

Luminex[®]

Pick Your Platform

Make Your Mark

Broadest spectrum of flow cytometry solutions, taking your research to the next level



What if you could have the power of multiparameter cellular analysis at your fingertips?

Innovative.

Through a strong foundation of innovation, Luminex offers the broadest range of flow cytometric analyzers available. The unique capabilities of these flow cytometers can take your research to the next level.

Amnis® FlowSight® and ImageStream®^{MX} Mk II Imaging Flow Cytometers

FlowSight® and ImageStream®^{MX} Mk II imaging flow cytometers were the first cell analyzers to combine the best of flow cytometry and microscopy, yielding novel insights into cell biology. Our imaging flow cytometers use the power of TDI-CCD imaging technology to take your cell analysis research to the next level.

Amnis CellStream® Benchtop Flow Cytometers

CellStream® benchtop flow cytometers, featuring patented Amnis optics technology and up to 7 lasers, deliver unparalleled sensitivity, plus the flexibility to customize and expand the system according to your research needs and budget.

Guava® easyCyte™ Benchtop Flow Cytometers

easyCyte™ benchtop flow cytometers feature patented microcapillary fluidics and up to 3 lasers, enabling them to generate accurate absolute cell counts, consume minimal sample, and produce low waste. They are also easy to use and maintain.

Guava® Muse® Cell Analyzers

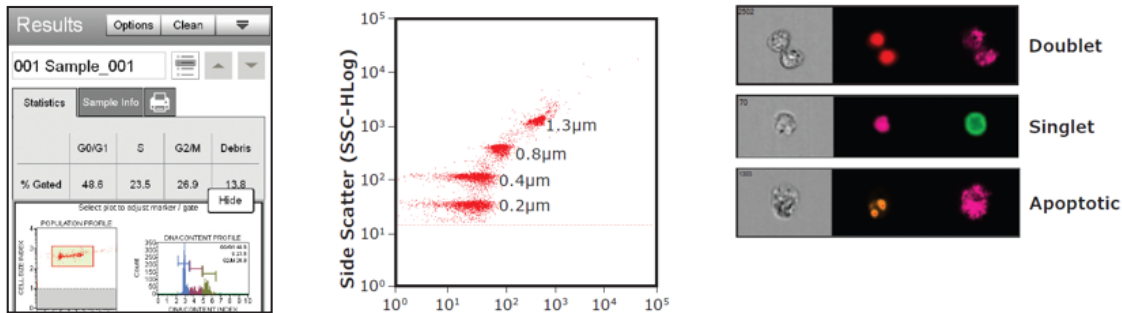
The Muse® Cell Analyzer packs 3-parameter analysis into a compact, easy-to-use benchtop device, making flow cytometry accessible to anyone, at any time.



What if anyone in your lab could easily run sophisticated cell health analyses, clearly delineate cell populations, and even visualize and quantify individual cellular events?

Intuitive.

Our flow cytometry systems are designed for ease of use, so you can focus on your research and advance your discovery. Our powerful and intuitive analysis software is designed to expedite results for common assays, while providing the versatility to run custom ones.



Representative data from Guava® Muse®, Guava® easyCyte™, and Amnis® FlowSight®

How much more would you accomplish with simple, intuitive assays based on powerful flow cytometry principles?

Flexible.

Our flow cytometry systems are supported by a broad portfolio of reagents and kits to help you gain greater insights into cellular status and processes. Muse and FlowCollect pre-optimized, multi-color kits simplify the assessment of cell health, cell signaling, and other applications.



Through innovation, ease of use, and flexibility, we have created simple, versatile, sensitive, visual, and boundless cytometric analysis platforms.

Look inside to pick your platform and make your mark...

luminexcorp.com/flowcytometry

Guava[®] Muse[®] Cell Analyzer



Simple.

Are your Western blots lacking the rigorous single cell data you are looking for? Get more accurate cell count and health determinations using the Guava[®] Muse[®] Cell Analyzer.

