Imaging, labeling, and detection solutions

Microscopy | High-content analysis | Cell counting | Plate reading

Thermo Fisher
SCIENTIFIC

Minimizing the complexities of cellular analysis

Our cellular analysis product portfolio combines the strengths of Invitrogen™ fluorescent reagents and a complete line of versatile analysis instrumentation. Select from a line of heavily peer-referenced platforms to make the discoveries that catalyze advances toward your research goals of tomorrow.

Our comprehensive imaging portfolio includes:

• Cell imaging systems

• Automated cell counting systems

• High-content analysis systems

• Cell imaging reagents

• Microplate readers

All of our analysis systems are designed to work together— from the initial cell culture check to more complex analyses. Discover more about your samples with automated cell counting, long-term live-cell imaging, automated multiwell plate scanning, and phenotypic screening.

Invitrogen™ EVOS™ imaging systems

Invitrogen™ Countess™ cell counters

Thermo Scientific™ CellInsight™ high-content analysis systems

Thermo Scientific™ Varioskan™ LUX multimode plate reader
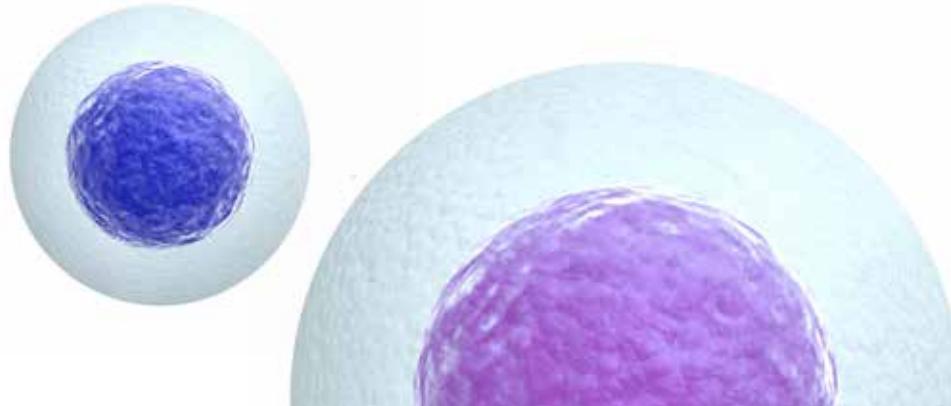
Contents
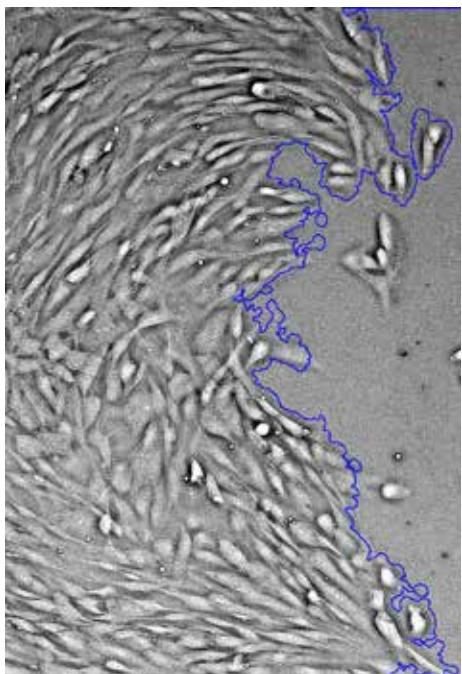
Compact and portable imaging systems

Now you can have an easy-to-use cell imaging platform where you want it and when you want it. Simply place your Invitrogen™ EVOS™ imaging system at your desired location, flip the switch, and you'll typically be ready to go in under two minutes.

From intimate hands-on demonstrations to presentations of data in front of large audiences, EVOS imaging systems are perfect for teaching, sharing, learning, and discovery.

Publication-quality imaging

In today's competitive scientific environment, generating publication-quality images is critical to your success. To help ensure you get the image quality you need, EVOS systems give you top-of-the-line imaging components, including:

- High-quality camera and optics to capture high-resolution images

- LED illumination to produce exceptional signal-to-noise ratios

- Easy-to-use image processing and analysis software for ready-to-publish images

Technology that's better for our environment

Traditional light sources in fluorescence microscopy use mercury-based bulbs that contain a carcinogen, requiring special handling and disposal. By using LED light sources, EVOS systems do not require these special steps and are thereby more environmentally friendly and more energy-efficient.
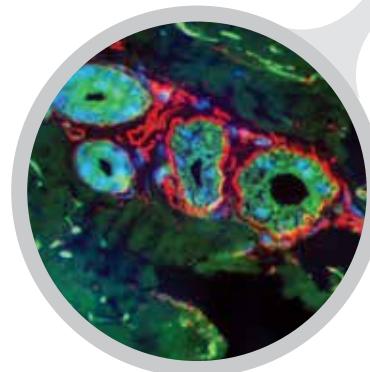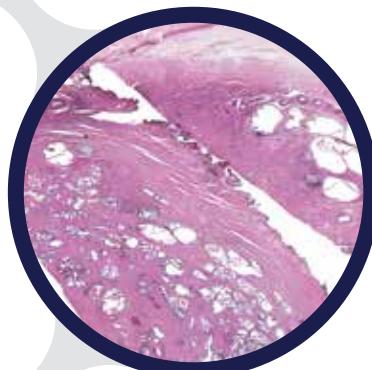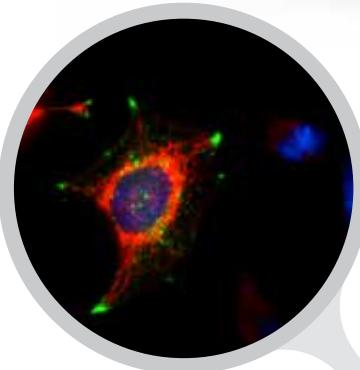
EVOS imaging systems at a glance

	M7000	M5000	FLoid	XL Core
	Cat. No. AMF7000	Cat. No. AMF5000	Cat. No. 4471136	Cat. No. AMEX1000
	Fluorescence			Brightfield
Hardware attributes				
Simple installation	Yes	Yes	Yes	Yes
Installation and training	Service team	User	User	User
Motorized encoded X/Y scanning stage	Yes			
Manual mechanical stage		Yes	Yes	Yes
Mechanical or fixed stage option				Yes
Objective turret positions	5	5		4
Objective range	1.25–100x	1.25–100x	20x	1.25–100x
Fluorescence channels	4	4	3	
Fluorescence LED light cubes	Yes	Yes		
Monochrome or color camera option	Both	Mono with LED-based RGB illumination scheme	Mono	Color
Epifluorescence images	Yes	Yes	Yes	
Transmitted-light images	Yes	Yes	Yes	Yes
Color images	Yes	Yes	No	Yes
Benchtop system	Yes	Yes	Yes	Yes
Suitable for use in tissue culture hood		Yes	Yes	Yes
Darkroom needed	No	No	No	No
Associated printer		Optional	Yes	
Onstage incubator for time-lapse imaging	Optional	Optional		
Time-lapse imaging	Multichannel	Multichannel		
Autofocus	Yes	Yes		
Z-stack capability	Yes	Yes		
Automated multiwell plate screening	Yes			
Cloud connectivity		Yes		
USB ports	Yes	Yes	Yes	Yes
DVI ports		Yes		
Software attributes				
Celleste analysis software	Optional	Optional	Optional	Optional
Embedded analysis		Yes		
Intuitive onboard software	Yes	Yes	Yes	Yes
Networking capability	Yes	Yes	Yes	
Integrated reagent selection guide			Yes	

EVOS M7000 Imaging System

A powerful, fast, fully automated system

Bring high performance and fast, automated imaging right to your lab bench with the Invitrogen™ EVOS™ M7000 Imaging System. This system has been designed with advanced capabilities to simplify demanding cell-based imaging applications such as live-cell analysis, image tiling, and Z-stacking, so you can focus on acquiring images and data rather than instrument operation.

Features

- **Speed**—scan a 96-well plate in three fluorescence channels in less than five minutes

- **Flexibility**—customize the system with more than 20 user-changeable LED light cubes, dual cameras (monochrome and color), a variety of objectives ranging from 1.25x to 100x, and multiple vessel holders

- **Time-lapse live-cell imaging**—onstage incubator option for precise control of temperature, humidity, and gases for normoxic or hypoxic conditions allows a wide range of biological studies under physiological conditions

- **Two cameras, no compromises**—all systems come with two cameras: a dedicated high-sensitivity monochrome camera optimized for fluorescence imaging and quantitation, and a dedicated high-resolution color camera optimized for colorimetric imaging

- **Area view**—move rapidly and seamlessly between single-field mode and low- and high-magnification scan modes to easily define and capture the area of interest

- **Automation**—time-saving features such as autofocus, rapid stage movement, and automated routines help reduce time to complete experiments, allowing high throughput, high data quality, and improved experimental reproducibility

- **Data analysis**—extensive quantitative imaging and statistical analysis in combination with Invitrogen™ Celleste™ Image Analysis Software, an optional advanced software package offering powerful tools for image segmentation and classification that can be used for cell counting and for measuring changes in intensity, area, and shape over time

SmartStart™ installation and training

A specialized installation and training program will get you up and running in just one day. One of our dedicated field application scientists comes to your site to provide hands-on workflow training and make sure your lab is quickly enabled to utilize the instrument's powerful features to maximize productivity.

