LUNA-STEM™
Dual Fluorescence Cell Counter

SVF AUTOMATED CELL COUNTER

The Luna-STEM™ is

a dual fluorescence cell counter

that measures cell number and viability.

The most advanced fluorescence optics

and analysis software enables the Luna-STEM™

to accurately count nucleated and

non-nucleated cells such as stem cells and

stromal vascular fraction(SVF), setting

itself apart from other cell counters.

LUNA-STEM™

The Luna-STEM™ is a stand-alone compact instrument integrated with dual fluorescence microscopy and image analysis software.

Its interactive touch screen provides various easy-to-use functions as well as accurate counting experiences.

Dual Fluorescence + Bright Field Optics

The Luna-STEM™, integrated with dual fluorescence as well as bright field optics, is a quantum leap for automated cell counting and viability analysis. By using 2 staining dyes, AO(Acridine Orange) & PI (Propidium Iodide), it provides sensitive and accurate results for almost all cell types, especially for stem cells and SVF.

With the Luna-STEM™, all nucleated and non-nucleated cells are counted and analyzed. For example, SVF, which contains various nucleated cells (adipocytes, blood cells, and others) and non-nucleated cells(RBCs, microvascular elements, and others), can be separately analyzed, which is impossible to other cell counters.
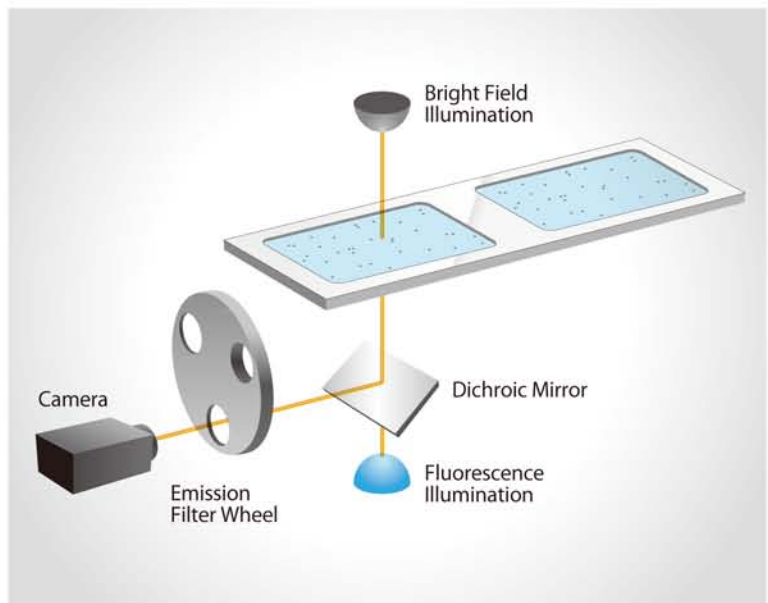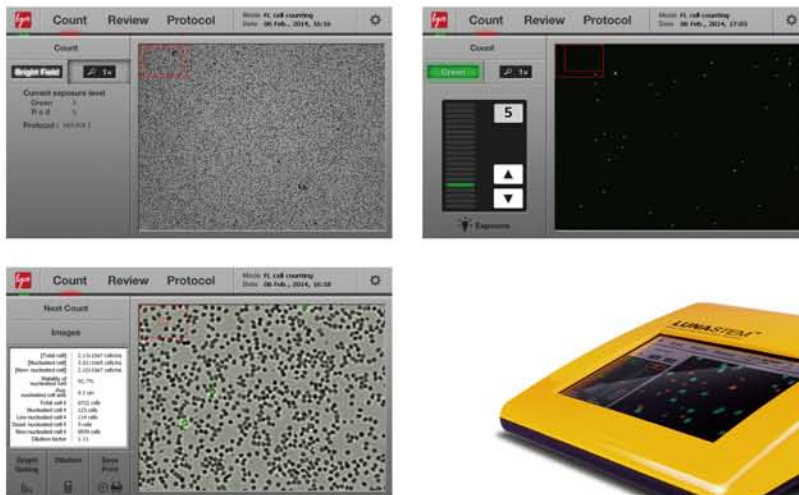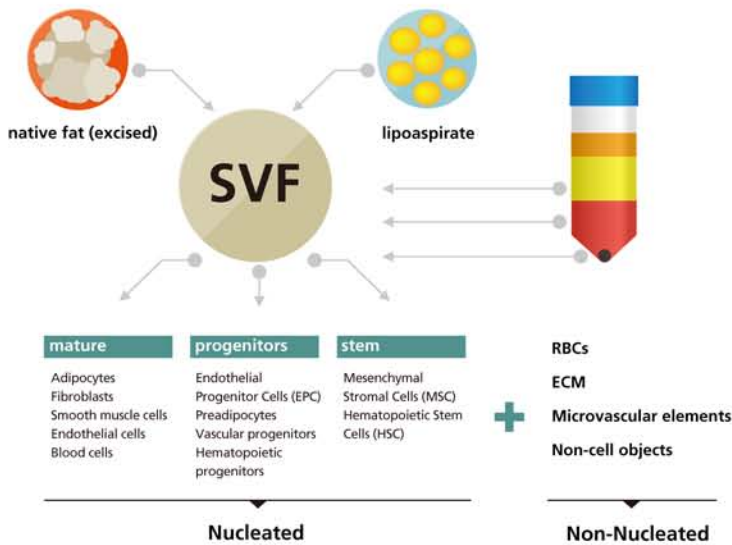

