

Coming soon

YOKOGAWA 
Co-innovating tomorrow™



High-Content Analysis System **CQ3000**

The best features of CellVoyager and CSU packed into one device!

Make way for high-performance HCA optimized for laboratories!

Go here for details



CellVoyager
High-Content Analysis System
CQ3000

YOKOGAWA

High-NA water immersion lens

Flat illumination

Simple operability and benchtop

High throughput imaging via simple operation

Quickly acquire 4D images with simple operations such as sample setting and protocol selection. Use with options (2nd camera, wide-field imaging) depending on the application for even faster imaging.

Throughput comparison when using the 2nd camera option

2 Camera

1 Camera

Time

Wide-field

Confocal

Laser power: 10%
Exposure time: 10 ms

Faster imaging!

• Detects two colors at the same time, so acquisition time is reduced. In addition, if confocal performance is unnecessary such as during low magnification imaging, widefield imaging can further shorten the exposure time.

High-resolution images that hold tons of information

Specially-designed water immersion lens captures clear images with a high SNR. In addition to fine observation via high magnification, it can accurately analyze images even with FOVs smaller than before due to the high-NA lens.

Enlarged

Sharp even at 20x!

24 cells /FOV

41 cells /FOV

156 cells /FOV

60x lens

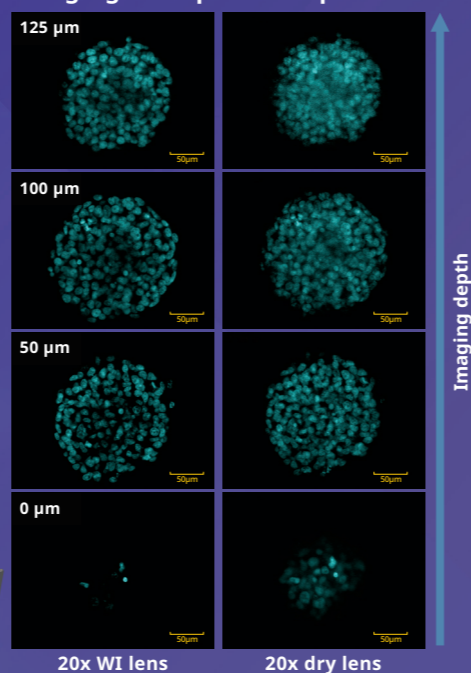
40x lens

20x lens

Get a deeper look!

• Our high-NA 20x water immersion lens developed in-house allows for image resolutions higher than a 20x dry lens. You can use 40x and 60x for efficient image analysis.

Imaging example for a spheroid



• 20x WI lens allows for deeper imaging with high SNR.

Live-cell imaging that could only come from YOKOGAWA

Low phototoxicity from the Confocal Scanner Unit and highly accurate temperature and position control enable time-lapse imaging in a cell-friendly, stable culture environment. Automatic water supply mechanism is also supported for longer periods of live-cell imaging.

Photo of cells cultured in CQ3000 and CO₂ incubator

CQ3000

CO₂ incubator

0h

84h

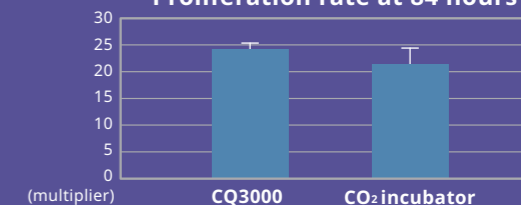
Worry-free imaging!

Cell proliferation rate distribution during CQ3000 culture (at 84 hours)

	1	2	3	4	5	6	7	8	9	10	11	12
A	22	23	24	24	21	24	23	23	24	24	24	26
B	24	25	22	25	24	24	23	26	24	24	23	22
C	26	24	23	24	23	24	23	24	26	26	24	23
D	24	23	24	25	23	22	25	25	22	23	24	25
E	25	26	23	23	24	24	24	24	23	25	26	23
F	25	26	23	26	25	24	25	26	25	24	25	23
G	26	26	25	25	27	25	25	24	26	25	27	24
H	24	25	25	22	25	23	24	23	23	25	23	23

(multiplier)