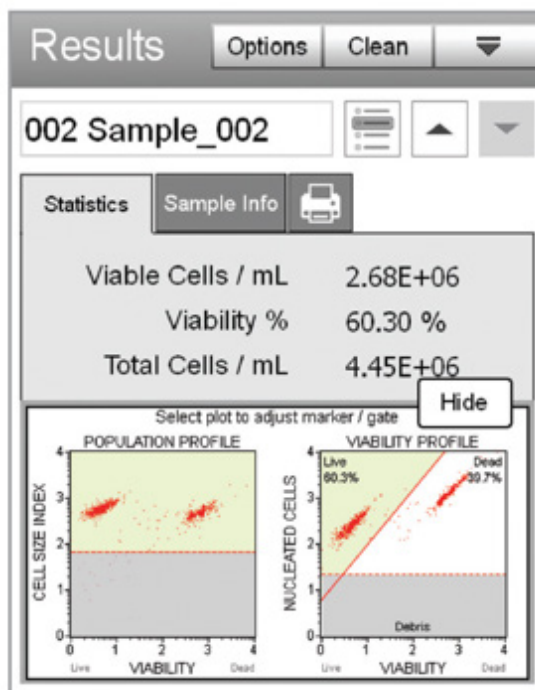
Flow cytometry for any scientist in any lab.

Get flow-based data quickly and easily for essential cellular analyses such as cell count and viability, apoptosis indicators, cell cycle, and popular signaling pathway markers. The Muse Cell Analyzer packs 3-parameter analysis into an affordable, easy-to-use benchtop device, making flow cytometry accessible to anyone, any time.

- Miniaturized flow technology, with a footprint of just 8 in × 10 in (21 cm × 26 cm), allows for conservation of benchtop space
- Novel, easy-to-use touchscreen interface allows for simplified acquisition and analysis
- Simple, intuitive software requires no flow expertise
- Mix-and-read, fully optimized assays available for popular cell health applications (count and viability, cell cycle, apoptosis, oxidative stress, and key cell signaling pathway markers)
- Surprisingly affordable

Data output for the Muse Count and Viability Assay.

Healthy Jurkat cells were mixed with heat-killed Jurkat cells and then stained with the Muse Count & Viability Reagent, and analyzed on the Muse Cell Analyzer. Data output includes summary results (not shown) and optional dot plots (shown below). Reported statistics include viable cells/mL, % viability, and the total cells/mL. The dot plot on the left shows viability vs. cell size; the plot on the right shows viability vs. nucleated cells, which allows you to assess the level of cellular death in your population.



Guava[®] easyCyte[™] Flow Cytometer



Versatile.

Have you been limited by the lack of access to large, shared cytometers, or the learning curve on more complex instruments? The Guava[®] easyCyte[™] line offers the flexibility to run simple assays with the analytical power of a large instrument.

Unleash what's possible.

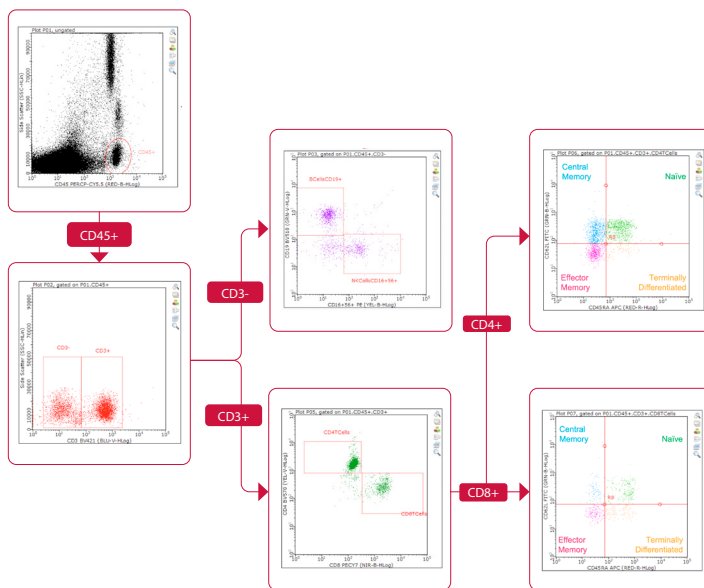
More than 20 years ago, Guava[®] Technologies introduced the first compact benchtop flow cytometers. Today, the easyCyte[™] line offers greater sensitivity and optional high-throughput capabilities. Powered by intuitive software, easyCyte flow cytometers are some of the most dynamic and flexible benchtop systems available.

