

# Guava<sup>®</sup> Muse<sup>®</sup> Cell Analyzer

Experience Simple, Affordable Flow Cytometry.



# Simple, Affordable Flow Cytometry. Now at Your Side.

Sophisticated cell analysis doesn't have to be exclusive, complicated, or costly. With the Guava® Muse® Cell Analyzer, you can now achieve highly quantitative results at a fraction of the price, effort, and time. The Muse® Cell Analyzer packs 3-parameter analysis into a compact, easy to use benchtop device, making flow cytometry accessible to anyone, any time. A user-friendly touchscreen interface, intuitive software, and optimized "Mix-and-Read" assays work to simplify your research.

- Sleek design creates simple, effortless operation
- Intuitive software and touchscreen interface enables rapid set-up and analysis
- Optimized Muse Assays facilitate simplified protocols and a short time to answers
- Compact size; footprint of only 8 in x 10 in (20 cm x 25 cm) takes up only a small amount of precious lab bench space
- Affordable price point allows for easier access to reliable flow cytometry analysis

## Highly intuitive touchscreen interface

The Muse Instrument features a highly intuitive touchscreen interface that allows for simple step-by-step operations, so easy that no flow expertise is required to run assays. The touchscreen prompts you through simple on-screen instructions and guides you through sample loading to simple setting adjustments to results—in just a few steps!

## Cell analysis is effortless and fast

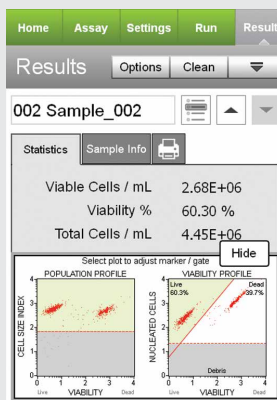
For the assays you rely on most, we've developed optimized kits validated for robust performance on the Muse Cell Analyzer. Typical cell preparation protocols have been condensed and simplified so sample preparation is fast and easy. You don't need to optimize any software settings—the Muse Instrument calculates all gating parameters and thresholds for you. Results are displayed in both graphical and statistical formats specific to each application, making analysis unambiguous. Spend less time with experimental set-up, avoid reagent waste, and save money—we've done all the work for you.

## Muse Assays

Choose from a broad range of Muse Assays for interrogating multiple aspects of cell biology:

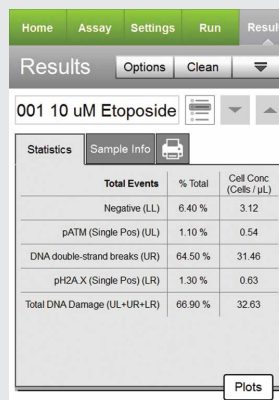
- Count and viability
- Cell proliferation
- Apoptosis
- Cell signaling
- Cell cycle
- DNA damage
- Autophagy
- Immunology
- Algae research
- Malaria research

### Muse Cell Count and Viability Kit



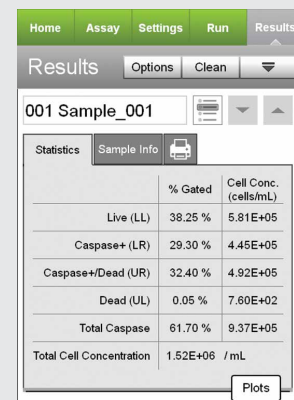
Absolute total cell counts and viability of dead and dying cells based on differential permeability of two DNA-binding dyes.

### Muse Multi-color DNA Damage Kit



Multiplex analysis of phosphorylated ATM and Histone H2A.X to detect extent of cellular DNA damage.