Proliferation rate at 84 hours

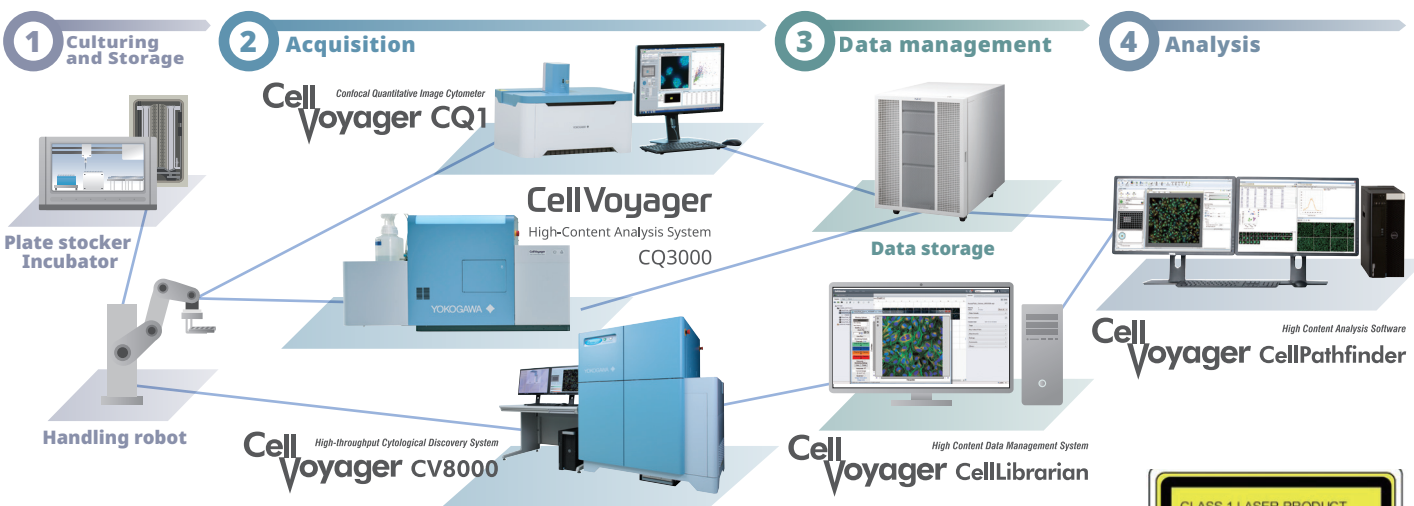


• CQ3000 achieves culturing and imaging while maintaining the same environment as a conventional CO₂ incubator. It's not only environmentally friendly, but it also minimizes the impact on cells.

Specifications

Model	CQ3000
Optics	Microlens enhanced dual wide Nipkow disk confocal
Fluorescence	Laser: Up to 4 colors Standard: 488 nm, 561 nm Option: 405 nm, 640 nm High power lasers option: 488 nm, 561 nm EM filter: Max. 10 filters (Including 1 filter for transillumination) Observation method: Confocal image, Wide-field image*1
Transmitted illumination	Bright-field LED
Camera	Up to 2 units, simultaneous excitation of 2 wavelengths Number of effective pixels: sCMOS 2000 x 2000 pixels Field of view size: 13.0 x 13.0 mm
Objective lens	Up to 6 lenses (Water immersion lens: Up to 2 lenses) Dry: 2x, 4x, 10x, 20x, 40x, 60x Long working distance: 20x, 40x Water immersion: 20x, 40x, 60x
Water supply function for immersion lens	Automatic supply
Flat-top beam shaper (Option)	Uniformizer
Sample vessel	Microplate (6, 12, 24, 48, 96, 384, 1536 wells), glass slides*2, cover glass chamber*2, 35 mm dish*2
Stage incubator	Temperature control range 35 - 39 °C Settable temperature resolution: 0.1 °C Time stability : ±0.2 °C*3 Spatial stability : ±1 °C*3 Humidity holding Automatic water supply function for incubator
Autofocus	Laser autofocus, Image-based autofocus
Analysis software (CellPathfinder)	Granule analysis, Neurite analysis, Nuclear morphology analysis, Nuclear translocation analysis, Membrane translocation analysis, Machine learning, Label-free analysis, 3D analysis, Texture analysis, Deep Learning, etc.
Size Weight	Main unit: W1031 mm x D401 mm x H600 mm 84 kg (with Uniformizer or 2nd camera) W1177 mm x D401 mm x H600 mm 102 kg Utility box: W275 mm x D432 mm x H298 mm 17.6 kg Gas mixer: W275 mm x D432 mm x H298 mm 9.3 kg Workstation: W176.5 mm x D452.1 mm x H417.9 mm 21.7 kg
Power consumption	Main unit and Utility box : 100-240 VAC, 400 VAmx 2nd camera: 100-240 VAC, 120 VAmx Gas Mixer : 100-240 VAC, 60 VAmx Workstation : 100-240 VAC, 750 VAmx
Operating environment	15 to 30°C, 30 to 70% RH, no condensation

*1 Required Uniformizer *2 Required sample holder (sold separately) *3 Ambient temperature of 21~25 °C



Information is distributed on a regular basis. Please follow for the latest information.



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Safety Precautions

- Read user's manual carefully in order to use the instrument correctly and safely.
- This product falls under the category of class 1 laser product.



Complies with 21 CFR 1040.10 and 1040.11 expect for deviations pursuant to Laser Notice No.50, dated June 24, 2007
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