Neural stem cell colony, 10x objective; light cubes: GFP, RFP.
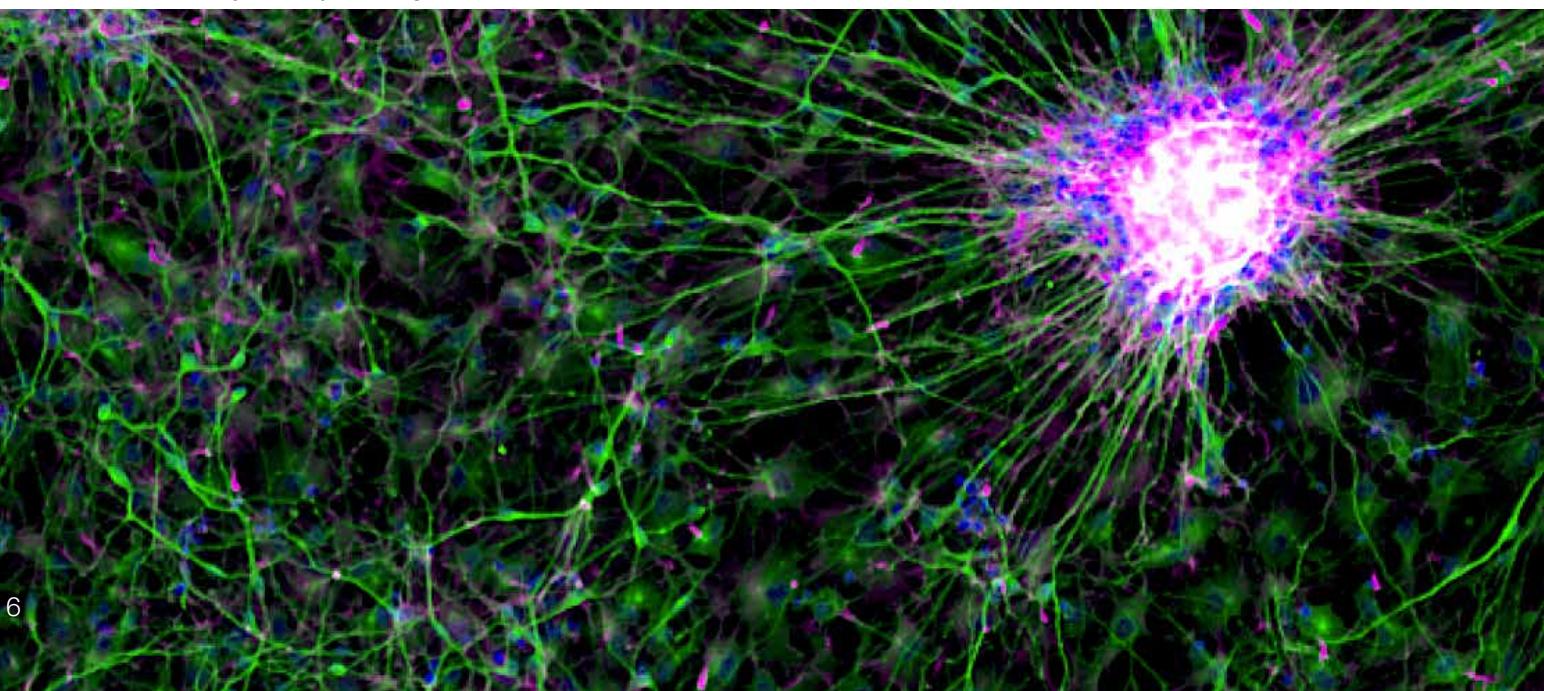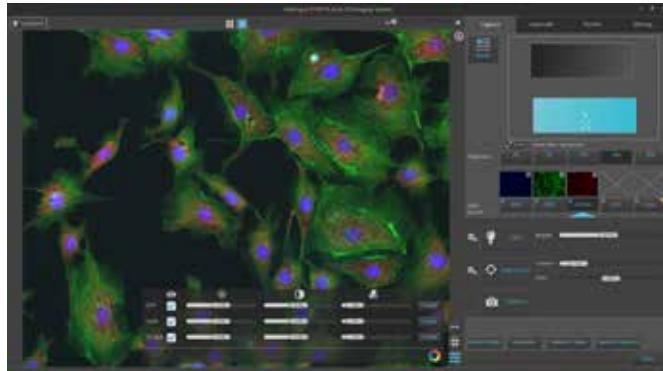
Easy-to-navigate user interface.
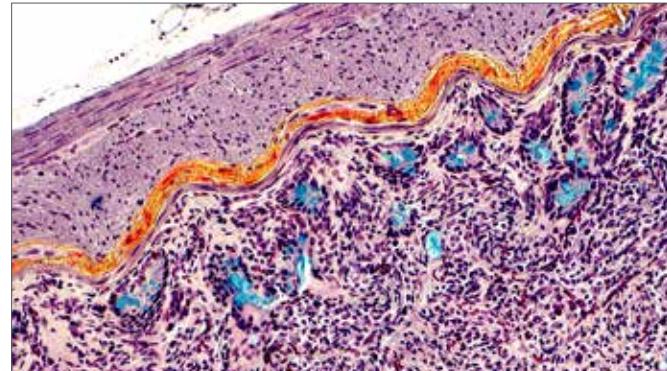
FFPE section of rat intestine tissue, 20x objective, color camera.

System highlights

| Attribute	Details
Optics	Infinity-corrected optical system; Royal Microscopical Society (RMS) threaded objectives with a 45 mm parfocal distance
Imaging mode	Fluorescence, brightfield, color brightfield, and phase contrast
Illumination	5-position chamber for 4 fluorescence light cubes plus brightfield imaging; light cubes with integrated hard-coated filter set and LED light source with >50,000-hour life; broad selection of standard and specialty light cubes
Imaging methods	Single color, multicolor, area scan with montage or tile stitch, time lapse, Z-stacking, movie capture
Objective capacity	5-position turret
Objectives (not included)	Wide selection of high-quality long working distance (LWD) and coverslip-corrected objectives
Condenser	60 mm LWD condenser; 4-position turret with a clear aperture and 3 phase annuli
Stage	Motorized X/Y scanning stage; 120 mm x 80 mm travel range with submicron resolution; drop-in inserts to receive vessel holders and lockdown holders to fix sample in place during long scans
Focus mechanism	Automated focus mechanism with submicron resolution
LCD display	23 in. high-resolution touchscreen color monitor (also fully controllable via mouse); 1,920 x 1,080 resolution
Cameras	High-sensitivity 3.2 MP (2,048 x 1,536) monochrome CMOS sensor with 3.45 µm pixel resolution; high-sensitivity 3.2 MP (2,048 x 1,536) color CMOS sensor with 3.45 µm pixel resolution
Computer	External Dell™ PC with an Intel™ Core™ i7-8700 processor, 32 GB DDR4 RAM, 512 GB PCIe solid-state drive, NVIDIA™ Quadro™ P1000 graphics card with NVIDIA™ Pascal GPU technology and 4 GB memory, and Windows™ 10 software, designed to operate with touchscreen monitor and microscope
Captured images	8-bit TIFF, PNG, JPG; 16-bit RAW monochrome: TIFF, PNG; movies and time-lapse images: AVI, WMV
Output ports	Microscope: USB 3.1 Type B, 4-pin power port Computer: 1 x USB 3.1 Gen 2 Type C; 5 x USB 3.1 Gen 1 Type A; 4 x USB 2.0 Type A; 1 serial; 2 x DisplayPort 1.2; 1 RJ45; 2 PS/2; 1 UAJ; 1 line-out
Networking capability	Connection through Windows/SMB network via an Ethernet cable connection
Power supply	24 V AC adapter with country-specific power cords
Dimensions (L x W x H)	457 x 356 x 330 mm (18 x 14 x 13 in.)
Weight	16 kg (35 lb)

Live-cell imaging with the Onstage Incubator

Cell imaging system onstage incubators

When combined with the onstage incubation system, the EVOS M7000 Imaging System is ideal for long-term monitoring of cell cultures and time-lapse imaging at high resolution. The Invitrogen™ EVOS™ Onstage Incubator is an environmental chamber that allows for precise control of temperature, humidity, and three gases for time-lapse imaging of live cells under both physiological and nonphysiological conditions, making the system ideal for demanding hypoxia experiments. The EVOS Onstage Incubator allows you to:

• Intuitively set environmental and image-acquisition parameters

• Easily maintain physiological or nonphysiological conditions with precise control

• Adjust environmental parameters while the experiment is running

• Helps save lab space with a small footprint and sleek design

Once you've captured images, you can seamlessly create and export them as movies:

• Create time-lapse images of every well of a 96-well plate, simultaneously

• Acquire time-lapse images in a single plane or Z-stacks

• Autofocus in each channel and region of interest

• Use metadata and time stamps included with each image frame of time-lapse movies

Day 1   Day 5   Day 7

Day 9   Day 11   Day 14
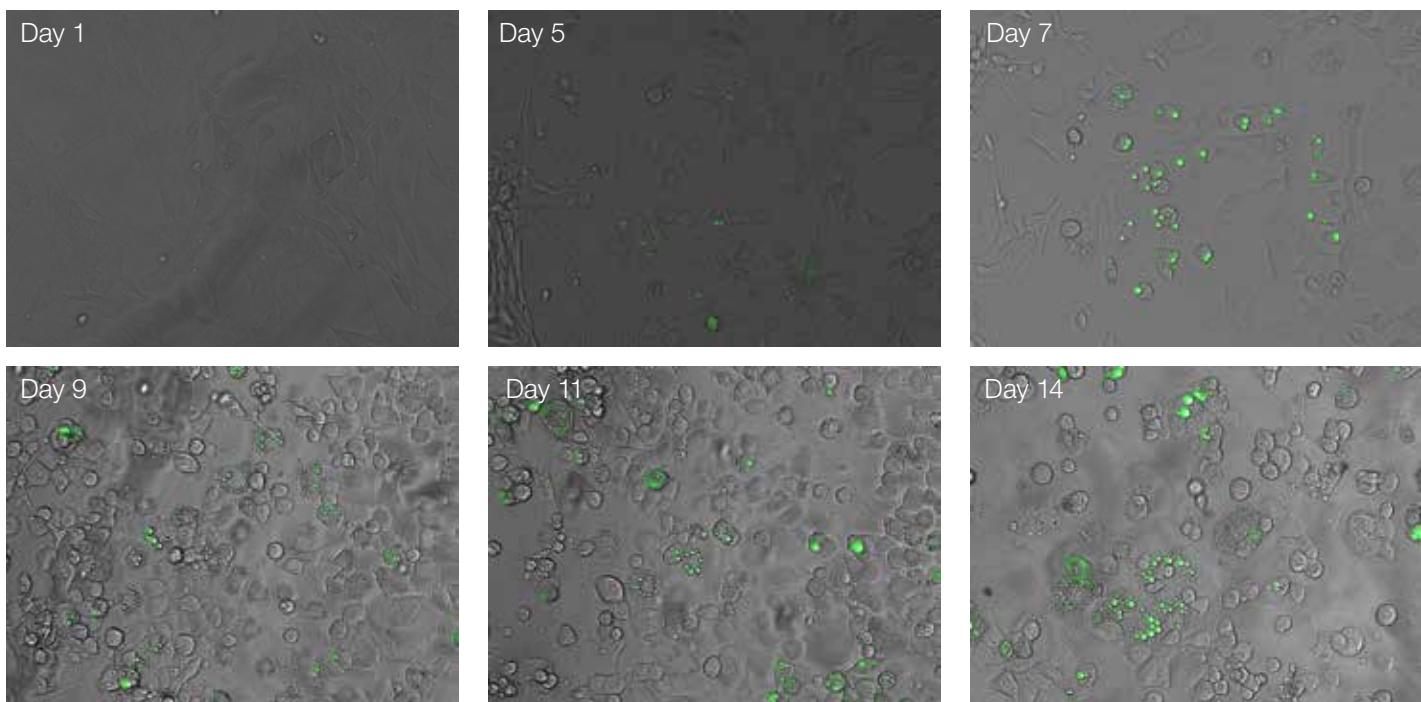
In these time-lapse images, 3T3-L1 cells (mouse fibroblasts) show increased adiposome numbers and size as they differentiate into adipocytes in differentiation medium.

