

ADVANCED  
**IMAGING SOLUTIONS**  
FOR RESEARCH EXCELLENCE

# Company Overview

Logos Biosystems, Inc. is dedicated to developing simple and smart research solutions for scientific professionals worldwide. Our company was established in 2008 and launched its first product - the LUNA™ Automated Cell Counter. Today, our products are in leading research institutions around the world, helping to streamline workflow, boost productivity, and facilitate research reproducibility. With our main headquarters in South Korea, we have expanded our presence with regional offices in the United States and Europe and distributors around the globe to serve our ever growing customer base.

## ADVANCED IMAGING SOLUTIONS FOR RESEARCH EXCELLENCE



### AUTOMATED CELL COUNTERS

*Powerful technology and sophisticated image-based cell detection software for simple automated cell counting*

### CELL IMAGING SYSTEMS

*Cell imaging systems to support a wide range of microscopy needs from simple cell culture analysis to high content screening*

### TISSUE CLEARING SYSTEMS

*The world's first commercial solution for simple, rapid, and efficient tissue clearing*



## TECHNOLOGY DESIGNED FOR YOUR WORKFLOW

The experts in our biological research, electronic engineering, optical engineering, software engineering, mechanical engineering, quality control and assurance, and production teams work together to create the ultimate research solutions for you and your workflow.



# Automated Cell Counters

Cell imaging is our area of expertise. We started with our classic LUNA™ and went on to develop a line of image-based automated cell counters known for their incredible speed, accuracy, and reliability. Our counters are equipped with high quality optics and sophisticated software that make cell counting as simple as inserting your sample and pressing 'count'. Cell concentration and viability data, images, and histograms are at your fingertips in as little as 7 seconds without the subjectivity, variability, and time investment of manual cell counting.

## BRIGHTFIELD COUNTING



**LUNA-II™**  
**AUTOMATED CELL COUNTER**  
L40001 with printer / L40002 without printer

The LUNA-II is cell counting convenience at its finest. Simply insert your sample and the LUNA-II does the rest: autofocus, adjust light, and count in just 15 seconds.



**LUNA-FX7™**  
**AUTOMATED CELL COUNTER**  
L70001 / L70002 Bioprocess Package

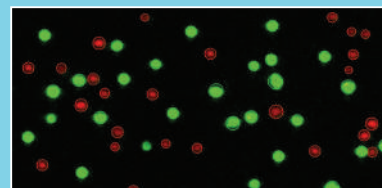
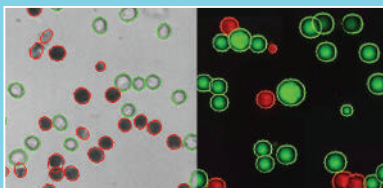
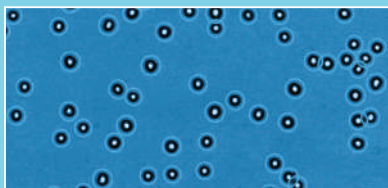
The largest counting volume up to 5  $\mu$ L using multichannel slides, fast and precise autofocus, and dual fluorescence brightfield illumination can end the accuracy debate. 21 CFR PART 11-ready CountWire™ software will support additional complementary solution for your facilities.

## FLUORESCENCE COUNTING



**LUNA-FL™**  
**DUAL FLUORESCENCE CELL COUNTER**  
L20001

Equipped with dual fluorescence and brightfield optics, the LUNA-FL is our powerhouse. The LUNA-FL can assess cell counts, viability, and GFP transfection efficiency without being limited by cell type or size.





## MICROBE COUNTING



AO  
PI

### LUNA-STEM™ AUTOMATED FLUORESCENCE CELL COUNTER FOR STEM CELLS & SVF

L30001

Adipose-derived SVF and stem cells are often contaminated with RBC and noncellular debris. The LUNA-STEM counts live nucleated cells, dead nucleated cells, and non-nucleated cells with precision and consistency for downstream procedures.



AO  
PI    FDA  
PI

### LUNA-II YF™ AUTOMATED YEAST CELL COUNTER

L50001

Yeast strains used in wine and beer production can be notoriously clumpy. The LUNA-II YF has an autofocusing cell counting and declustering algorithm that counts individual yeast cells in just 15 seconds.

