

LEVITAS^{BIO}



LeviCell Sample Prep Solutions

QUALITY WITHOUT COMPROMISE

A NEW CHAPTER IN SAMPLE PREP

Empowerment Through Innovation

Experience unparalleled cell enrichment and sample preparation with the LeviCell® system family. Our proprietary Levitation Technology™ offers a fast, simple, and scalable method, consistently delivering high-quality samples suitable for any downstream application.



**Unbiased
Results**



**One-Step
Multiplexing**







**True Sample
Flexibility**



UNPARALLELED VERSATILITY

Optimize Your Starting Material

Both label and dye-free, Levitation Technology™ enables gentle and efficient processing while preserving cells' native states, delivering high-quality samples ready for a wide range of downstream applications.

			
VIABLE CELL ENRICHMENT	CELL-SPECIFIC SELECTION	DEBRIS REMOVAL	SAMPLE ANALYSIS
Label-free	Easy to multiplex	Label-free	Visualize the full sample
No pressure	Ready to use kits	Removed automatically	Cell characterization
No cell stress	Label-free cells of interest	No extra wash steps	Insight to upstream steps

Research Areas

- Oncology
- Immunology
- Neuroscience

Downstream Assays

- Flow cytometry
- Model generation
- Functional studies



Tissue Types

- Primary tissues
- Archived samples
- Limited amounts

Analytical Analysis

- Single-cell seq.
- Proteomics
- CRISPR

DIFFERENTIATED TO DELIVER MORE

Why Levitation Technology?

Levitation Technology™ is a groundbreaking alternative to traditional cell enrichment methods, streamlining workflows by reducing lengthy and variable processing steps. This innovative approach enhances efficiency, allowing researchers to maximize their time and resources across diverse projects.

	Label-free	High viability	High yield	Ease of use	Debris removal	Gentle	Size limit
Levitation	✓	✓	✓	✓	✓	✓	350 µm
Centrifuge	✓	✗	✗	✗	✓	✗	N/A
Beads	≈	≈	≈	≈	≈	≈	30 µm
Bubbles	✗	≈	≈	≈	✗	≈	60 µm
FACS	✗	✗	✗	✗	✗	✗	30 µm

✓ Always
≈ Sometimes
✗ Never

Streamlined Workflow

Combine several steps from several different platforms into one simplified and streamlined workflow to maximize efficiency and productivity.