EVOS Onstage Incubator specifications	
Compatible vessels	Multiwell plates; 35, 60, and 100 mm Petri dishes; T-25 flasks; chamber slides; and more
Temperature range	Ambient to 40°C
CO_2 range	0–20%
O_2 range	0% to ambient
Humidity range	>80% relative humidity at 37°C
Dimensions (H x D x W)	25 x 19 x 3.7 cm (environmental chamber) 37 x 16 x 20 cm (control unit)
Weight	1.5 kg (environmental chamber) 10 kg (control unit)
Compatible instruments	EVOS M5000, EVOS M7000, CellInsight CX5, CellInsight CX7, CellInsight CX7 LZR

High-content analysis onstage incubator

The Invitrogen™ High-Content Analysis (HCA) Onstage Incubator allows you to equip your Thermo Scientific™ CellInsight™ instrument with live-cell imaging capabilities, including the option to upgrade your existing CellInsight platform. Live-cell imaging enables you to observe biological processes as they happen, and onstage incubation creates an environment for longer-term imaging, allowing you to perform quantitative analysis. Onstage incubation also helps you control the environment for your cells so that you can observe and measure their biological changes over time. These capabilities are complemented by Thermo Scientific™ HCS Studio™ Cell Analysis Software for increased statistical power.

Observe biological processes as they happen

Extended imaging sessions rely on the provision of a controlled environment for the live cells under study. The Onstage Incubator allows precise control of temperature, humidity, and CO_2 levels so that you can observe and measure biological activity and changes over time. Data gathered from longer-term imaging studies are the basis of quantitative analysis studies, especially when combined with HCS Studio Cell Analysis Software.

Image analysis with Celleste software

Transform your 2D and 3D cell image analysis with Celleste 5.0 Image Analysis Software

A full-feature image analysis suite designed for any image-based biological application that generates publication-quality data, Invitrogen™ Celleste™ 5.0 Image Analysis Software helps process measurements over multiple data points to enable qualitative and quantitative data. Streamlined and customizable workflows allow for repeatability and reproducibility across experiments.

Features include:
• Powerful image analysis capabilities for segmentation, classification, and quantification of single images or a batch of images

• Comprehensive image processing and enhancement functions with optional modules for deconvolution, 3D rendering, and 3D analysis

• Rapid processing with manual and automatic measurements over multiple channels and images

Invitrogen™ Celleste™ 2D Deconvolution Module
Improve single-plane image quality (signal-to-noise ratio) of cells or tissue slices by clearing background haze (out-of-focus light).

• Blind and nonblind deconvolution options

• Dramatically improved image quality

• Removal of blur that can obscure important details

**Invitrogen™ Celleste™ 3D Deconvolution Module**
Dramatically improve resolution and clarity of thick samples like spheroids, tissue slices, or cells in 3D matrices by deconvolving image Z-stacks.

• Blind and nonblind deconvolution options

• Advanced point spread function (PSF) controls with measured and theoretical PSF options

• A suite of 3D display and visualization tools
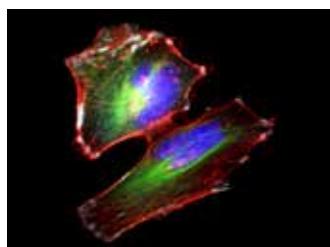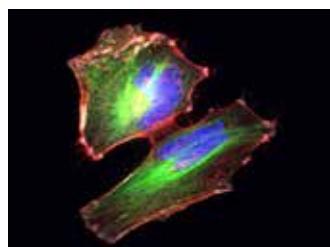
**Widefield**   **Deconvolved**   **Widefield**   **Deconvolved**
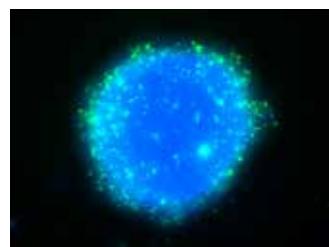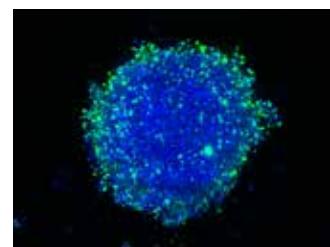
Find out more at **thermofisher.com/celleste**

Cell viability

Using Invitrogen™ LIVE/DEAD™ labeling kits, you can label your cells, image them on the Invitrogen™ EVOS™ M5000 or EVOS M7000 microscopes, and perform cell counting measurements using Celleste 5.0 Image Analysis Software.

Simply import a multifluorescent captured image, apply smart segmentation, and get an accurate and rapid determination of cell viability.
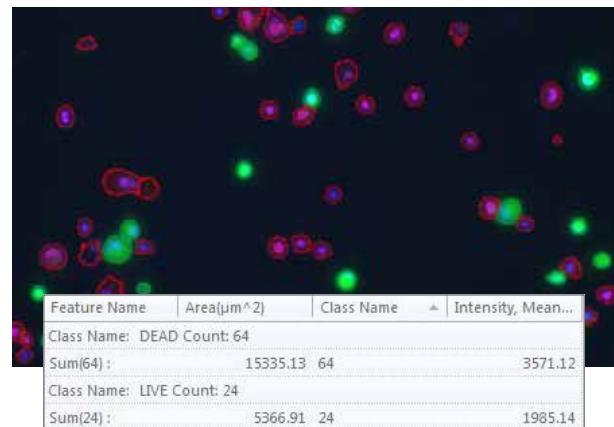


Colocalization

Celleste software includes a colocalization feature, which measures the spatial overlap between two (or more) different fluorescent labels to demonstrate a correlation between a pair of biomolecules in 2D or 3D space.
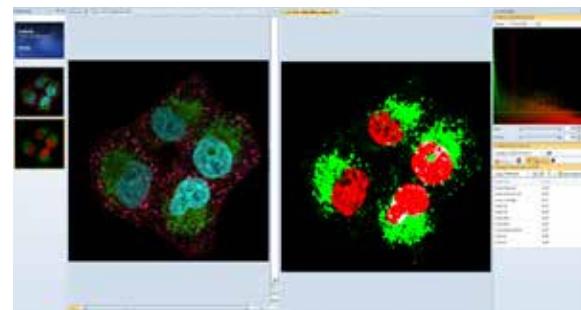
Cell cycle

Researchers looking at changes in the cell cycle during an organism's development can use Celleste 5.0 Image Analysis Software to monitor intensity and color as cells go through the different cell cycle phases.
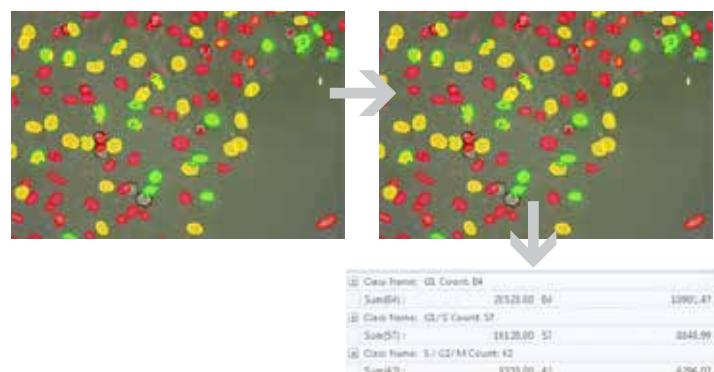
Wound healing

Wound healing, embryonic development, and tumorigenesis involve an orchestrated movement of cells in particular directions in response to external signals, both chemical and mechanical. With the wound-healing measurement on Celleste software, you can generate data on migration rate and direction with the touch of a button.
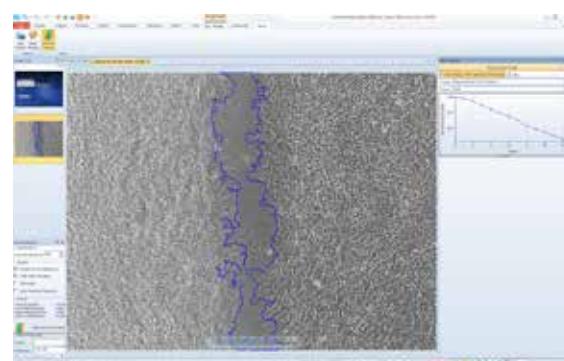
EVOS M5000 Imaging System

Form, function, and flexibility in one

Features

- Onboard software for acquisition, annotation, and analysis

- Machine learning–based cell counting and confluency analysis

- Autofocus, Z-stack capability, time-lapse imaging, and multichannel capture with a single click

- Automated multichannel fluorescence

- High-resolution monochrome camera and novel LED-based color illumination modes

- Proprietary RGB illumination for color images

- Connect, our cloud-based platform, enables you to access images and data anytime and anywhere with an internet connection
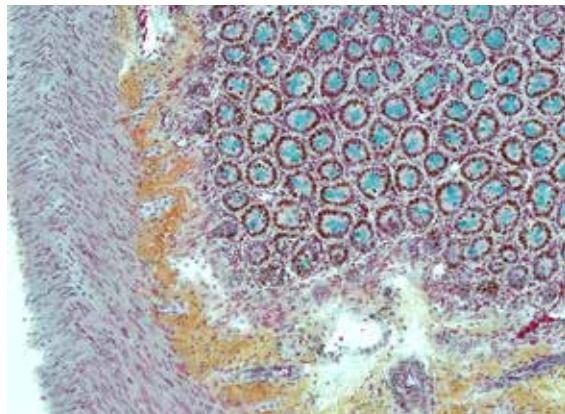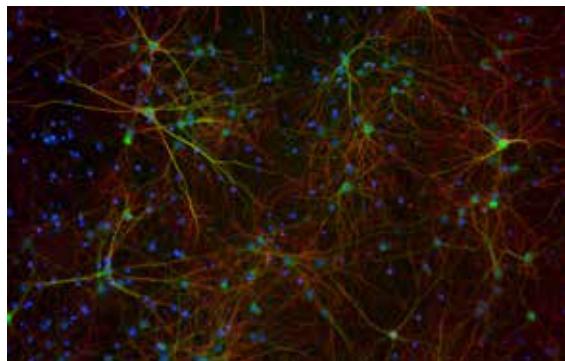
Unique and proprietary color illumination mode enables rendering of true color in transmitted light.

System highlights

| Hardware	Details
Illumination	LED light cubes (>50,000 hr life per light cube) with adjustable intensity
Contrast methods	Epifluorescence and transmitted light (brightfield and phase contrast)
Objective turret	5-position control
Fluorescence channels	Simultaneously accommodates up to 4 fluorescent light cubes
Condenser working distance	60 mm
Stage	Mechanical stage with x- and y-axis fine-positioning controls and automated z-axis software controls; interchangeable vessel holders available
LCD display	18.5 in. high-resolution articulated LCD monitor
Camera	Highly sensitive 3.2 MP monochrome CMOS camera (2,048 x 1,536) with 3.45 µm pixel resolution
Output ports	3 USB ports, 1 DVI port (supports direct output to USB and networked storage), Wi-Fi connectivity
Power supply	AC adapter
Dimensions (W x L x H)	18 x 18 x 23 in.
Weight	50 lb

Software

Designed by biologists for biologists, the EVOS M5000 Imaging System is remarkably easy to use. Following seamless image acquisition, you can analyze, edit, and annotate your images using a set of convenient tools available both in live mode and for saved images. For common applications, we have created easy-to-use image analysis tools driven by sophisticated segmentation algorithms. With a few clicks you can get a total count of your DAPI-stained cells or an estimate of confluence for reproducibility when you split your cells. Once you have edited and analyzed your images, save the images and data to the integrated hard drive, to an external USB device, to a local network, or to Connect, using the EVOS™ Image Analysis app.