The easyCyte line of flow cytometers offers:

- Up to 3 lasers and 14 parameters on a benchtop instrument, allowing for a high degree of flexibility
- Product upgradability from 1 to up to 3 lasers, which enables future-proofing
- An innovative microcapillary fluidics design, eliminating sheath fluid and reducing waste stream
- The combination of microcapillary technology and a positive displacement syringe pump, which allows for direct absolute counting with industry-leading precision
- An intuitive software interface, providing a simplified assessment of results, including cell-health assays
- Detection of particles as small as 0.2 and up to 60 μm , facilitating the evaluation of a variety of samples
- High-throughput options, which allow walkaway acquisition for up to 96 samples

8-color immunophenotyping using easyCyte 12HT.

Using a simple, no-wash protocol, whole blood was stained with 8 different CD markers. Simple, intuitive spectral compensation and serial gating allows for resolution of B cells, NK cells, CD4⁺ T cells, and CD8⁺ T cells. Sensitive mean fluorescent intensity detection permits subsequent demarcation of T cells into naïve, terminally differentiated, and central or effector memory phenotypes (shown below).



Amnis[®] CellStream[®] Flow Cytometer



Sensitive.

Do you need high sensitivity and access to a variety of lasers to advance your research? Analyze small, dim particles that are usually outside of detection limits using the Amnis[®] CellStream[®] Flow Cytometer.

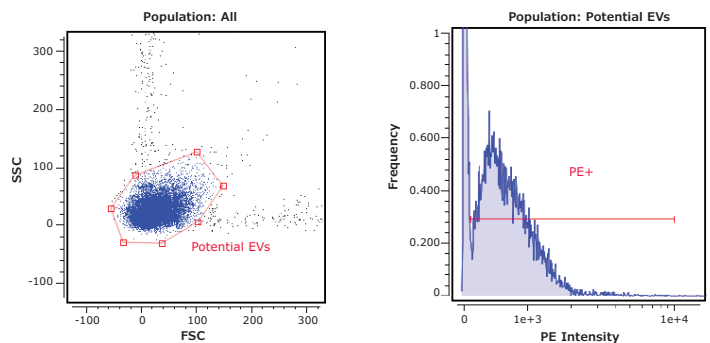
Capabilities today. Flexibility for tomorrow.

Discover unparalleled fluorescence sensitivity and flexibility in a compact, affordable system. With patented optics technology, this flow cytometer uses a charge-coupled device (CCD) camera for detection and offers fully-configurable 1- to 7-laser capacity. Systems are easy to upgrade in the lab, allowing you to customize according to your experimental needs and budget.

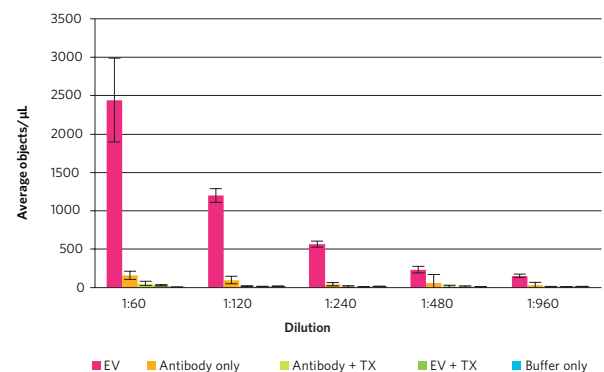
- Time Delay Integration (TDI) and CCD camera technology work together to provide high fluorescence sensitivity, enabling the detection of dim and small particles
- Detection of small particles, allowing even extracellular vesicles and bacteria to be identified
- Choose from 1 to 7 lasers and up to 22 detection channels, enabling multiplexing and offering high flexibility for experiments
- Standard 96-well plate autosampler for high-throughput analysis
- Event Gallery aids sample verification and troubleshooting
- Aspect ratio calculation allows for doublet discrimination
- Rapid, on-site upgrades to save you time and allow you to expand your research capabilities

Superior detection of extracellular vesicles.