### Muse MultiCaspase Kit



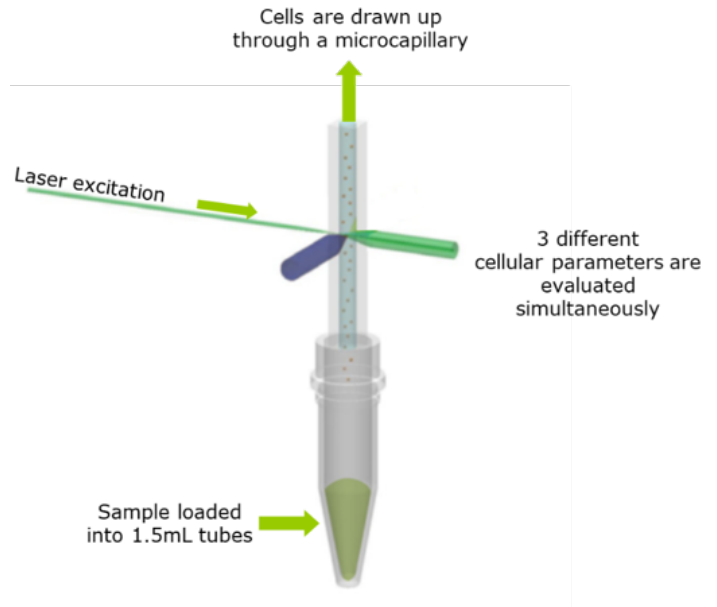
Apoptosis monitoring using a single reagent detecting multiple caspase activity and a dead cell dye.

## Novel, miniaturized cytometry

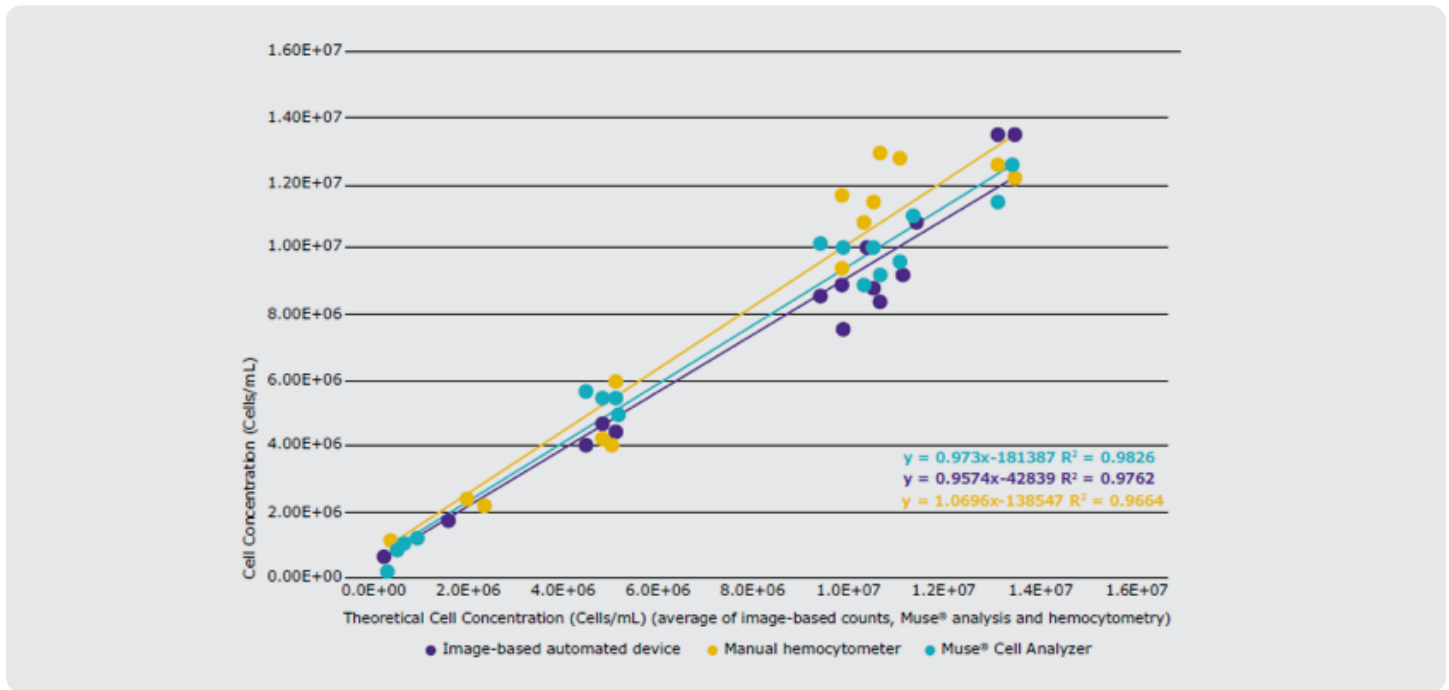
The Muse Cell Analyzer uses miniaturized fluorescent detection and microcapillary technology to deliver truly accurate, precise, and quantitative cell analysis compared to other methods. Versatile enough to analyze both suspension and adherent cells 2-60  $\mu\text{m}$  in diameter, the Muse Cell Analyzer provides greater accuracy and precision than other analysis methods.