Applications

The EVOS M5000 system integrates precision components with a unique modern design to deliver high-quality fluorescence and color imaging with unprecedented flexibility. It is a fully integrated system that combines precision optics, an 18.5 inch high-resolution articulated LCD monitor, and a highly sensitive 3.2 MP monochrome CMOS camera (2,048 x 1,536) with 3.45 µm pixel resolution. The monochrome camera affords the best sensitivity for detection of faint fluorescence signals and allows quantitative analysis, while the unique and proprietary color illumination mode enables rendering of true color in transmitted light (e.g., when imaging stained tissue samples).

Key software capabilities

- Z-stacking

- Automated Z-stacking

- Automated cell counting

- Multichannel time-lapse imaging
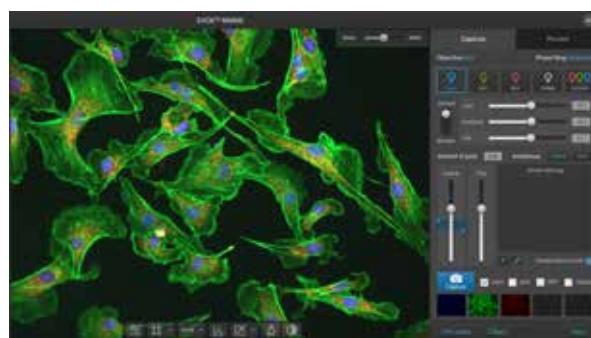
Intuitive interface allows even novice users to take images like a pro within minutes.

EVOS FLoid Imaging Station

Simple, budget-friendly, three-color fluorescence cell imaging

The Invitrogen™ EVOS™ FLoid™ Imaging Station can be used in a broad range of applications, including routine tissue culture visualization and imaging (e.g., with DAPI, GFP, and Invitrogen™ Texas Red™ dye), and serves as an excellent entry instrument for fluorescence microscopy.


Features

- **Simplicity**—fully integrated system with intuitive, multilingual user interface

- **Speed**—get results in a snap without warm-up, cooldown, or filter changes

- **Convenience**—capture and print images on your bench rather than in the darkroom

- **Robustness**—no moving parts, and long-life LEDs for reliable day-to-day use

Software

The EVOS FLoid Imaging Station makes capturing and processing three-color fluorescence images as easy as taking pictures on your smartphone. All images acquired can be saved in JPEG, BMP, TIFF, and PNG formats.

Key software features

- One-click, multichannel overlay

- Icon-based operation

- Multiple language options

- Digital zoom

Screenshot of the EVOS FLoid image processing software.
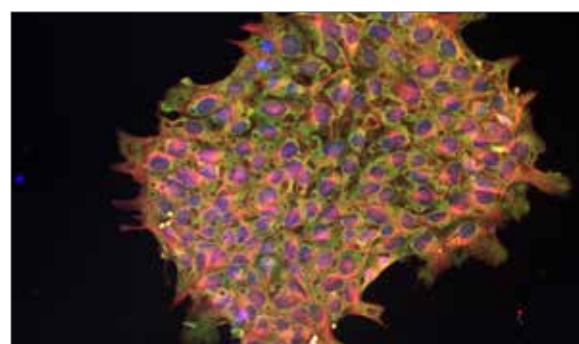
Human induced pluripotent stem cells, 20x; light cubes: GFP, RFP, and DAPI.

EVOS XL Core Imaging System

Compact, simple transmitted-light system perfect for use in a cell culture hood or tissue culture facility

The Invitrogen™ EVOS™ XL Core Imaging System is the ideal tissue culture microscope.

Features

- Fits inside all culture hoods

- Cost-effective and user-friendly

- Easy installation; no maintenance, assembly, alignment, or calibration

- Removable mechanical stage for precise imaging

Software

Integrated software is a key component of this all-in-one system. Our software includes a variety of features, such as color temperature control. All images acquired can be saved in JPEG, BMP, and TIFF formats.

Key software features

- Easy-to-use interface

- Adjustable saturation and contrast

- Color temperature control (warm vs. cool)
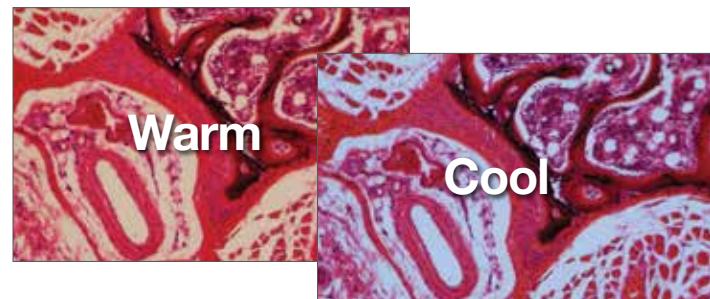
Mouse tail cross-section, 20x objective.

EVOS vessel holders and stage plates

All models

AMEPVH009
Universal stage insert

AMEPVH003
Holds two 60 mm Petri dishes

AMEPVH005
Holds two 25 cm^2 flasks (rectangular or triangular)

AMEPVH001
Holds two 25 mm x 75 mm standard microscope slides, chamber slides, etc.

AMEPVH006
Holds one Thermo Scientific™ Nunc™ T-75 flask (75 cm^2)
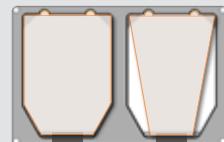
AMEPVH021
Holds two microscope slides or chamber slides with retention clip

AMEPVH004
Holds one 100 mm Petri dish

AMEPVH007
Holds one hemocytometer
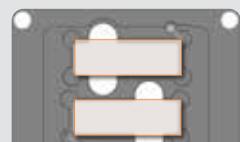
AMEPVH022
Holds one multiwell plate with retention clip for AMEPVH001 through AMEPVH018

AMEPVH002
Holds four 35 mm Petri dishes

AMEPVH028
Holds one multiwell plate with retention clip
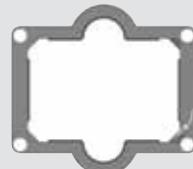
AMEPVH030
Holds two 35 mm Petri dishes

Custom vessel holders

Need a vessel holder to accommodate your specialized plate, slide, culture dish, or flask? Contact us to create a specialty vessel holder for your EVOS imaging system.
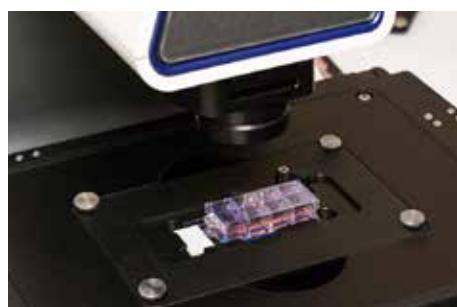
See a complete list of available vessel holders and stage plates at
thermofisher.com/evosvesselholders

The power of LED illumination

All EVOS fluorescence cell imaging systems utilize LED light sources, providing high-intensity output over a short light path for the most efficient fluorophore excitation.

- A shorter light path enables better detection of fluorescence signals

- Stable illumination intensity helps provide consistent results

- >50,000-hour bulb lifetime helps lower your laboratory costs

- Adjustable light intensity helps reduce photobleaching and phototoxicity

Customizable instruments for your fluorescence experiments

You can get more out of your research with easy-to-use, modular systems that can adjust to fit your experimental needs. We offer imaging systems that can be customized with a variety of LED light cubes, vessel holders, and objectives.

Placing the LED light cube as close as possible to the objective turret minimizes optical elements in the light path to help increase the efficiency of fluorophore excitation, enabling better detection of weak fluorescence signals.

Common light cubes

Light cube	Excitation (nm)	Emission (nm)	Dye	Cat. No.
DAPI	357/44	447/60	DAPI, Hoechst stain, BFP	AMEP4650
TagBFP	390/18	447/60	TagBFP	AMEP4668
CFP	445/45	510/42	ECFP, Lucifer Yellow, Evans Blue	AMEP4653
GFP	470/22	510/42	GFP, Alexa Fluor 488, SYBR Green, FITC	AMEP4651
YFP	500/24	524/27	EYFP, acridine orange + DNA	AMEP4654
RFP	531/40	593/40	RFP, Alexa Fluor 546, Alexa Fluor 555, Alexa Fluor 568, Cy3, MitoTracker Orange, Rhodamine Red, DsRed	AMEP4652
Texas Red	585/29	624/40	Texas Red, Alexa Fluor 568, Alexa Fluor 594, MitoTracker Red, mCherry, Cy3.5	AMEP4655
Cy5	628/40	692/40	Cy5, Alexa Fluor 647, Alexa Fluor 660, DRAQ5	AMEP4656
Cy5.5	655/46	794/16	Cy5.5, Alexa Fluor 660, Alexa Fluor 680, Alexa Fluor 700	AMEP4673
Cy7	710/40	775/46	Cy7, IRDye 800CW	AMEP4667
CFP-YFP EM	445/45	542/27	CFP/YFP (for FRET applications)	AMEP4669
AO	470/22	488/20	Acridine orange + RNA, simultaneous green/red with FL color	AMEP4670
AO Red	442/46	628/32	Acridine orange + RNA, CTC formazan, Fura Red (high Ca^{2+})	AMEP4671
White	N/A	N/A	Reflected light applications	AMEP4672

See a complete list of available light cubes at **thermofisher.com/evoslightcubes**

EVOS objectives

Plan achromat: Perfect for general applications; color and focus have standard correction compared to apochromat and fluorite objectives.

Plan achromat*									
Magnification	NA**	WD† (mm)	Brightfield	Phase	Long WD	Coverslip-corrected	Optimal vessel thickness (mm)	Oil	Cat. No.
2x	0.06	5.62	•		•		1.0–1.2		AMEP4931
4x	0.13	10.58	•	•	•		1.0–1.2		AMEP4932
10x	0.25	7.45	•	•	•		1.0–1.2		AMEP4933
20x	0.4	6.92	•	•	•		1.0–1.2		AMEP4934
40x	0.65	3.1	•	•	•		1.2		AMEP4635
	0.65	2.74	•	•	•		1.0		AMEP4935
50x	0.95	0.19	•			•	0.17	•	AMPFOP050
100x	1.25	0.15	•			•	0.17	•	AMPFOP100

* Recommend 1.0 mm thickness for glass slides.

