

BIOLUMINESCENCE INCUBATOR

DATASHEET



High throughput multi-well
plate luminescence.



The Cairn Alligator* system allows bioluminescence measurements to be simultaneously recorded from up to six multi-well plates over several days. Based on the New Brunswick Galaxy 170R incubator we make substantial modifications to convert the standard incubator into a high throughput luminometer. In addition to the precise temperature, O₂, CO₂ and humidity control provided as standard we adapt the chamber for light-tightness and high NA imaging using a deep-cooled, back-thinned or Electron Multiplied CCD. The system is supplied fully integrated with OptoMorph software for multi-region timelapse analysis.

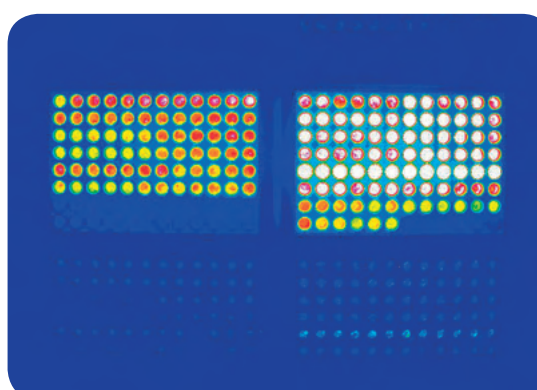


APPLICATIONS

- Circadian rhythm measurements
- Calcium recordings (Aequorin)
- Plant sciences
- Simultaneous fluorescence

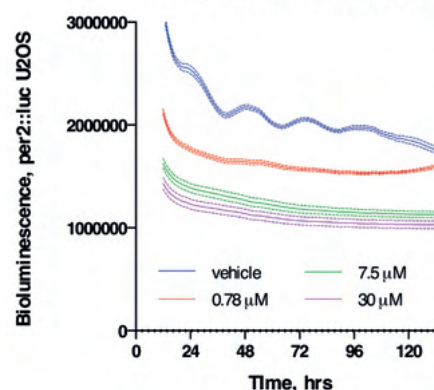
KEY BENEFITS

- High throughput, up to six 384 well plates imaged simultaneously
- Precise environmental control
- LED illumination for circadian rhythm stimulation
- High aperture lens with demisting optics
- Light-tight, does not require a dark room
- Software control of all environmental conditions and illumination



***Alligator -**
"Because it swallows all the light coming off our cells."

Representative grouped data, n=6





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SUMMARY

The luminometer is based around the popular Galaxy® 170 R, 170 litre CO₂ + O₂ incubator. It provides superior quality, outstanding performance, and intuitive operation for your lab. An advanced six-sided direct heating system gently bathes cells in a seamless, fanless chamber.

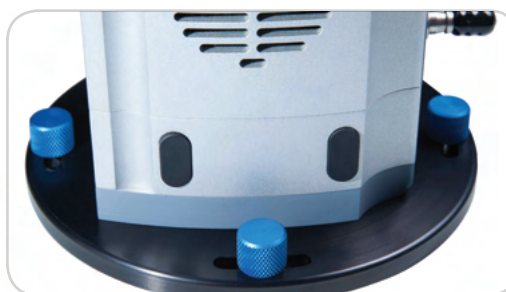
“This fantastic new system offers the capacity for high-throughput collection over time scales that vary from seconds to weeks, without sacrificing the quality of the data collected. The flexible and sensitive environmental control gives us the ability to do experiments which would simply not be possible otherwise.”

Dr. John S. O'Neill,
MRC Laboratory of Molecular Biology,
University of Cambridge

SPECIFICATION

The Alligator system includes the following modifications:

- Secondary shroud for complete light tightness
- F/0.95 lens with anti-mist heater
- Black coating of stainless steel racks
- Multi well plate alignment
- Dedicated focus adjustment tool
- Photon trap of CO₂ sensor
- Illumination ring
- Gas exchange pump
- Full OptoMorph software control of all parameters
- Custom scripting for multi-well recordings and data export
- Integrated deep-cooled camera from Hamamatsu, Andor or Roper Scientific



Light tight (adjustable)
camera mount