## Laser-based fluorescence detection

The Muse System delivers high-performance cell analysis using a microcapillary and miniaturized optics, which occupy one-tenth the space of a typical flow cytometer. Laser-based fluorescence detection of each cell event can evaluate up to 3 cellular parameters.



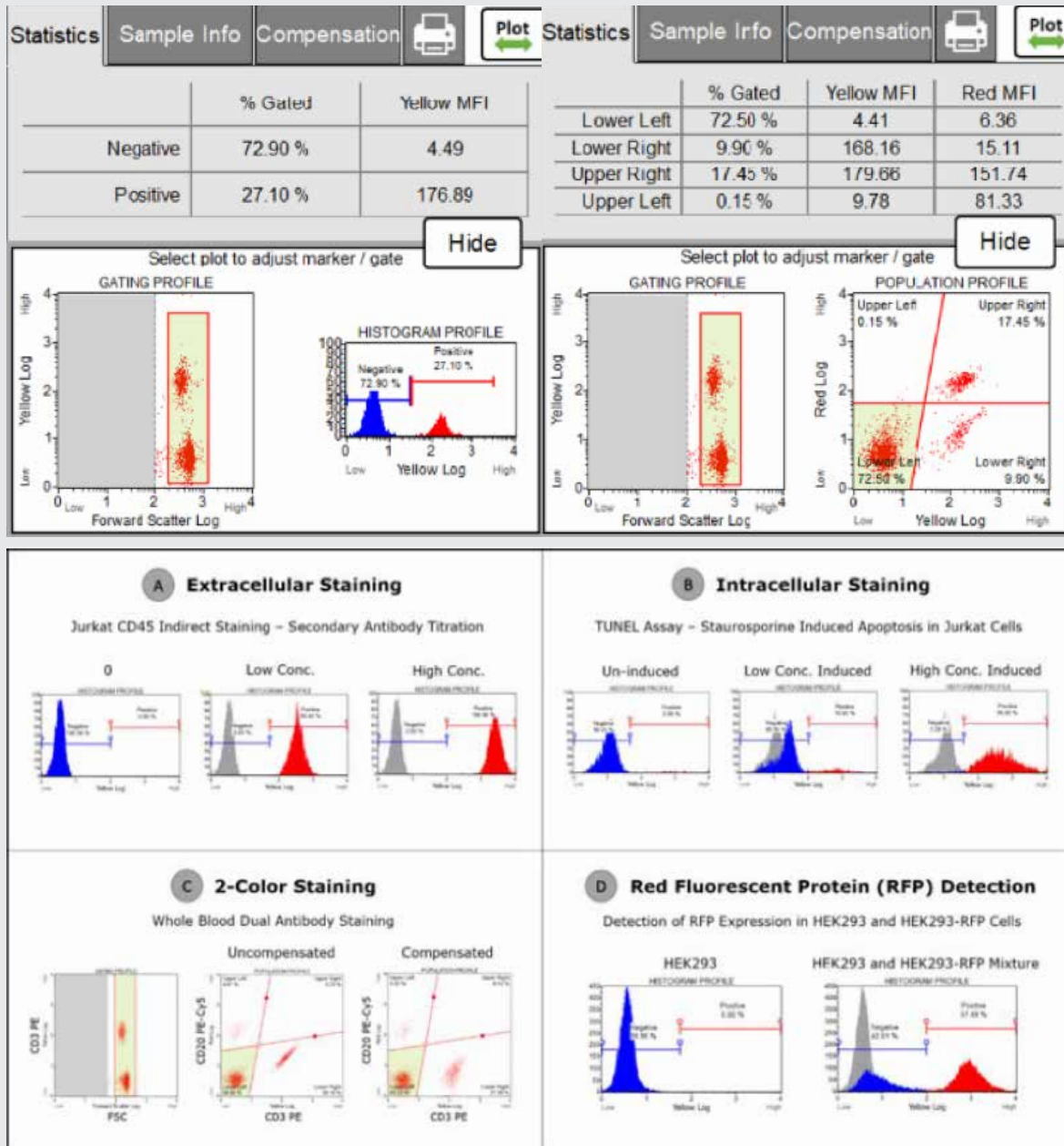
## Measure more accurately and reliably



The Muse Cell Analyzer counts cells more accurately than manual hemocytometry or image-based automated analysis. Multiple adherent and suspension cell types (MCF-7, K562, HB, CHO-K1, and Jurkat cells) were counted using the methods shown. Cell counts from all 3 methods were averaged to obtain a "theoretical cell concentration." Each point represents the average of 3 replicates, and each data series was fit with linear regression. Muse concentration values showed the highest correlation coefficient and slope when compared to the "theoretical cell concentration," indicating superior accuracy.

## Muse Open Modules

The Muse Cell Analyzer has 2 open modules, allowing the user to run their own 2-color assays. The open modules allow users flexibility to run 2-color (yellow and red fluorescence) experiments while still maintaining the simplicity of a guided software interface. Using the open modules, users can apply the system to a variety of extended problems such as: extracellular marker detection, intracellular detection, and the characterization of red fluorescent proteins and transfection levels.



Example experiment that can be performed using Muse® Open Module Yellow: (A) Jurkat cells were stained with unlabeled anti-CD45 primary antibody and two different concentrations of PE-labeled secondary antibody. (B) Jurkat cells were induced to apoptosis by staurosporine and the TUNEL assay was performed on the cells. (C) Whole blood was stained with PE-labeled anti-CD3 and PE-Cy5 labeled anti-CD20 antibodies. (D) Red fluorescent protein (RFP) expression was tested using untransfected HEK293 and RFP transfected HEK293-RFP cells lines.