** NA = numerical aperture.

† WD = working distance.

Plan fluorite: Excellent resolution resulting in bright fluorescence signal and high-contrast imaging; helps reduce optical aberrations; color and focus have a higher level of correction.

Plan fluorite*									
Magnification	NA	WD (mm)	Brightfield	Phase	Long WD	Coverslip-corrected	Optimal vessel thickness (mm)	Oil	Cat. No.
4x	0.13	10.58	•		•		1.0–1.2		AMEP4922
	0.13	10.58	•	•	•		1.0–1.2		AMEP4980
10x	0.3	7.13	•		•		1.0–1.2		AMEP4923
	0.3	7.13	•	•	•		1.0–1.2		AMEP4981
20x	0.5	2.5	•			•	0.17		AMEP4698
	0.45	6.23	•		•		1.0–1.2		AMEP4924
	0.40	6.12	•	•	•		1.0–1.2		AMEP4982
40x	0.65	2.8	•		•		1.2		AMEP4625
	0.65	1.79	•		•		1.0		AMEP4925
	0.65	1.6	•	•	•		1.2		AMEP4683
	0.65	1.79	•	•	•		1.0		AMEP4983
	0.75	0.72	•			•	0.17		AMEP4699
	1.3	0.2	•			•	0.17	•	AMEP4735
60x	0.75	2.2	•		•		1.2		AMEP4626
	0.75	1.28	•		•		1.0		AMEP4926
100x	1.28	0.21	•			•	0.17	•	AMEP4696

* Recommend 1.0 mm thickness for glass slides.
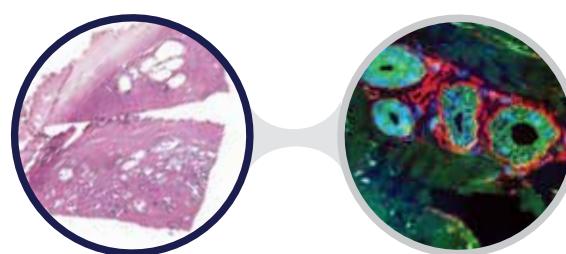
Prostate cross-section, 10x objective.

Rat epidermis, 40x objective.

Plan apochromat: Highest levels of resolution, fluorescence brightness, contrast, and chromatic correction compared to achromat and fluorite objectives.

Plan apochromat								
Magnification	NA	WD (mm)	Brightfield	Phase	Long working distance	Coverslip-corrected	Oil	Cat. No.
1.25x	0.04	5.11	•		•			AMEP4736
2x	0.08	6.22	•		•			AMEP4751
4x	0.16	13.0	•		•			AMEP4752
10x	0.4	3.1	•			•		AMEP4753
20x	0.75	0.65	•			•		AMEP4734
40x	0.95	0.18	•			•		AMEP4754
60x	1.42	0.15	•			•	•	AMEP4694
100x	1.4	0.13	•			•	•	AMEP4733

Long working distance vs. coverslip-corrected

Long working distance

Optimized for use through vessels with nominal wall thickness of 0.9–1.5 mm (slides, flasks, microtiter dishes, etc.).

Coverslip-corrected

Optimized for use with #1.5 coverslips (approximately 0.17 mm thick). Have a higher magnification-to-numerical aperture (NA) ratio and provide higher resolution compared to long working distance.
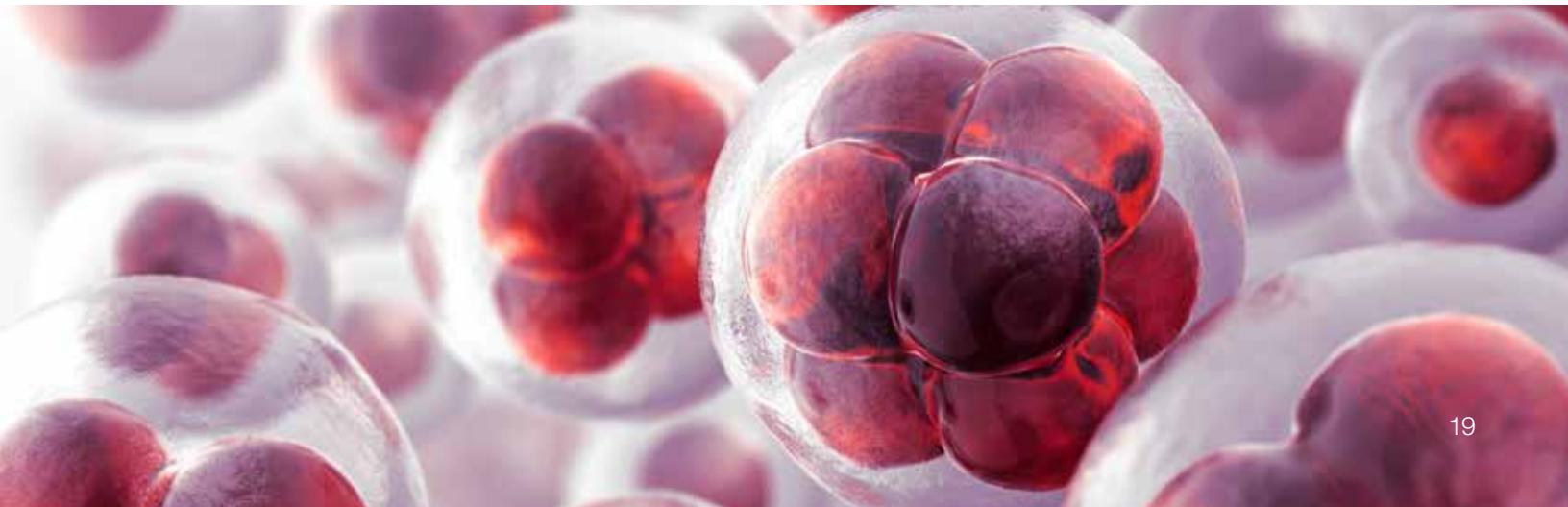
Fluorophore selection guide

Use the selection guide below to choose the Invitrogen™ dye that best matches your light source and experimental needs.

	EVOS DAPI Light Cube (AMEP4650) Ex: 357/44 nm; Em: 447/60 nm	EVOS GFP Light Cube (AMEP4651) Ex: 470/22 nm; Em: 510/42 nm
Apoptosis	Annexin V, Alexa Fluor 350 Conjugate (A23202)	CellEvent Caspase-3/7 Green (C10423) Click-iT Plus TUNEL Assay, Alexa Fluor 488 (C10617) Image-iT LIVE Green Caspase-3 and -7 Detection Kit (I35106)
Autophagy		Premo Autophagy Tandem Sensor RFP-GFP-LC3B Kit (P36239) Premo Autophagy Sensor LC3B-GFP (P36235) Premo Autophagy Sensor GFP-p62 Kit (P36240)
Cell tracing and tracking	CellTrace Calcein Blue, AM (C34853) CellTracker Blue CMAC Dye (C2110) CellTracker Blue CMF$_2$HC Dye (C12881)	CellTrace Calcein Green, AM (C34852) CellTracker Green CMFDA Dye (C7025) Vybrant DiO Cell-Labeling Solution (V22886)
Cytoskeleton stains	Alexa Fluor 350 Phalloidin (A22281)	Alexa Fluor 488 Phalloidin (A12379) CellLight Actin-GFP (C10582) CellLight Tubulin-GFP (C10613) ActinGreen 488 ReadyProbes Reagent (R37110)
Endocytosis		CellLight Early Endosomes-GFP (C10586) pHrodo Green Dextran, 10,000 MW (P35368) LysoTracker Green DND-26 (L7526)
Neuronal tracing and staining	Alexa Fluor 350 Hydrazide (A10439)	NeuroTrace 500/525 Green Fluorescent Nissl Stain (N21480) DiO (D275) Alexa Fluor 488 Dextran (D22910)
Nuclear stains	DAPI (D1306) Hoechst 33342 (H3570) NucBlue Fixed Cell ReadyProbes Reagent (R37606)	SYTO 9 Green Fluorescent Nucleic Acid Stain (S34854) SYTOX Green Nucleic Acid Stain (S7020) CellLight Nucleus-GFP (C10602)
Oxidative stress		CellROX Green Reagent (C10444) CM-H$_2$DCFDA (C6827) DAF-FM Diacetate (D23844)
Phagocytosis		pHrodo Green *E. coli* BioParticles Conjugate (P35366) pHrodo Green *S. aureus* BioParticles Conjugate (P35367) pHrodo Green Zymosan BioParticles Conjugate (P35365)
Plasma membrane stains	Wheat Germ Agglutinin, Alexa Fluor 350 Conjugate (W11263)	Wheat Germ Agglutinin, Alexa Fluor 488 Conjugate (W11261) CellMask Green Plasma Membrane Stain (C37608) CellLight Plasma Membrane-GFP (C10607)
Proliferation		Click-iT Plus EdU Alexa Fluor 488 Imaging Kit (C10637)
Viability	ReadyProbes Cell Viability Kit, Blue/Green (R37609) ReadyProbes Cell Viability Kit, Blue/Red (R37610)	LIVE/DEAD Viability/Cytotoxicity Kit (L3224) LIVE/DEAD Cell Imaging Kit (488/570) (R37601) ReadyProbes Cell Viability Kit, Blue/Green (R37609)