PhotonSlide™

The PhotonSlide™ is a new counting slide which has ultra low auto-fluorescence equivalent to glass hemocytometer.
Its patented design has precision chamber height to evenly distribute cells throughout the counting chamber.

Nucleated & Non-Nucleated Cell Analysis

native fat (excised) → SVF ← lipoaspirate

mature	progenitors	stem
Adipocytes	Endothelial	Mesenchymal
Fibroblasts	Progenitor Cells (EPC)	Stromal Cells (MSC)
Smooth muscle cells	Preadipocytes	Hematopoietic Stem
Endothelial cells	Vascular progenitors	Cells (HSC)
Blood cells	Hematopoietic progenitors	

+

RBCs

ECM

Microvascular elements

Non-cell objects

Nucleated   **Non-Nucleated**

Total Cells

Nucleated Cells
- Live cells (AO positive, Green)
- Dead cells (PI positive, Red)

Non-Nucleated Cells
- AO/PI negative

LUNASTEM™

Interactive Software Interface

Powerful On-board Analysis
After cell counting is performed, the built-in software gives cell viability data immediately. For validation, live cells are tagged in green and dead cells are circled in red.

Image Overlay
3 images captured from each channel(bright field, green, & red) can be merged directly on the screen. The brightness of each color can be adjusted independently for accurate monitoring. All images can be saved onto a USB drive.
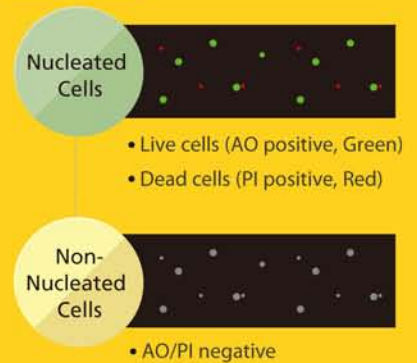
Data Report
The analyzed data can be saved as a PDF report or CSV file. Counting results, cell images, and histograms are generated into a single PDF file which is saved into a USB drive.
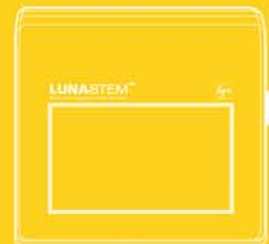
Luna™ Printer
After each count, the results can be immediately printed out with the Luna™ Printer.

Advanced	Dual fluorescence optics integrated in the brilliant design
Fast	30~60 sec after analyzing 3 images generated from bright, green, &red channels
Accurate	To count nucleated & non-nucleated cells Separately superior to conventional counters
Convenient	Simple counting procedure and easy-to-use

Specifications

Sample Volume	**10 µl**
Cell Counting Time	30~60 sec (Depending on sample conditions)
Cell Concentration Range	5×10^4 - 2×10^7 cells/ml (Optimal range)
Cell Size Range	Detectable Range: 1 - 90 µm Optimal Range: 5 - 60 µm
Excitation wavelength	470 ±20nm
Emission wavelength	525 ±25nm, 600 nm (LP)
Light Source	LED
Image Resolution	5 MP
LCD Display	7 inches (800 x 480 pixels)
Dimensions (W×D×H)	22 × 21 × 9 cm (8.6 × 8.3 × 3.5 inch)
Weight	1.8 kg (4 lb) *without the external power adaptor

Ordering Information

Cat#	Product
L30001	Luna-STEM™ Automated Cell Counter
PhotonSlide™	
L12005	50 slides (100 counts)
L12006	500 slides (1,000 counts)
L12007	1000 slides (2,000 counts)
F23001	AO/PI cell viability kit