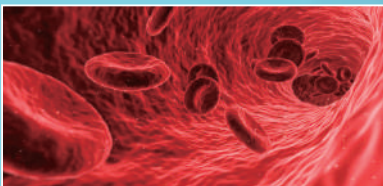


QT    QV

### QUANTOM Tx™ MICROBIAL CELL COUNTER

Q10001

No more waiting days to count CFUs. In less than 30 seconds, the QUANTOM Tx scans up to 10 fields of view to produce accurate single bacterial cell counts. The advanced software can account for the varying shapes, sizes, and arrangements of different bacteria.



# Cell Imaging Systems

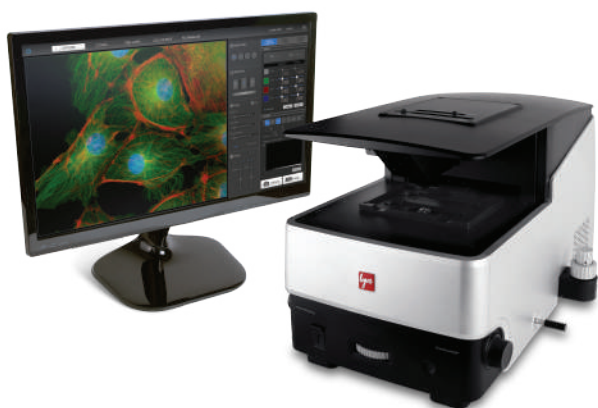
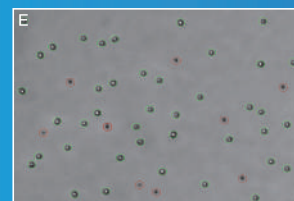
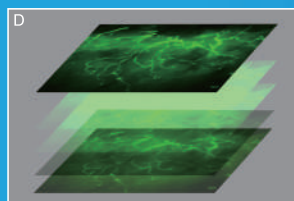
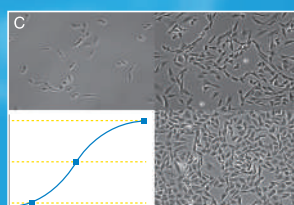
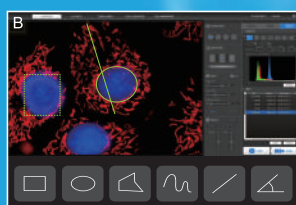
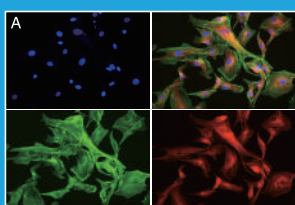
We took what we know about cell imaging and took it a step further. Whether you need a high performance fluorescence imaging system on your benchtop or a high content imaging and analysis system to quantify complex cellular phenotypes, we have you covered.

## CELENA<sup>®</sup> S DIGITAL IMAGING SYSTEM

CS20001  
CS20002 – Starter Kit



The CELENA<sup>®</sup> S Digital Imaging System makes capturing high resolution, publication-quality images a breeze. Don't let its size fool you, the CELENA<sup>®</sup> S is equipped with advanced precision optics, a highly sensitive CMOS sensor, digitally controlled LED light sources with hard-coated fluorescence filters, and a computer with image analysis software. The sophisticated yet simple software supports multicolor fluorescence imaging, brightfield imaging, phase contrast imaging, live cell time lapse imaging, and Z-stack imaging.



- A ..... MULTICOLOR FLUORESCENCE AND BRIGHTFIELD IMAGES
- B ..... ONBOARD DATA ANALYSIS
- C ..... LIVE CELL TIME LAPSE IMAGING
- D ..... Z-STACK IMAGING
- E ..... CELL COUNTING & VIABILITY ANALYSIS