The diagnostic and therapeutic potential of extracellular vesicles (EVs) is currently under intense investigation. In this study, the CellStream Flow Cytometer demonstrates clear detection of EVs. Red blood cell (RBC)-derived EVs were stained with anti-CD235ab-PE. Control samples were collected for antibody only, PBS, and labeled RBC-EVs incubated with Triton[®]-X 100 (TX). Using the potential EV gate (top left), PE+ events were identified (top right). The graph shows PE+ objects/mL for the control samples and the CD235ab-PE labeled sample (bottom).



A. PE+ Objects per μ l



Amnis® FlowSight®

Imaging Flow Cytometer



Visual.

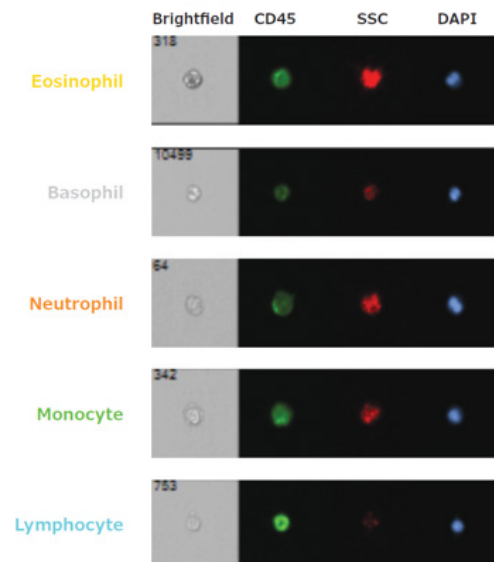
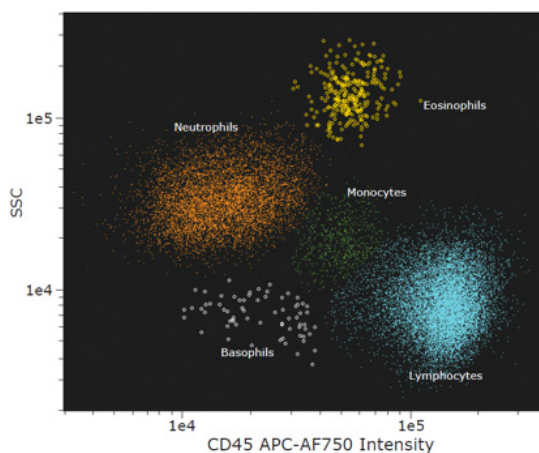
Are your heterogeneous cell populations poorly delineated? The Amnis® FlowSight® Imaging Flow Cytometer offers high fluorescence sensitivity and the ability to inspect individual cells to identify rare phenotypes.

Flow cytometry with vision.

Get high-sensitivity flow cytometry and imagery with 20x multi-color images of every cell to visualize fluorescence at the cell membrane, within the cytoplasm, or in the nucleus. Perform experiments that require morphology information and effortlessly identify cell doublets and distinguish debris to improve gating and analysis.

- Up to 12 20x multi-color images of each cell, including side scatter and brightfield, at up to 5,000 events per second
- Powerful IDEAS® image analysis software with easy-to-use fluorescence compensation and analysis wizards
- Upgradable to 4 lasers and automated sample loading for walkaway operation

Five-part white blood cell differential with a single marker.



The FlowSight® Imaging Flow Cytometer excels at the resolution of mixed subpopulations in heterogeneous samples. Human peripheral blood mononuclear cells (PBMCs) are partitioned into 5 distinct populations using CD45 and side scatter intensity. High fluorescence sensitivity and tight coefficients of variation (CVs) resolve monocytes (green) from lymphocytes (blue) and facilitate the detection of rare basophils (white). The dedicated side scatter laser clearly resolves eosinophils (yellow) from neutrophils (orange).

Amnis[®] ImageStream[®]X Mk II Imaging Flow Cytometer



Boundless.

What if you could resolve subcellular events? Just think of what you could learn about cell biology by measuring morphological changes, cell-cell interactions, and even cell signaling events like nuclear translocation.

Cytometry without limits.