UV

300 nm   400 nm   500 nm

Find out more at **thermofisher.com/microscopes**
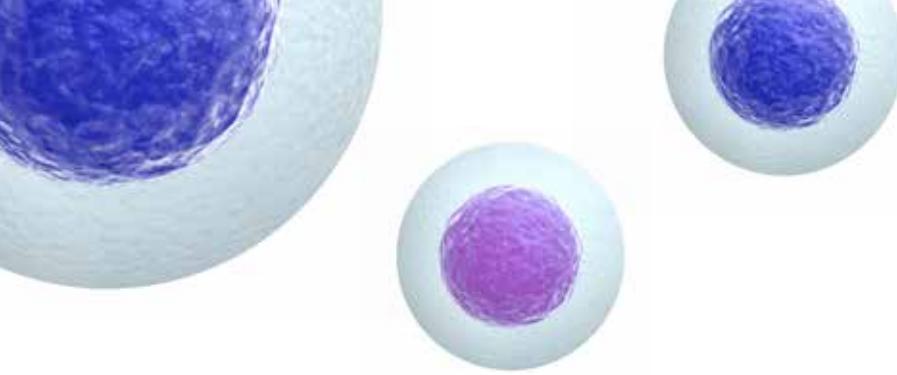
EVOS RFP Light Cube (AMEP4652) Ex: 531/40 nm; Em: 593/40 nm	EVOS Texas Red Light Cube (AMEP4655) Ex: 585/29 nm; Em: 624/40 nm	EVOS Cy5 Light Cube (AMEP4656) Ex: 628/40 nm; Em: 693/40 nm
Annexin V, Alexa Fluor 555 Conjugate (A35108) Image-iT LIVE Red Caspase-3 and -7 Detection Kit (I35102) Image-iT LIVE Red Poly Caspases Detection Kit (I35101)	Click-iT Plus TUNEL Assay, Alexa Fluor 594 Dye (C10618) Annexin V, Alexa Fluor 594 Conjugate (A13203)	Click-iT Plus TUNEL Assay, Alexa Fluor 647 Dye (C10619) Annexin V, Alexa Fluor 647 Conjugate (A23204)
Premo Autophagy Tandem Sensor RFP-GFP-LC3B Kit (P36239) Premo Autophagy Sensor LC3B-RFP (P36236) Premo Autophagy Sensor RFP-p62 Kit (P36241)		
CellTracker Orange CMRA Dye (C34551) CellTracker Orange CMTMR Dye (C2927) Vybrant DiI Cell-Labeling Solution (V22885)	CellTracker Red CMTPX Dye (C34552)	CellTracker Deep Red Dye (C34565) Vybrant DiD Cell-Labeling Solution (V22887)
Alexa Fluor 555 Phalloidin (A34055) CellLight Actin-RFP (C10583) CellLight Tubulin-RFP (C10614) ActinRed 555 ReadyProbes Reagent (R37112)	Alexa Fluor 594 Phalloidin (A12381)	Alexa Fluor 647 Phalloidin (A22287)
CellLight Early Endosomes-RFP (C10587) pHrodo Red Dextran, 10,000 MW (P10361) pHrodo Red Epidermal Growth Factor (EGF) Conjugate (P35374)	LysoTracker Red DND-99 (L7528)	LysoTracker Deep Red (L12492)
DiI (D282) Alexa Fluor 555 Dextran (D34679) Tetramethylrhodamine Dextran (D1817)	Alexa Fluor 594 Hydrazide (A10438) Alexa Fluor 594 Biocytin (A12922) Alexa Fluor 594 Dextran (D22913)	DiD (D7757) Alexa Fluor 647 Hydrazide (A20502) Alexa Fluor 647 Dextran (D22914)
SYTO 82 Orange Fluorescent Nucleic Acid Stain (S11363) CellLight Nucleus-RFP (C10603)		TO-PRO-3 Iodide (T3605) HCS NuclearMask Deep Red Stain (H10294)
CellROX Orange Reagent (C10443) Dihydroethidium (D11347)	MitoSOX Reagent (M36008)	CellROX Deep Red Reagent (C10422)
pHrodo Red *E. coli* BioParticles Conjugate (P35361) pHrodo Red *S. aureus* BioParticles Conjugate (A10010) pHrodo Red Zymosan BioParticles Conjugate (P35364)		
Wheat Germ Agglutinin, Alexa Fluor 555 Conjugate (W32464) CellMask Orange Plasma Membrane Stain (C10045) CellLight Plasma Membrane-RFP (C10608)	Wheat Germ Agglutinin, Alexa Fluor 594 Conjugate (W11262)	Wheat Germ Agglutinin, Alexa Fluor 647 Conjugate (W32466) CellMask Deep Red Plasma Membrane Stain (C10046)
Click-iT Plus EdU Alexa Fluor 555 (C10638)	Click-iT Plus EdU Alexa Fluor 594 Imaging Kit (C10639)	Click-iT Plus EdU Alexa Fluor 647 Imaging Kit (C10640)
LIVE/DEAD Viability/Cytotoxicity Kit (L3224) ReadyProbes Cell Viability Kit, Blue/Red (R37610)	LIVE/DEAD Cell Imaging Kit (488/570) (R37601)	NucRed Dead 647 ReadyProbes Reagent (R37113)

IR

600 nm   700 nm   800 nm

**EVOS M7000 Imaging System.**   **EVOS M5000 Cell Imaging System.**

CellInsight high-content analysis platforms

The **Thermo Scientific™ CellInsight™ CX7 LZR HCA Platform** offers a more powerful and integrated way to develop and automate high-content assays. With laser illumination, the CellInsight LZR HCA Platform enables researchers to image faster in both widefield and confocal modes, with deeper penetration into the specimen.
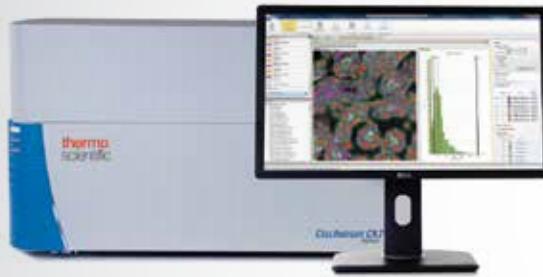
The **Thermo Scientific™ CellInsight™ CX7 HCA Platform** offers an integrated way to develop and automate high-content assays using a combination of 5-color brightfield and 7-color fluorescence imaging in confocal or widefield modes.
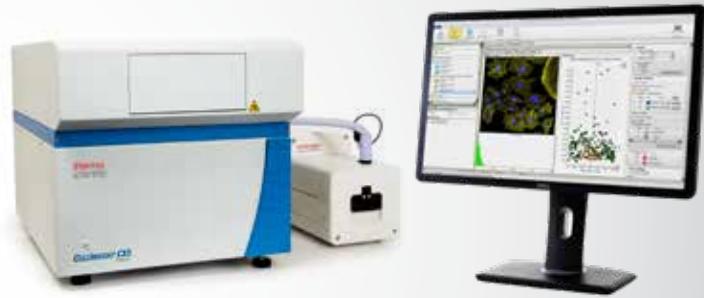
The **Thermo Scientific™ CellInsight™ CX5 HCS Platform** is a fast, simple-to-operate, automated cellular imaging and analysis benchtop platform designed for speed, robustness, and affordability across standard assay development and screening applications.

High-content analysis (HCA), also known as high-content screening (HCS), image cytometry, quantitative cell analysis, or automated cell analysis, is an automated method that is used to identify substances that alter the phenotype of a cell in a desired manner.

Using a combination of established technologies, HCA can address both cellular-level intensity and morphological measurements. With sufficient resolution for subcellular detection, automated detection and phenotyping can be achieved with intact, fixed, or live cells. The table on the next page describes some of the commonly used cell-based assays in laboratories.

Features and functionality

- **Precise image capture**—the highly sensitive, 14-bit cooled CCD camera with an enlarged 2,208 x 2,208 pixel array captures quantitative data with high quantum efficiency across the spectrum.

- **Rapid data analysis**—Thermo Scientific™ HCS Studio™ Cell Analysis Software analyzes your images in real time, so that you collect all the data you need to make decisions that count.

- **Live-cell imaging**—extended imaging sessions rely on the provision of a controlled environment for the live cells under study. The Onstage Incubator allows precise control of temperature, humidity, and CO_2 levels so that you can observe and measure biological activity and changes over time. Data gathered from longer-term imaging studies are the basis of quantitative analysis studies, especially when combined with HCS Studio Cell Analysis Software for increased statistical power.

Which HCA system is right for you?

| Compact screening system to scale up your throughput | Integrated performance modes for screening and analysis | Designed for confocal imaging and assay flexibility |

	CellInsight CX5 platform	CellInsight CX7 platform	CellInsight CX7 LZR platform
Illumination	5 channels	7 channels	7 channels
Camera	Photometrics X1 camera with 4.54 µm pixel resolution		
Widefield	5 channels	7-color high-output LED	7-color laser excitation
Brightfield	White	4 specific LED plus white light for higher-contrast imaging	
Confocal	NA	Spinning disk 40 µm/70 µm	
Objectives	Single position, 2x–40x	3-position turret, 2x–40x	3-position turret, 2x–40x; additional options available
Focus	Software	Laser and software	Laser and software
Live-cell imaging	Optional HCA Onstage Incubator with kinetic scheduling of acquisition		
Software	HCS Studio Cell Analysis Software; optional client software available		
Database	Store Image and Database Management Software included; scalable SQL or Oracle™ database options available		

How is HCA different?

HCS vs. other cell-based assays

Assay type	Detection mode	Detection method	Intensity-based	Cell-based	Intact cells	Multiplex capability	Cell-by-cell	Location	Subcellular structure	Multicellular structure	Assay development to screening
Substrate conversion	Colorimetry/ fluorescence	Fluorometer	•	•	•	•	•	•	•	•	•
RIA	Scintillation	Scintillation counter	•	•	•	•	•	•	•	•	•
ELISA	Chemiluminescence	Spectrometer/ luminometer	•	•	•	•	•	•	•	•	•
SPA	Scintillation	Scintillation counter	•	•	•	•	•	•	•	•	•
Luciferase	Chemiluminescence	Luminometer	•	•	•	•	•	•	•	•	•
GeneBLAzer	FRET	Ratiometric fluorescence	•	•	•	•	•	•	•	•	•
FLIPR	Fluorescence	Plate reader	•	•	•	•	•	•	•	•	•
Flow cytometry	Fluorescence	Multilaser PMT flow cytometer	•	•	•	•	•	•	•	•	•
HCS/HCA	Fluorescence	Multispectral fluorescence imager with analysis	•	•	•	•	•	•	•	•	•

• Good capability　• Limited capability　• Poor capability　• No capability

Find out more at **thermofisher.com/hcs**

CellInsight CX7 LZR High-Content Analysis Platform

- **Faster scan times**—up to 5x faster than confocal imaging

- **Quantifiably brilliant data**—laser-based illumination provides superior spheroid illumination

- **Enhanced speed and sensitivity for superior performance**—seven independent lasers provide superior multiplexing with minimal bleed through

The Thermo Scientific™ CellInsight™ CX7 LZR High-Content Analysis Platform delivers superior performance for the diverse set of experiments and cell types that are emerging in cell-based assays.

- Perform confocal or 3D imaging with extremely bright illumination to penetrate thick samples

- Speed up acquisition of images with shorter exposure times and laser autofocus capabilities

- Expand your multiplexing with near-IR (785 nm) laser excitation

- Reduce photobleaching and phototoxicity by controlling the amount of light to the sample for live-cell imaging and analysis

Whether you are using a high-content platform for primary or secondary screening or you have a specific assay that you are developing, the CellInsight CX7 LZR platform provides you with a broad set of tools for quantitative imaging and analysis.

- Objective range from 2x to 60x available

- Broadest range of plate formats and types that are compatible with the system

- Expand your capabilities with optional onstage incubation and robotic plate handling

- Seamlessly scale and share your data using Thermo Scientific™ Store Image and Database Management Software

- Use the world-class Thermo Scientific™ HCS Studio™ suite of software to build and screen your cell-based assays

Flexible imaging options

With the CellInsight CX7 LZR High-Content Analysis Platform, you have a choice of imaging modes and setup tools to extract the information you need from your samples.

