BIO BASIC® - Cell Counters

The Next Generation of Cell Counters and Imaging Solutions
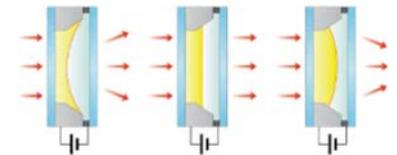
LUNA-II™ Automated Cell Counter

The Luna-II™ automated cell counter is the most advanced and affordable brightfield cell counter. It has been recognized to have the best-in-class accuracy with unmatched speed, and consistency of measurement. This instrument integrates precision microscopy optics, onboard computer, image analysis software with various histograms and cell-size gating data, an exceptional accuracy in cell de-clustering, a new autofocusing mechanism based on liquid lens technology and built-in printer.

Accurately detects total/live/dead cells at concentrations ranging from 5x104 to 1x107 cells/ml and cells sizes between 3 and 60μm.

The LUNA-II™ automated cell counter has integrated a novel focusing mechanism based on liquid lens technology. The liquid lens does not use any mechanical moving parts to change the Z stage. Instead, the Z position of the sample is rapidly obtained by the application of a small voltage to the liquid lens. The elimination of moving parts removes noise and significantly reduces the need for servicing. Even after multi-million cycles of focusing, the liquid lens does not require repair or service.

Feature: De-Clustering with the LUNA-II™

The LUNA-II™ automated cell counting algorithm has been recognized to have the best-in-class cell counting accuracy. The LUNA™ software has exceptional accuracy in cell de-clustering and can successfully count clumpy cells. The LUNA-II™ automated cell counter has inherited this well-known performance aspect of the LUNA™ software. Clumpy cells are de-clustered quickly and automatically, then counted as individual cells.
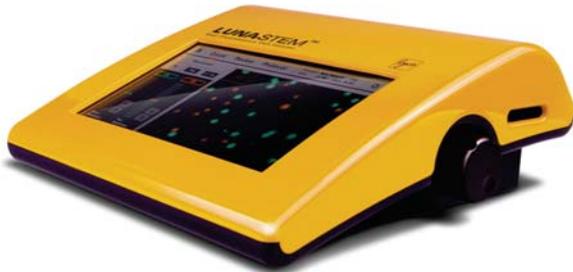
LUNA-FL™ Dual Fluorescence Cell Counter

The Luna-FL™ automated cell counter is a stand-alone compact instrument with combined fluorescence microscopy and image analysis software. It accurately gives the count of live/dead of any type of cells, due to its dual fluorescene microscope optics. It is highly optimized for the count of primary cells, stem cells, splenocytes PBMCs, etc. It is equipped with a powerful on-board analysis, an image overlay option, cell size gating capabilities, and the ability to generate and export data reports. The LUNA-FL™ Dual Fluorescence Cell Counter is integrated with on-board flow cytometry type gating software

This system can also perform GFP expression analysis in less than 30 seconds. The Luna-FL™ will count the number of GFP transfected cells, then generate and display a fluorescence intensity histogram.

LUNA-STEM™ Automated Fluorescence Cell Counter for Stem Cells and SVF

The LUNA-STEM™, integrated with dual fluorescence as well as bright field optics, is a giant leap forward for automated cell counting and viability analysis. Using two dyes, Acridine Orange (AO) & Propidium Iodide (PI), the LUNA-STEM™ provides sensitive and accurate data for almost all cell types, especially stem cells and SVF cells.

With the LUNA-STEM™, all nucleated and non-nucleated cells are counted and analyzed. For example, the LUNA-STEM™ can detect and analyze the various SVF nucleated cells (adipocytes, blood cells, and others) and non-nucleated cells (RBCs, microvascular elements, and others), which is currently an impossibility for other cell counters.

Features:

- **Powerful on-board analysis** - Once the LUNA-STEM™ has counted your cells, the built-in software immediately generates cell viability data. Green and red circles indicate live and dead cells, respectively.
- **Cell size gating** - Counted cells can be gated based on cell size. Using the histogram that displays live and dead cell population, you can easily exclude or include specific sizes by simply dragging the ends of the histogram.
- **Image overlay** - Three images captured from each channel (bright field, green, red) can be merged directly on the screen. The individual brightness of each color can be adjusted. All images can be saved onto an external USB drive.