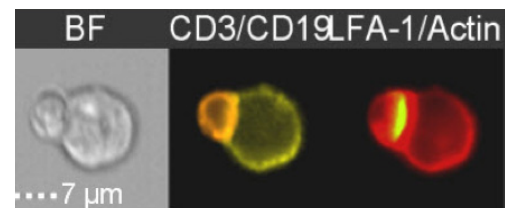
Revolutionize your research with high-resolution, multi-color images taken at up to 5,000 cells per second. The ImageStream[®]X Mk II Imaging Flow Cytometer combines microscopy with up to 60x magnification—all while delivering the speed, sensitivity, and phenotyping abilities of high-sensitivity flow cytometry.

- 5,000 cells/second with real-time intensity compensation—ideal for rare cell analysis—for up to 60x image magnification
- Powerful IDEAS[®] image analysis software with fluorescence compensation and analysis wizards for ease of use
- Up to 6 lasers provides flexibility for multi-color experiments
- Small sample volumes of 20-200 μ L allows you to run with minimal reagents and waste

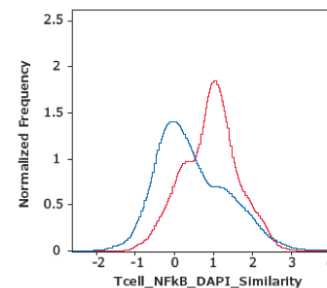
T:APC conjugates.

The ImageStream[®]X Mk II Instrument enables a vast number of applications by combining microscopy with flow cytometry. This example highlights the identification of cell conjugates, interrogation of the point of contact, and measurement of cell activation by measuring proteins on the cell surface, at the synapse, and in the cytoplasm and nucleus—all accomplished simultaneously, automatically, and objectively on significant numbers of cells.

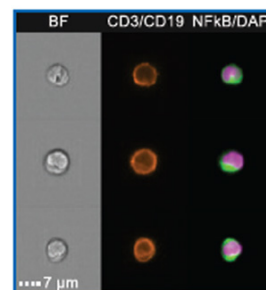
Stimulating the TCR with ligand/MHC complexes presented by APCs results in the formation of an immunological synapse, recruitment of molecules to the synapse, T cell activation, and nuclear translocation. In this example, we measured synapse formation, recruitment of LFA-1 to the synapse and NF κ -B translocation in T cells, which were in contact with SEB-loaded APCs (T cell-APC conjugates).



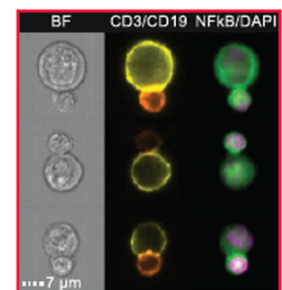
Cell conjugate with synapse. T cell (orange), APC (yellow), Actin (red), LFA-1 (green).



Single T cells, median similarity score = 0.29



T cell-APC conjugates, median similarity = 0.98



Similarity score histogram of single T cell (blue) and T cells in T cell-APC conjugates (red). Representative images of cells with median Similarity scores for each are shown: BF, brightfield; CD3-PE-TexasRed (orange); CD19-PE (yellow); NF κ -B-FITC (green); DAPI (pink).

Which Instrument Is Right **For You?**

		Non-Imaging Flow Cytometers			Imaging Flow Cytometers	
		Guava® Muse® Cell Analyzer	Guava® easyCyte™ Flow Cytometer	Amnis® CellStream® Flow Cytometer	Amnis® FlowSight® Imaging Flow Cytometer	Amnis® ImageStream®x Mk II Imaging Flow Cytometer
		Simple	Versatile	Sensitive	Visual	Boundless
Function	Lasers	1	1-3	1-7	1-4	1-6
	Detection Type	Photodiode	PMT	CCD - TDI	CCD - TDI	CCD - TDI
	Sample Loading	Single tube	Single tube or 96-well plate	Single tube or 96-well plate	Single tube or 96-well plate	Single tube or 96-well plate
	Parameters	Intensity	Up to 14	Up to 22	12	Up to 12
Benefits		Morphology	N/A	3	>1,000	>1,000
	Magnification	N/A	N/A	N/A	20x	Up to 60x
	Format	Open	Open	Open	Open	Open
	Flexibility	Low-Medium	Medium	Highest	High	Highest
Microscopy Applications		No	No	No	Yes	Yes

CCD, charge-coupled device; PMT, photomultiplier tubes; TDI, time delay integration



Pick your platform.
Make your mark.