Confocal

Illuminated by seven wavelength-specific lasers, confocal imaging is enhanced by high-speed spinning disk technology. With two distinct pinhole patterns, imaging is optimized for both thin and thick samples. Decrease your confocal scan times by more than half by combining high-NA objectives, laser illumination, and ultrasensitive CCD camera technology.
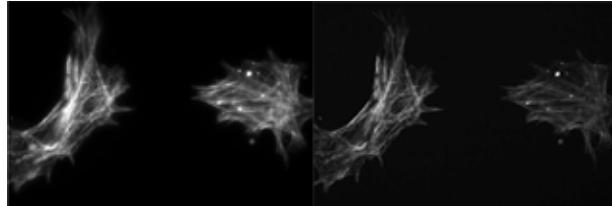
Neurons taken in widefield vs confocal imaging modes using the CellInsight CX7 LZR system, showcasing the sharper image resolution.

Widefield

Leverage the widefield capabilities of the CellInsight CX7 LZR platform for high-throughput cell-level phenotyping. With seven-color laser excitation, capture more information from each cell as you label additional targets. Be confident that you can screen more compounds with the large format Photometrics™ X1 CCD camera and integrated laser autofocus so that none of your precious cells are missed.

Brightfield

Using an LED array for RGB and amber illumination, you can make colorimetric absorbance measurements of your histology samples with classic stains like hematoxylin and eosin (H&E). You can also multiplex your colorimetric absorbance data with fluorescence measurements, offering new possibilities for validation and correlation.

CellInsight CX5 High-Content Screening Platform

Small in size but massive in its power, the Thermo Scientific™ CellInsight™ CX5 High-Content Screening (HCS) Platform brings automated quantitative cell analysis to every cell biology or screening lab. Transform your cell-based research by analyzing single cells in up to five fluorescent colors. With proprietary autofocus and integrated plate-scanning intelligence methods, the CellInsight CX5 HCS Platform brings speed and accuracy to investigate cell populations and phenotypes without sacrificing sensitivity and resolution.

See more in fewer images
The Photometrics X1 camera is the most powerful HCS imaging tool to boost quantitative performance. See more of your biology in fewer images with the enlarged 2,208 x 2,208 pixel array. By offering both reliability and reproducibility, the X1 camera's CCD technology affords you the confidence to trust your data.

Brightfield capabilities
Designed to work with or without fluorescent labeling, the CellInsight CX5 HCS Platform utilizes transmitted light, allowing you to explore more cell biology without the restriction of fluorescent dyes.

Scalable cell biology
The CellInsight CX5 HCS Platform addresses the problem of scale with a continuum of solutions depending on the need, compatible with slides all the way through 1,536-well microplates. The platform connects directly to the Thermo Scientific™ Orbitor™ RS Microplate Mover to increase processing capacity up to 80 plates. With included application programming interfaces (API), the CellInsight CX5 system can be integrated into any third-party automation platform.

The CellInsight CX5 HCS Platform can be equipped for automated high-throughput screening using the Orbitor RS plate handler. HCA Studio software can directly operate the Orbitor instrument, eliminating the need for third-party software.

HCS Studio Cell Analysis Software

Intuitive interface and intelligent design
Accelerate your research with Thermo Scientific™
HCS Studio™ Cell Analysis Software, which offers a broad
scope of high-content bio-applications. Scientists can
study their HCA data at the individual cell, field, or well
level to determine the most sensitive cell phenotypes.
HCS Studio software offers:

• "On the fly" real-time analysis, enabling faster acquisition
  of data

• Icon-based guidance, accessible to novice users

• Fully customizable for experienced users

• Thermo Scientific™ Cellomics™ Spot Detector
  BioApplication software tools for assay development
  and screening

• Scalable to many thousands of images

Analysis or screening
Whether you are analyzing a few slides to answer basic
research questions or screening thousands of samples in
a systems biology study, we can offer you the platform of
choice to meet your application's needs.

Go from image collection to tabulated results and
population statistics—and back again, because the data
always come back to cells.
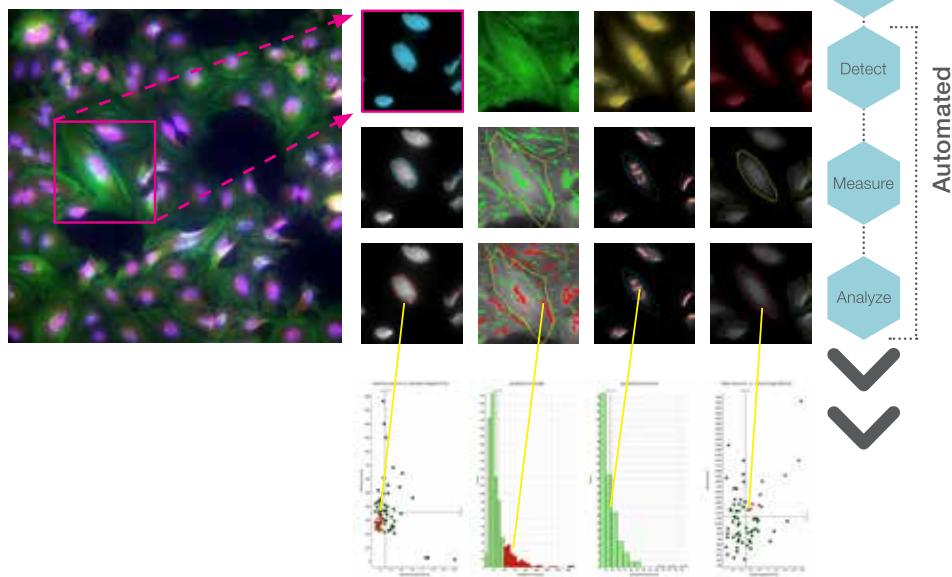
With this software, you can:

• Link data seamlessly to both images and protocols

• Move from tabulated data to view cells, wells, or fields

Assay performance
With HCS Studio Cell Analysis Software, you can be
confident of robust assay performance. Rank your assay
parameters based on Z-prime before starting a screen, and
then adjust your "stop criteria" to collect only the data you
need for statistical significance.

Application area	Example assays
Morphology	Subcellular to multicellular changes, cytoskeletal changes, cell differentiation, neurite outgrowth
Signaling	Transcription factor activation, receptor trafficking, phosphorylation, cell–cell interactions
Expression	RNA and protein expression
Cytotoxicity	Apoptosis vs. necrosis, genotoxicity, oxidative stress, organelle status
Proliferation	Cell count, cell viability, cell cycle

Learn more at thermofisher.com/hcs

Store Image and Database Management Software

Be productive from your first day of use with Store Image and Database Management Software
Every Thermo Scientific™ high-content platform is configured with a base version of Thermo Scientific™ Store Image and Database Management Software. With 10 GB of storage, Store Image and Database Management Software helps ensure the security of your data and allows you to be productive from your first day of use. Although it is not a scalable solution, you always have the option to upgrade to the full version of this software as your requirements change.

• Store Image and Database Management Software included with all high-content platforms

• Sufficient for moderate use with active data management program

• Out-of-the-box use with no IT overhead

• Full functionality with no degradation of speed or features

Scalable storage
Store Image and Database Management Software offers an optional configuration (preferred for industry partners), which includes:

• Scalability for use with an SQL or Oracle database to accommodate screens

• Installation on servers for capacity and management

• Experienced guidance for IT implementation

Expands for higher-throughput screening capabilities
Store Image and Database Management Software expands to a server-based platform, allowing huge amounts of images and data to be managed. With this software, you can import, convert, and spool images from any platform or client running HCS Studio Cell Analysis Software. Share data and images across your organization for a fully collaborative work environment.

HCS administrator
Client-user interface that senses new plates and notifies service that images and data are ready to spool

Scan

Image import and conversion tool
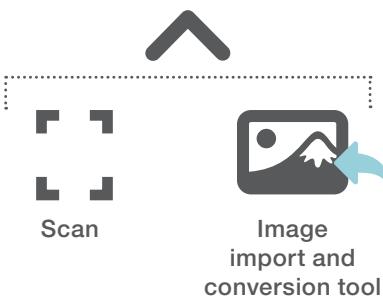
HCS application server
Middleware that handles the insertion of images and data into the database

Store database
SQL or Oracle Relational Database that stores images and data

View

Data/image export tool
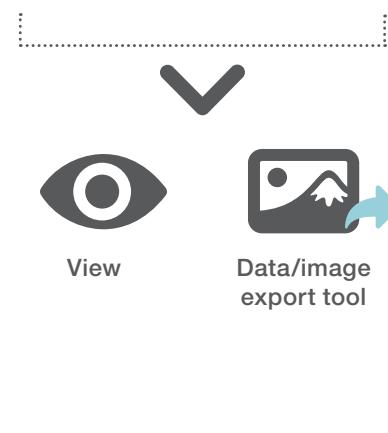
# Countess II Automated Cell Counters

Advanced technology at an affordable price

Accurate counts in as little as 10 seconds

We offer two high-performance automated cell counters designed to meet the needs of any lab. The Invitrogen™ Countess™ II and Countess™ II FL Automated Cell Counters contain advanced autofocusing and counting algorithms to allow you to quickly and accurately count cells while avoiding user variation associated with manual counting.

Both automated cell counters offer the following features:

- **Accuracy**—autofocus and autolighting minimize user-to-user variability
- **Speed**—results in as little as 10 seconds
- **Convenience**—built-in dilution calculator and ability to save up to 10 user profiles

Feature	Countess II counter	Countess II FL counter
Counting mode	Brightfield channel	Brightfield channel plus two optional, user-changeable fluorescence channels
Slides	Disposable slides	Reusable and disposable slides
Counting time	As little as 10 seconds	
Focus	Autofocus with manual focus option	
User profiles	Customize and save up to 10 user profiles	
User interface	Intuitive touchscreen with ability to use a mouse, if desired	

Customizable instruments for your fluorescence experiments

You can get more out of your research with easy-to-use, modular systems that can adjust to fit your experimental needs. We offer imaging systems that can be customized with a variety of LED light cubes, vessel holders, and objectives. EVOS M5000 and EVOS M7000 Imaging Systems are powered by the same light cubes that are used in the Countess II FL system. The light cubes can be easily transferred between systems to help increase the experimental capabilities of your lab while saving money. Learn more about our full line of imaging systems at **thermofisher.com/microscopes**.

"It outperformed all other suppliers' models that we tried."

