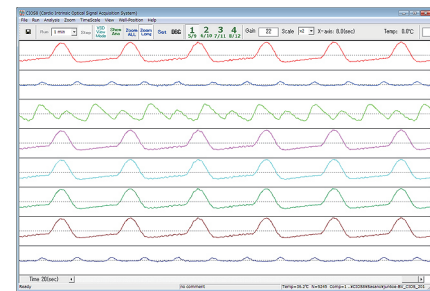
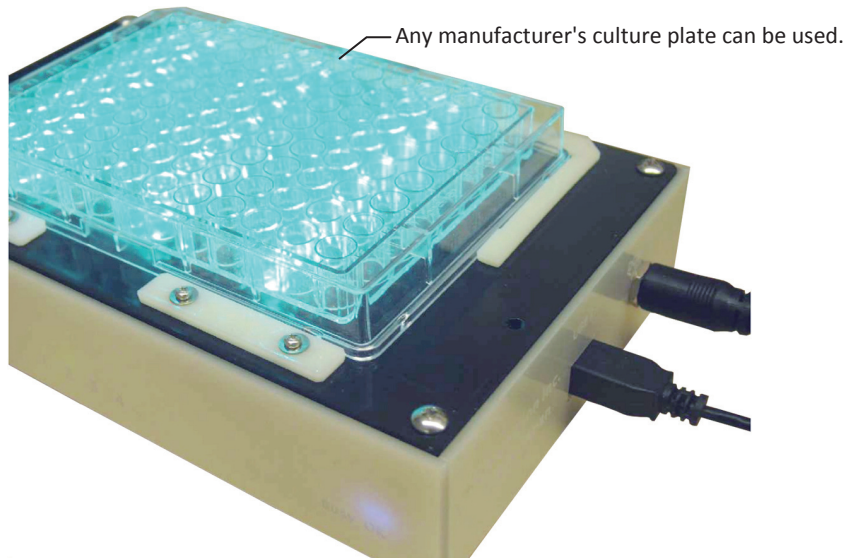


NEW

# Do you still count cardiomyocyte beating visually?

*Just place a culture plate without processing*

*Real-time automatic detection for multiwell plate*



## Cardio Intrinsic Optical Signal Acquisition System CLOS8

### To Save Time, and Reduce Cost and Work

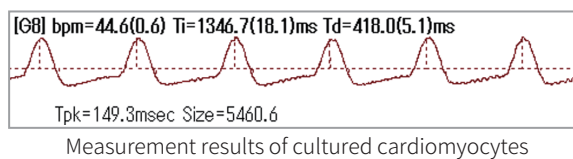
Just place a culture plate on this instrument!  
Activity of cardiomyocytes in a culture plate can be measured without staining and invasion. Result is displayed in real time in a waveform, and number of beats and contraction time are automatically detected with a single button. Built-in temperature control and plate moving mechanism. It is small and lightweight making it ideal for personal use.



#### Easy operation



#### Data Example



#### Applications

- Count of number of beats of cultured cardiomyocytes
- Confirmation of differentiation of iPS-derived cardiomyocytes
- Evaluation of cardiotoxicity of new drug candidates
- Simple measurement of membrane potential using voltage-sensitive dye

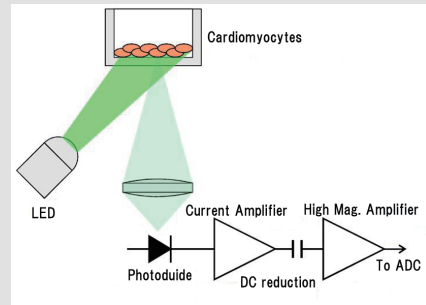
## Method and principle of Measurement

The principle of measurement of activities is quite simple.

It is well known that cell activities change light scattering, and beating cardiomyocytes show larger changes by beating activities.

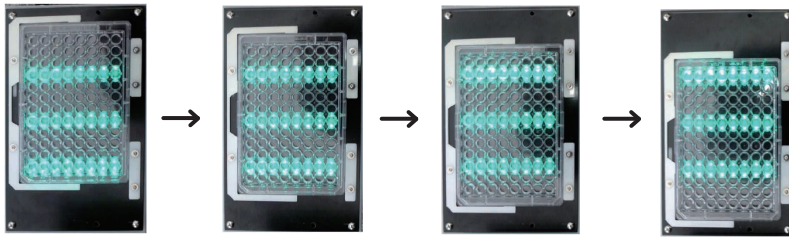
LED under cultureware illuminates sample at low angle. The scattered light reflected from cells is detected by photo-diode, then only change component is amplified and extracted as activity signal.

The extracted signal is digitized and amplified thousands of times, or tens of thousands of times. Then, cardiac activities are recognized by numeral process.



## Structure of CIO8

- All of light source, photo-detector, signal processing circuit, temperature control stage are built in main unit
- Motorized well-plate carrier  
3 rows can be measured at same time. Since well-plate is moved right and left by the motorized well-plate carrier, 96 wells can be measured (8-wells x 3 rows x 4).  
This allows to measure cardiomyocytes activity under stable conditions without opening the lid.



## Option

- Simple measurement of membrane potential using voltage-sensitive dye

## Specifications

Model	Cardio Intrinsic Optical Signal Acquisition System CIO8
Product name	CIO8
System configuration	CIO8, USB2.0 cable, AC adaptor (x2), Control software
Available plate	Culture plate with 96-wells or less
Mechanism for plate movement	Electrical carrier
Temperature control	Automatic
Detectable item	Number of heart beat, Contraction time
Interface	USB2.0
Control PC	Windows 7/10 64bit Recommended
Recommended operating condition	Temperature range: 20 - 30, Humidity range: 30% - 80%
Dimension	185mm (W) x 115mm (D) x 75mm (H)
Weight	Approx. 1kg
Power supply	AD24V1A (x2)

\* Specifications & appearance are subject to change without prior notice due to continuous improvements.

\* All products are made in Japan.

Demo unit is now available.

For inquiry >>  
[inquiry@scimedia.com](mailto:inquiry@scimedia.com)

### Contact Information:



940 South Coast Drive, Suite 160  
 Costa Mesa, CA 92626  
 Tel: +01 714 850 0797  
 Fax: +01 714 850 9308  
 Email: [inquiry@scimedia.com](mailto:inquiry@scimedia.com)  
 URL: [www.scimedia.com](http://www.scimedia.com)