Also available - Microbial Cell Counters

LUNA-II YF™ Automated Yeast Cell Counter

- **Fully automated yeast cell count and viability analysis** - Automatically focuses on yeast cell samples, captures high resolution images in two fluorescence channels, and runs the information through an advanced counting algorithm
- **Unmatched counting accuracy and speed** - Unique algorithm produces count and viability data in just 15 seconds
- **Compatible with LUNA™ reusable and disposable slides**
- **Lowest count per cost on the market**

QUANTOM Tx™ Microbial Cell Counter

- **Single bacterial cell detection** - Novel cell detection and declustering algorithm that can accurately count individual bacterial cells in even the tightest clusters.
- **Rapid quantification** - Results in minutes, no culturing required
- **Data report generation** - PDF reports can be generated and saved with total cell counts, cell images (up to 20), counting parameters, and histograms

Spotlight: Reusable Slides for LUNA™ Cell Counting Systems

The new LUNA™ Reusable Slide has been designed to work with the LUNA™ family of cell counters for cost-efficient and accurate cell counting. The LUNA™ Reusable Slide has the affordability of manual cell counting without the associated subjectivity and time. PhotonSlides™ are disposable precision slides that offer the ultimate counting experience with no mess or cleanup. Both slides have been designed to maintain the highest standard of cell counting accuracy for fluorescence cell counting.

iRiS™ Multi-Color Fluorescence Imaging Made Easy

The iRiS™ Digital Imaging System pairs high performance optics, automation, and a user-friendly workflow to create a seamless user experience. High quality images can be captured consistently regardless of the operator's level of experience.

Features:

- Engineered with the highest quality Japanese-manufactured optical components.
- Guarantees exceptional quality in transmitted light imaging.
- Long lasting LEDs and hard coated optical filters have been integrated to provide high performance robust fluorescent imaging.
- Equipped with an ultra low noise scientific-grade CMOS camera to maximize the signal-to-noise ratio.
- Simply capture and analyze your images in real-time; there is no need to transfer your images to a separate platform for analysis
- Enables time lapse and Z-stack image acquisition with only a few mouse clicks.
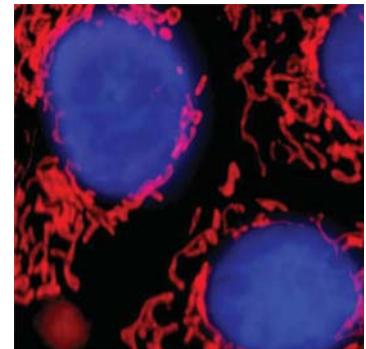

BPAE cells imaged with iRiS™

BIO BASIC® - X-Clarity

X-CLARITY™
The Ultimate Solution for Tissue Clearing

The X-CLARITY™ dramatically reduces the negative effects (burning, melting, black precipitates formation, bubble trapping) associated with standard electrophoretic tissue clearing with a unique electrode design and an active cooling system.

The X-CLARITY™ ETC Controller works as both a power supply and a temperature controller. The tissue sample is placed inside the X-CLARITY™ ETC Chamber where it undergoes electrophoresis to remove lipids. Clearing buffer is continually circulated through the chamber under temperature controlled conditions, minimizing the probability of artifacts arising due to poor temperature control.
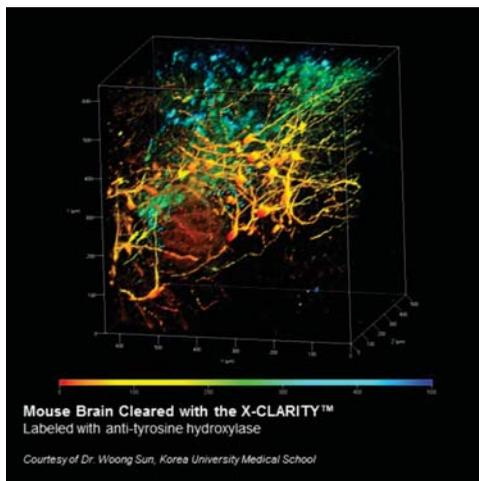
This advanced system ensures that tissue clearing occurs efficiently and rapidly. It can clarify a whole adult mouse brain in under 48 hours. Moreover, the X-CLARITY™ Tissue Clearing System successfully produces transparent tissues that are efficiently penetrated by and labeled with macromolecules such as antibodies or oligonucleotides. This allows for the 3D imaging of large tissues at single-cell resolution.

Mouse Brain Cleared with the X-CLARITY™
Labeled with anti-tyrosine hydroxylase

Courtesy of Dr. Woong Sun, Korea University Medical School

Features:
- Exceptional transparency
- Fastest processing time
- Easy installation and operation
- Minimized artifacts
- No leaking, no boiling
- Pre-optimized protocol
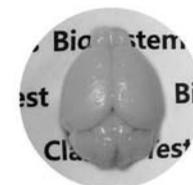
Mouse Brain
Prior to Clearing

After Clearing
with X-Clarity™

Simple 5-step Protocol:

Hydrogel Infusion	Polymerization	Tissue Clearing	Labelling	Imaging

For more information, or to order, please contact Bio Basic Inc.:

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