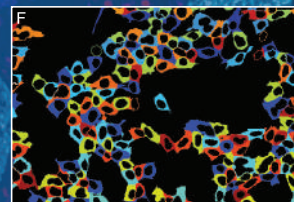
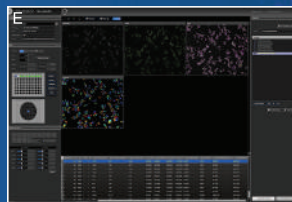
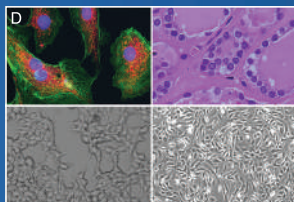
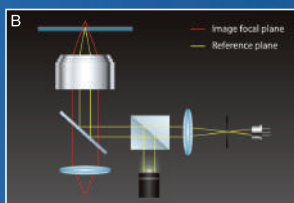
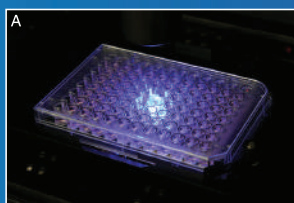


*POWERFUL, FLEXIBLE & AFFORDABLE*

## CELENA® X HIGH CONTENT IMAGING SYSTEM | CX30000



The CELENA® X High Content Imaging System is an integrated imaging system designed for rapid, high content image acquisition and analysis. Customizable imaging protocols, image-based and laser autofocus modules, and a motorized XYZ stage simplify well plate imaging and slide scanning. The integrated CELENA® X Cell Analyzer software allows you to set up advanced image analysis sequences that can be used to quantitatively analyze numerous cellular features for the simplest fixed cell assays to more complicated, time-lapse live cell assays.

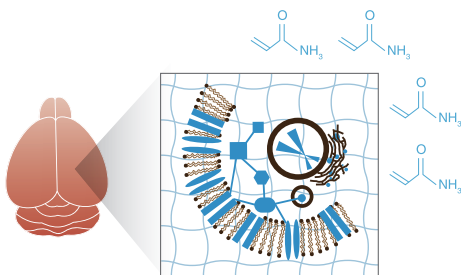


- A ..... FULLY AUTOMATED PLATE AND SLIDE IMAGING
- B ..... LASER AUTOFOCUS
- C ..... LIVE CELL ASSAY SUPPORT
- D ..... FOUR IMAGING MODES
- E ..... POWERFUL, EASY-TO-USE USER INTERFACE
- F ..... CUSTOMIZABLE HIGH CONTENT ANALYSIS

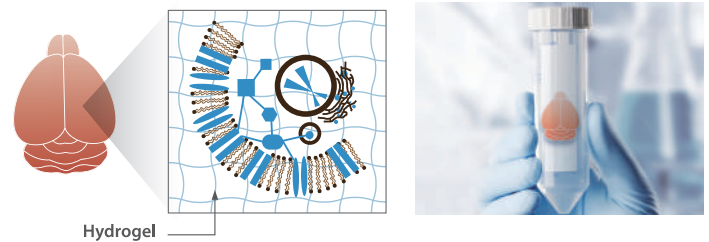
# Tissue Clearing Systems & Reagents

With the X-CLARITY™, we took our imaging expertise in a different direction: volumetric imaging. X-CLARITY™ is based on CLARITY (Clear Lipid-exchanged Acrylamide-hybridized Rigid Imaging / Immunostaining in situ-hybridization-compatible Tissue hydrogel), a tissue clearing method that renders tissues optically transparent while preserving tissue structure and content for volumetric imaging. The X-CLARITY™ systems and reagents standardize, simplify, and accelerate each step of the tissue clearing process. Tissue clearing has never been so simple.

## 1 HYDROGEL INFUSION



## 2 TISSUE-HYDROGEL HYBRIDIZATION



### X-CLARITY™ Hydrogel Solution Kit

C1310X

- X-CLARITY™ Hydrogel Solution - 1 x 1 L
- X-CLARITY™ polymerization Initiator - 1 x 2.5 g

The X-CLARITY™ Hydrogel Solution Kit is a pre-tested hydrogel solution for uniform and consistent tissue-hydrogel hybridization. The kit is made up of X-CLARITY™ Hydrogel Solution, an acrylamide-based solution used to create polyacrylamide, and X-CLARITY™ polymerization Initiator, a thermal free radical initiator also known as VA-044.

### X-CLARITY™ Polymerization System

C20001

A standalone, automated system, the X-CLARITY™ Polymerization System eliminates the need for extra equipment like vacuum chambers, nitrogen gas tanks, or water baths. Samples can simply be placed in well plates or conical tubes to polymerize samples in a heated and strictly anaerobic environment. Vacuum strength, temperature, and a timer can be controlled with a simple touchscreen interface.