# Ordering Information

## Muse® Assays

Part Number	Product Name
<b>Cell Health</b>	
MCH100102	Muse® Count & Viability Kit (100 tests)
MCH100104	Muse® Count & Viability Reagent (200x)
MCH200109	Muse® Autophagy LC3-Antibody Based Kit (50 tests)
MCH200110	Muse® RFP-LC3 Reporter Autophagy Assay Kit (100 tests)
MCH600103	Muse® Count & Viability Reagent (600 tests)
MCH100111	Muse® Oxidative Stress Assay (100 tests)
MCH100112	Muse® Nitric Oxide Assay (100 tests)
MCH100114	Muse® Ki67 Proliferation Assay (100 tests)
MCH100106	Muse® Cell Cycle Kit (100 tests)
MCH100107	Muse® Cell Dispersal Reagent (100 tests)
<b>Cell Signaling</b>	
MCH200101	Muse® H2A.X Activation Dual Detection Kit (50 tests)
MCH200102	Muse® EGFR-RTK Activation Dual Detection Kit (50 tests)
MCH200103	Muse® PI3K Activation Dual Detection Kit (50 tests)
MCH200104	Muse® MAPK Activation Dual Detection Kit (50 tests)
MCH200105	Muse® Bcl-2 Activation Dual Detection Kit (50 tests)
MCH200107	Muse® Multi-Color DNA Damage Kit (50 tests)
MCH200108	Muse® PI3K/MAPK Dual Pathway Activation Kit (50 tests)
MCH200113	Muse® STAT-1 Activation Dual Detection Kit (50 tests)
MCH200114	Muse® EGFR/MAPK Activation Dual Detection Kit (50 tests)

Part Number	Product Name
<b>Apopotsis</b>	
MCH100105	Muse® Annexin V & Dead Cell Kit (100 tests)
MCH100108	Muse® Caspase-3/7 Kit (100 tests)
MCH100109	Muse® MultiCaspase Kit (100 tests)
MCH100110	Muse® MitoPotential Kit (100 tests)
<b>Immunology</b>	
MIM100102	Muse® Human CD8 T Cell Kit (100 tests)
MIM100101	Muse® Human CD4 T Cell Kit (100 tests)
MIM100103	Muse® Human B Cell Kit (100 tests)
MIM100104	Muse® Human CD25 Lymphocyte Kit (100 tests)
MIM100105	Muse® Human CD69 Lymphocyte Kit (100 tests)
<b>Algae Research</b>	
MIA100101	Muse® Algae Count & Viability Kit (100 tests)
MIA100102	Muse® Algae Nile Red Kit (100 tests)
<b>Malaria Research</b>	
MPA100101	Muse® <i>P.f.-P.v.</i> Antigen Detection Assay (100 tests)
MMA100101	Muse® RBC Invasion Assay (100 tests)

