalised cell line prior to maintenance in a standard tissue culture incubator (set at 37C, 95% air/ 5% CO₂) for 48 hours.

Both plates were placed in middle of incubator side by side.





Buffering Gel Technology at Work

When placed in incubator Incubator

When removed from Incubator

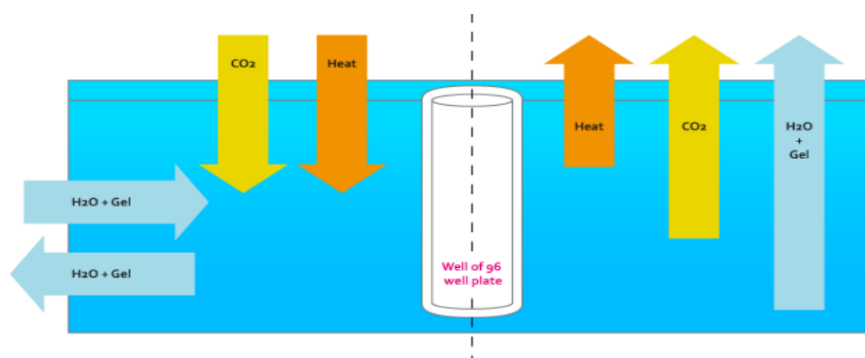


Figure showing the mechanism by which the microplate environment is maintained by patented buffering gel technology.

When placed in the incubator the buffering gel absorbs heat, CO₂ and the vapor pressure of water reaches equilibrium with that of the incubator atmosphere.

When the incubator door is opened, or the plate is removed from the controlled environment, the Buffering Gel releases heat, water and CO₂ down their respective gradients counteracting any changes in the microplate

Cross section Diagram of Multi well bioreactor plate with gel, lid & base

Lid of Microplate

(i) Clear Gel Layer:

This Sacrificial Layer Generates a High Water Vapor Pressure and Acts as an Exchange Surface for Respiratory and Environmental Gasses.

(ii) Dark Gel Layer.

This Layer acts as a Thermal Retention Core, Absorbing and Releasing Heat.

Micro Plate Base

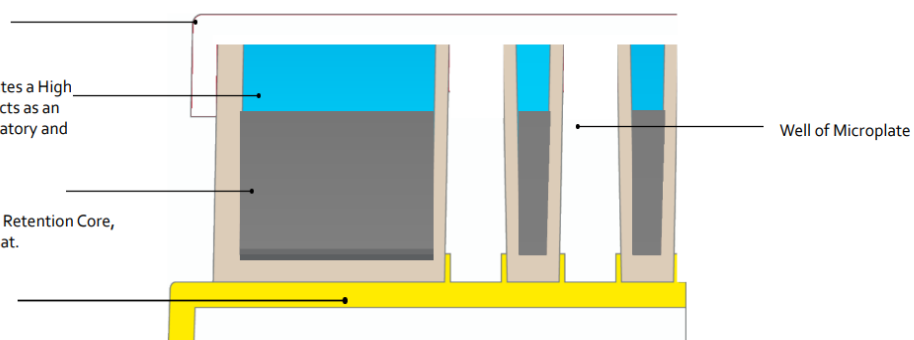




Plate Specifications

Plate	Clear SBS Format
Skirt	SBS format compatible with automation
Bottom	Flat bottomed
Working volume	10nl - 150µL
No. Wells	96
Packaging	Individual
Sterility	Sterile
Plate Dimensions	85.5 (W) x 127.8 (L) x 14 (H)
Manufacturing Standards	Manufactured under ISO 13485 (Medical Device standard)
Storage	Store at room temperature: 4°C - 28°C and out of direct sunlight
Material	Polystyrene - suited to Tissue Culture & Microscopy
Surface Treatments	Low attachment, Tissue culture treated, Collagen, Fibronectin, Laminin





Plate Specifications