To learn more about cellular analysis technologies, or to request a demonstration, please visit:

luminexcorp.com/flow-cytometry-and-imaging/

Flow Cytometry **Reagents**

Our flow cytometry systems are supported by a broad portfolio of reagents and kits to help you gain greater insight into cellular status and processes. Muse®, Guava®, and Amnis® pre-optimized, multi-color kits simplify the assessment of cell health, cell signaling, and other applications.

Learn more at: luminexcorp.com/flow-cytometry-kits-and-reagents/

Muse® Assays

The Muse Cell Analyzer uses fluorescent reagents to detect and measure 3 parameters for every cell, with little or no sample preparation required. Muse assays are available for precision cell counts, as well as single cell measurement of critical cell parameters, including:

Part Number	Product Name
System Maintenance Kit	
MCH100101	Muse® System Check Kit
Cell Health And Apoptosis Kits	
MCH100102	Muse® Count & Viability Kit (40 mL)
MCH600103	Muse® Count & Viability Kit (240 mL)
MCH100104	Muse® Count & Viability Kit 200X
MCH100105	Muse® Annexin V & Dead Cell Kit
MCH100106	Muse® Cell Cycle Kit
MCH100107	Muse® Cell Dispersal Reagent
MCH100108	Muse® Caspase-3/7 Kit
MCH100109	Muse® MultiCaspase Kit
MCH100110	Muse® MitoPotential Kt
MCH100111	Muse® Oxidative Stress Kit
MCH100112	Muse® Nitric Oxide Kit
MCH100114	Muse® Ki67 Proliferation Kit

Part Number	Product Name
Cell Signaling Kits	
MCH200101	Muse® H2A.X Activation Kit
MCH200102	Muse® EGFR-RTK Activation Kit
MCH200103	Muse® PI3K Activation Kit
MCH200104	Muse® MAPK Activation Kit
MCH200105	Muse® Bcl-2 Activation Kit
MCH200107	Muse® Multi Color DNA Kit
MCH200108	Muse® PI3/MAPK Dual Activation Kit
MCH200109	Muse® Autophagy LC3 Antibody-Based Kit
Immunology Kits	
MIM100101	Muse® Human CD4 T Cell Kit
MIM100102	Muse® Human CD8 T Cell Kit
MIM100103	Muse® Human B Cell Kit

Guava® Flow Cytometry Kits

Our optimized turnkey assay kits shorten your sample preparation time, minimize assay development, and facilitate data analysis. All kits are also cross-platform tested on traditional sheath-based flow cytometers. All reagents (except cells) are included, and thus no assay development time is needed.

Part Number	Product Name
System Maintenance Kits	
4200-0140	Guava® Instrument Clean Fluid (ICF)
4500-0025	Guava® Easy Check Kit
Cell Health And Apoptosis Kits	
4000-0040	Guava® ViaCount Reagent (40 mL)
4000-0041	Guava® ViaCount Reagent (240 mL)
4500-0110	Guava® ViaCount Flex Reagent (100 tests)
4700-0060	Guava® ViaCount Flex Reagent (500 tests)
4700-0050	Guava® ViaCount Cell Dispersal Reagent
4500-0450	Guava® Nexin Kit (100 tests)
4500-0455	Guava® Nexin Kit (500 tests)
4500-0220	Guava® Cell Cycle Kit
4000-0061	Guava® Express 7-AAD Reagent
FCCH100106	Guava® MitoDamage Kit
FCCH100108	Guava® Annexin Red Kit
FCCH100171	Guava® Autophagy LC3 Antibody-Based Kit
FCCS025153	Guava® DNA Damage Histone H2A.X Dual Detection Kit
FCCS100182	Guava® Histone H2A.X Dual Detection Kit

Amnis® Kits for Imaging Experiments

Product Name	Description	Part Number
NFκ-B Translocation Kit	2-color assay kit for the rapid detection and quantitation of NFκ-B translocation from the cytoplasm to the nucleus	ACS10000
Protein Aggregate & Silicone Oil Detection Kit	2-color assay kit for discrimination of silicon oil droplets and protein aggregates using a convenient mix-and-read assay	APH10001



For more information, please visit luminexcorp.com/flowcytometry

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