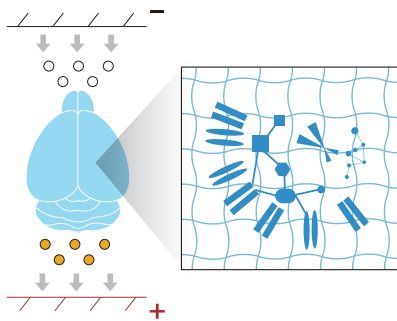


# X-CLARITY™

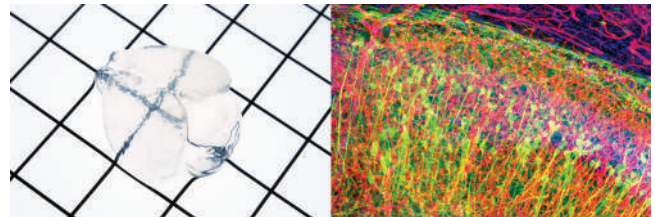
## SYSTEMS & REAGENTS FOR TISSUE CLEARING



### 3 LIPID REMOVAL



### 4 LABELING & IMAGING



#### X-CLARITY™ Tissue Clearing System II

C30001

The X-CLARITY™ Tissue Clearing System II is an all-in-one, easy-to-use solution for electrophoretic tissue clearing. Its unique design accelerates the removal of lipids from tissues while preserving the structural integrity of the sample. Users can set electrophoretic or passive tissue clearing conditions through a simple and intuitive touchscreen interface.

#### Electrophoretic Tissue Clearing Solution

C13103 – 12 x 1L

A premixed, SDS-based buffer optimized for tissue clearing.

#### DeepLabel™ Antibody Staining Kit

C33001

- DeepLabel™ Solution A - 1 x 25 mL
- DeepLabel™ Solution B - 2 x 25 mL
- DeepLabel™ Washing Buffer - 1 x 250 mL
- X-CLARITY™ Mounting Solution - 1 x 25 mL

DeepLabel™ Antibody Staining Kit is a set of non-toxic, ready-to-use reagents optimized for use with clarified tissues for effective antibody penetration and site-specific binding. With DeepLabel™, macromolecular probes rapidly and efficiently penetrate thick, protein-dense tissues at lower antibody concentrations.

#### X-CLARITY™ Mounting Solution

C13101 – 25 mL    C13102 – 10 x 25 mL    C13107 – 20 x 25 mL

X-CLARITY™ Mounting Solution is a refractive index matching medium that minimizes photobleaching and preserves fluorescence signals, making it an ideal solution for clarified and labeled tissue samples.



# Reviewed and Approved by Scientists

Our products are used by scientific professionals around the world to accelerate their workflow. Find out what our customers have to say about Logos Biosystems products:

## AUTOMATED CELL COUNTERS

### **Matthew Scarnati**

Child Health Institute of New Jersey

"The LUNA-II is great product and saves a ton of time in the lab. I previously used a hemocytometer for all of my counting needs, however with multiple stem cell lines to work with this proved to be quite time consuming. The cell counter not only saves time, but gives accurate and yield consistent counts between cell lines. Great product!"

### **Gelina Sani**

Children's National Medical Center

"The LUNA-FL is one of my favorite machines in our lab. It lets me acquire cell counts so quickly so I can go on with my bench work. Not only are we able to count but we can look at other statistics like viability and average cell size with just the push of a button. The best part about this counter is the accuracy. I am able to reliably count every cell line that I put in, and am able to do it again the next day. I'm so glad we have this system in our lab!"

### **Regina Wulff**

Weill Cornell Medicine

"The LUNA-FL consistently produces fast and reliable results. The counts and viabilities provided by this instrument are consistent with values provided by flow cytometry. This product is remarkably easy to operate, care for, and maintain. In comparison to similar products on the market, the LUNA-FL is exceptional for the low cost."

### **Violetta Medik**

Evelo Biosciences

"The QUANTOM Tx is very easy to use. The sample prep is quick and the replicates are pretty tight. I used it for counting very small cells, as well as bacteria that grow in chains or clusters and the software does a great job analyzing the image. I compared the results to other methods and the results are spot on. Overall, I am very happy with the purchase."