# Ordering Information

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## Instruments and Accessories

Part Number	Product Name
0500-3115	Muse® Cell Analyzer
0500-3120	Muse® Replacement Flow Cell
4200-0140	Instrument Cleaning Fluid (100 mL)
MCH100101	Muse® System Check Kit
0110-8617	Muse® Yellow and Red Open Modules

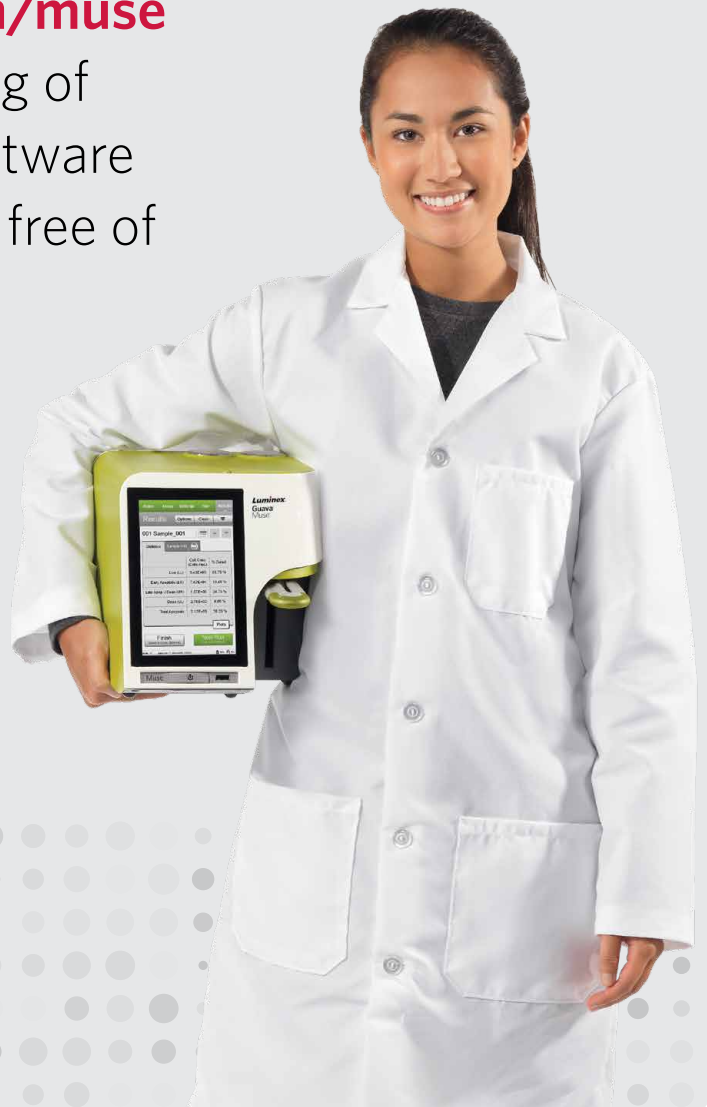
## Muse® Product Specifications

<b>Input Cell Numbers</b>	User selected; Cell concentration range of 10,000-500,000/mL
<b>Sample Format</b>	Single loader; <2 minutes per sample Sample volume and number of cells counted can be specified Absolute cell counts
<b>Cell Types</b>	Homogeneous or heterogeneous, suspension or adherent, primary cells or cell lines
<b>Cell Size</b>	2-60+ microns (µm) in diameter
<b>Data Handling</b>	Data analyzed on system, with USB export of graphs, CSV files, and raw data files

# We are continually releasing new **Muse Assay Modules and Kits!**

- Video demonstration
- Most recent listing of Muse Assays
- Application notes
- Publications
- Software updates
- And more!

Please visit [luminexcorp.com/muse](http://luminexcorp.com/muse) for the most up-to-date listing of Muse Assays. New assay software modules can be downloaded free of charge from the website.





**Luminex**  
complexity simplified.

For more information, please visit [luminexcorp.com/muse](https://luminexcorp.com/muse)

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