—Michael DaCosta, The Jackson Laboratory

Reduced variability helps improve accuracy

The autofocus feature of Countess II instruments works by analyzing more than 30 focal planes, then selecting the plane with the best focal quality. This helps ensure that any variance from sample to sample, user to user, and slide to slide is minimized. Results are based on the optimal focal plane to enable highly accurate cell and viability counts. The Results view shown below allows quick visual confirmation of cells as being live or dead.
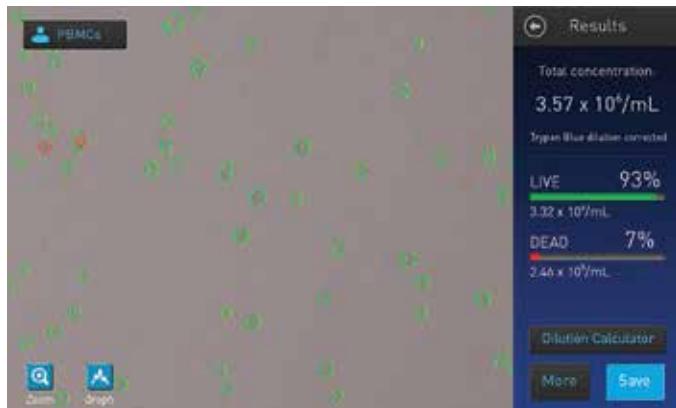
Peripheral blood mononuclear cells (PBMCs) counted using the Countess II Automated Cell Counter. Counting and viability measurement is done using trypan blue staining.

Reusable or disposable slides available

The Countess II FL Automated Cell Counter was designed to work with a reusable glass slide to help significantly reduce the long-term consumable costs associated with automated counting. Convenient disposable slides are also available.

| Countess II FL Automated Cell Counter | Reusable slide | An end to manual counting |

The ability of the Countess II cell counters to gate cells based on cell size, brightness, and circularity using quantitative measurements rather than operator judgment also helps to reduce subjectivity, and allows increased repeatability between samples and users.
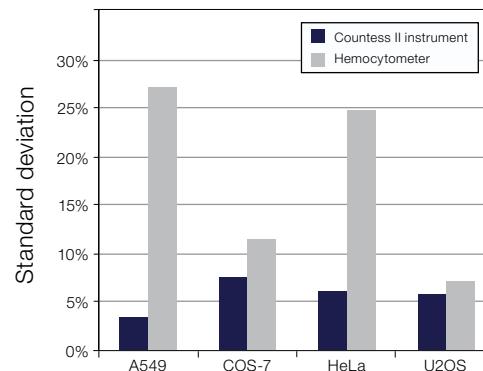
Variability in cell counting using a hemocytometer compared to using a Countess II instrument. Comparable samples of A549, COS-7, HeLa, and U2OS cells were counted by three different operators using a Countess II cell counter and then manually with a hemocytometer and microscope. The user-to-user variability for the hemocytometer is much higher than for the Countess II instrument.

Time savings

The additional time it takes to manually count cells compared to counting with Countess II Automated Cell Counters is often overlooked as an added cost. An individual counting five slides per day (two samples per slide) can save ~10 hours per month by switching to an automated counter with a reusable slide. This additional time can be applied to other activities in the lab, resulting in a significant advantage when switching from manual to automated cell counting.
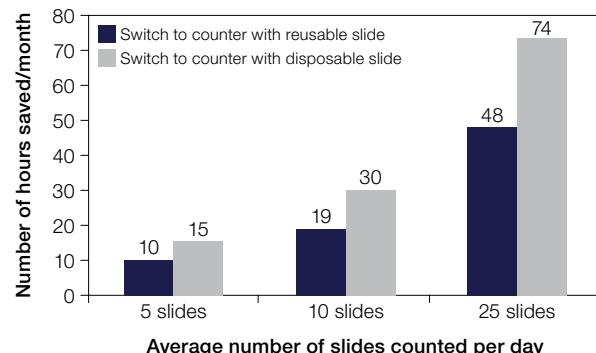
Estimated hours saved per month when switching from manual cell counting to using an automated cell counter.

29

Microplate readers

Multimode vs. single-mode options

Find the perfect reader for your lab

Our dedicated and multimode Thermo Scientific™ microplate readers provide flexibility, performance, and ease of use for virtually any microplate assay. Whether you need to measure absorbance, fluorescence, luminescence, time-resolved fluorescence, or AlphaScreen™ assays—or you think you'll need to expand capabilities in the future— we offer a microplate reader solution tailored to your lab. See key specifications for Thermo Scientific plate readers in the table below.

Key features for accurate, efficient, and reliable measurements

Every reader in this family features auto-calibration every time you power up the instrument, and easy export to Microsoft™ Excel™ software. Additional advantages like robot compatibility, unlimited licenses for Thermo Scientific™ SkanIt™ Software, and an extensive online library of ready-to-use protocols help you save time and maximize instrument uptime, giving the results you need to help answer big scientific questions.

Considerations	Multiskan FC	Multiskan Sky	Fluoroskan	Luminoskan	Fluoroskan FL	Varioskan LUX
	Photometer	Spectrophotometer	Fluorometer	Luminometer	Fluorometer/ luminometer	Scanning multimode reader
Applications	Absorbance		Fluorescence	Luminescence	Fluorescence, luminescence	Absorbance, fluorescence; optional: time-resolved fluorescence (TRF), luminescence, AlphaScreen
Wavelength range (nm)	340–850	200–1,000	Excitation: 320–700; emission: 360–800	270–670	Excitation: 320–700; emission: 360–670	Absorbance/fluorescence excitation: 200–1,000 nm Fluorescence emission: 370–840 nm Luminescence: 360–670 nm TRF excitation: fixed to 334 nm (spectral scanning: 200–840 nm) TRF emission: 400–700 nm (spectral scanning: 270–840 nm) AlphaScreen excitation: fixed to 680 nm AlphaScreen emission: 400–660 nm
Wavelength selection	Filters	Monochromator	Filters	Not required for most applications; filters can be used when necessary	Filters	Monochromator for UV/Vis absorbance and fluorescence intensity Filters for luminescence, TRF, AlphaScreen
Plate format	96 wells (384 wells optional)	μDrop plate/96 wells/384 wells	6–384 wells	6–384 wells	6–384 wells	6–1,536 wells (fluorometry, TRF, luminometry, AlphaScreen) μDrop plate/6–384 wells (absorbance)

Find out more at **thermofisher.com/platereaders**

SkanIt Software

Intuitive setup, quick and powerful analyses

To complement the automated features of Thermo Scientific microplate readers, SkanIt Software provides a truly user-friendly interface with features that help prevent common errors and boost productivity. SkanIt Software is available in two editions: Research Edition for scientists working in life science research, and Drug Discovery Edition, which provides features to help you comply with requirements of FDA 21 CFR Part 11 regulations.

Features that make plate reading easy and efficient

- SkanIt Cloud Library is a searchable library of ready-to-use SkanIt sessions containing experimental protocol notes, plate layout, real assay data generated by scientists for your guidance, calculations, and visualizations

- Intuitive interface with logical, stepwise structure simplifies measurement setup

- Virtual pipette tool makes it easy to map samples to your plate layout

- Extensive analysis tools for many common assays and applications

- Single-click data export to an Excel spreadsheet

- Autoloading feature enables you to automatically load data into your custom Excel template

- Automatically save and send data when run is complete

- Data formatted to fit your needs: *.xlsx, *.pdf, *.xml, and *.txt in addition to SkanIt *.skax files

- Unlimited installations and no annual fee for SkanIt Software

Features that help prevent common errors

- Prompts to rename experiments help prevent data loss

- Measurement data is saved continuously and is not lost unless intentionally deleted by the user

- Back-calculate your standards as a QC check

Find out more at **thermofisher.com/skanit**
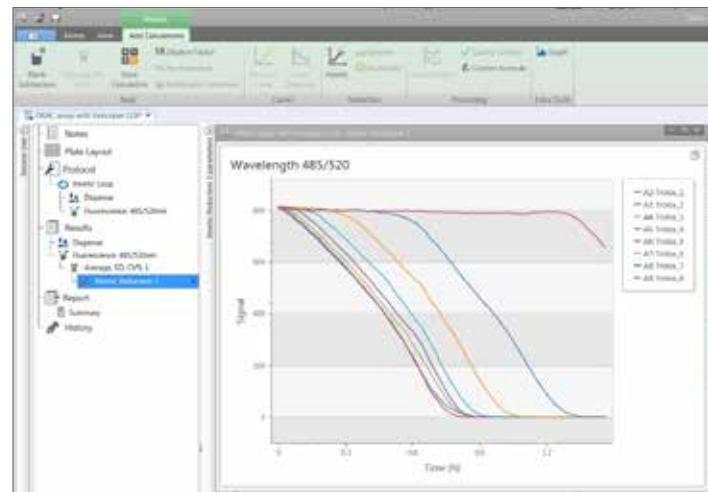
The intuitive user interface of SkanIt Software makes reading microplates easy.

Varioskan LUX Multimode Microplate Reader

Designed for bioscience researchers with a wide variety of needs, the Thermo Scientific™ Varioskan™ LUX Multimode Microplate Reader provides a flexible range of measurement modes. The instrument helps simplify measurement setup with automatic dynamic range selection; its smart safety controls ease your workflow to help you avoid experimental errors. The Varioskan LUX multimode reader raises the bar for reliability and ease. It offers:

- Five detection technologies: absorbance, fluorescence, luminescence, TRF, and AlphaScreen assays

- Modular, upgradable system for customization

- Five measurement modes: endpoint, kinetic, spectral, multipoint, and kinetic spectra

- Spectral scanning for assay optimization

- Simultaneous dispensing and measurement

- Integrated gas module for control of CO_2 and O_2

Find out more at **thermofisher.com/varioskanlux**

Educational resources

BioProbes™ *Journal*, our award-winning print and online magazine, highlights the latest breakthroughs in cell biology, featuring new technologies and products.

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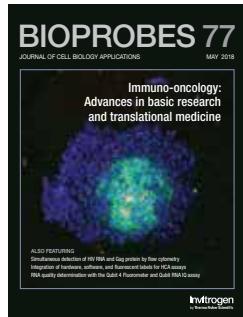
The most complete reference guide on fluorescent labeling and detection—The Molecular Probes™ Handbook: A Guide to Fluorescent Probes and Labeling Technologies—describes over 3,000 reagents and kits representing a wide range of Invitrogen™ labeling and detection products.

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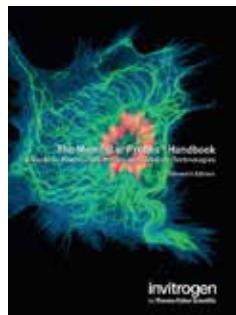
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Ordering information

Product	Cat. No.
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EVOS M7000 Imaging System	AMF7000
EVOS Onstage Incubator	AMC1000
EVOS M5000 Cell Imaging System	AMF5000
EVOS FLoid Imaging System	4471136
EVOS XL Core Imaging System	AMEX1000
CellInsight CX5 High-Content Screening Platform	CX51110
CellInsight CX7 High-Content Analysis Platform	CX7A1110
CellInsight CX7 LZR High-Content Analysis Platform	CX7A1110LZR
HCA Onstage Incubator for CellInsight CX5 instruments	NX5LIVE002
HCA Onstage Incubator for CellInsight CX7 and CX7 LZR instruments	NX7LIVE001
Varioskan LUX Multimode Microplate Reader	VLBL00D0
Multiskan Sky Microplate Spectrophotometer	51119500

Find out more at **thermofisher.com/cellimaging**

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