## CELL IMAGING SYSTEMS

### **Alessio Menga**

University of Bari, Italy

"The CELENA S is fast to learn, easy to use, and has made a significant difference to our workflow. Being able to quickly image our samples directly in our own lab, without the need for a darkroom, is amazing! The CELENA S is highly sensitive to fluorescence signals, so has been an excellent solution to our needs. I highly recommend this product to anyone who does a lot of fluorescence cell imaging and as well as to beginners."

### **Jason Lee**

AmtixBio

"The best thing about the CELENA S is the image quality. We can use it for quick screening or for data collection and in both cases get sharp, detailed images. The multipurpose nature of the CELENA S software makes it a great addition to our lab. Our researchers learned to get high quality images in a few minutes, which is great compared to the hours of training and practice it takes to learn on a traditional setup."

### **Myoung Sup Shim**

Duke University Health System

"We need live cell time-lapse imaging for our studies but other imaging systems did not produce acceptable images for long-term imaging. The CELENA X is the only system that has given us satisfactory multi-fluorescence images of multi-well plates. The automatic laser focusing is especially fantastic. We don't waste time taking individual images as the CELENA X does high-throughput imaging and focuses great for all wells over long periods of time. Image quality is great for every photo and making high-quality videos is easy. Cells remain healthy, and there is minimal fluorescence quenching even after extensive imaging (5 minute intervals for over 72 hours). I strongly recommend the CELENA X for live cell time-lapse imaging and other applications."



## TISSUE CLEARING SYSTEM & REAGENTS

### **Doug Richardson**

Harvard Center for Biological Imaging

"We purchased the X-CLARITY Tissue Clearing System for our facility and have been very satisfied with its easy-to-use design and consistent results. The X-CLARITY has now allowed many more researchers to enter the field of tissue clearing. In my opinion, the X-CLARITY Tissue Clearing System along with the X-CLARITY Polymerization System will help expand the availability of this technique to all scientists who hope to add it to their laboratory's repertoire."

### **Victoria Neckles**

Clemson University

"Great results, easy to use! This product was effective at clearing my tissue samples. It cleared whole brains, hearts, stomach, kidneys, livers, etc. The user manual was easy to read and easy to follow. There is little attention and maintenance required while the system in running."

### **Chiara Magliaro**

Center E Piaggio - University of Pisa

"The X-CLARITY is a very easy-to-use and versatile. I started using it for murine brains, and it was quite easy to customize the protocols also for different biological samples (e.g., 3D advanced neural constructs). It allows me to avoid both waste of time and money."

### **Terika Smith**

University of South Carolina

"The X-CLARITY is very easy to use and is very user friendly. I've used it to clear mouse nerves and spinal cords in approximately 4-6 hours. We've been getting great results with this system and I would highly recommend it to anyone interested in tissue clearing."

### **Yoko Yazaki-Sugiyama**

Okinawa Institute of Science and Technology

"For quite a while we were using passive immersion method to obtain transparent zebra finch brains, but this was time-consuming and always a pain in the neck. With the X-CLARITY Tissue Clearing System, even a whole brain can be cleared within several hours with excellent consistency as well as better signal-to-noise ratio when acquiring fluorescent images from deep tissue. It has made our lives a lot easier. TIME IS MONEY!"

### **Uri Manor**

Salk Institute for Biological Studies

"The X-CLARITY is a delight to use and significantly lowers the barrier to tissue clearing imaging applications. With better clearing, and faster turnaround time, we were able to generate many more samples and images than would otherwise have been possible. Highly recommended!"

### **David Mulder**

Universität Hamburg

"Great product, produces rich data. So far, the X-CLARITY has helped us to get amazing data on astrocyte morphology in the olfactory bulb. Thanks to the clearing, it makes slicing the tissue for microscopy redundant. Therefore we are able to study the more complex networks in their physiological form. Great product!"

### **Claire Crola Da Silva**

NSERM

"The X-CLARITY is essential for our research. Very easy to use. It gives robust and reproducible results and allows us to standardize the methodological chain."

# ADVANCED IMAGING SOLUTIONS FOR RESEARCH EXCELLENCE



biosystems

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LBSM-RD-BR-TP-001