CURRENT STATE



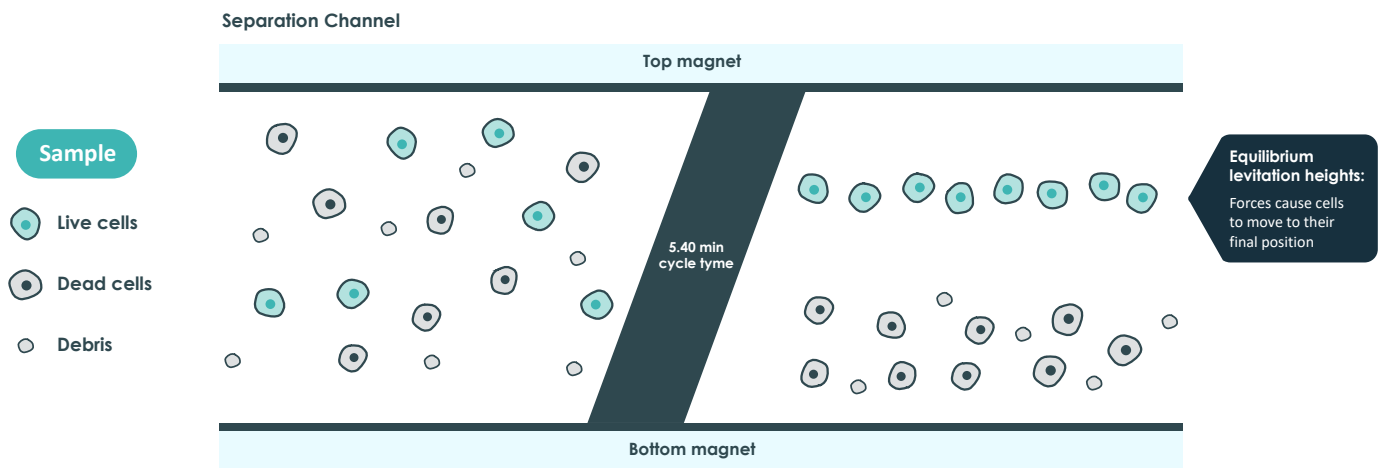
LEVITATION PROTOCOL



LEVITATION TECHNOLOGY AT-A-GLANCE

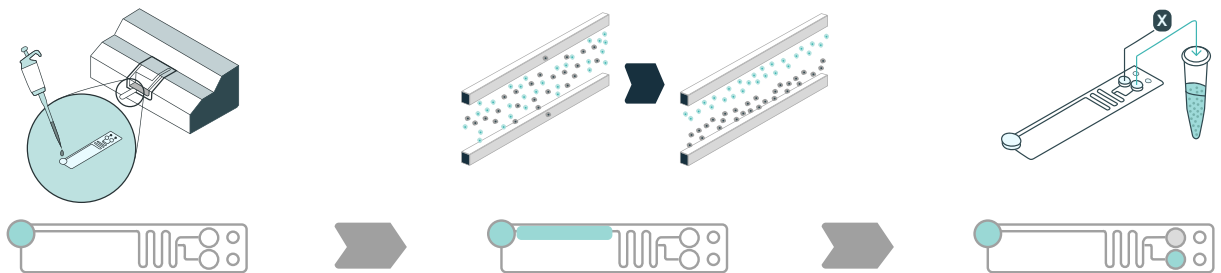
How It Works

Levitation takes place due to forces exerted by the magnets on the fluid around the cells. Viable cells are impermeable to the Levitation Agent, resulting in strong levitation, while dead/dying cells and debris fall to the bottom of the separation chamber.



Fast & Simple: 3 Steps in 20 Minutes

The LeviCell® systems eliminate lengthy and technically complex enrichment protocols to enable reliable and reproducible results.



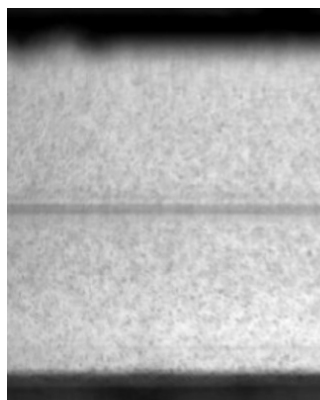
NEXT-GENERATION QUALITY CONTROL

Quality You Can See

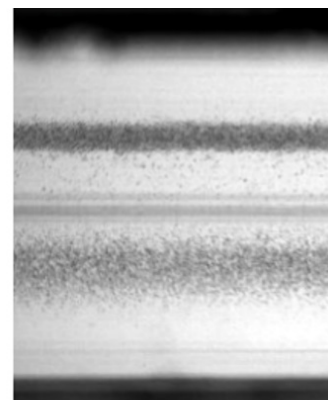
The onboard camera provides the ability to see cells levitating during the run. This offers added capabilities that are unmatched by any other sample preparation technologies available.

Real-Time Visualization

- Live imaging of sample during run
- Brightfield & fluorescent illumination
- Generates 20 sec. video montage



Beginning equilibration



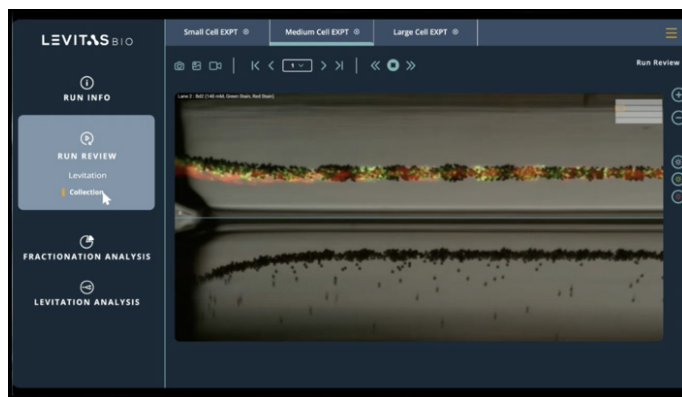
Ending equilibration

The Power of LeviMetrics

LeviMetrics™ analysis software delivers next generation analysis of samples obtained directly from the sample preparation process. Images are captured during the run, and can be visualized and analyzed to provide key insights into the sample prior to any subsequent downstream analytical assay.

Post-Run Analysis

- Quick download of run reports and images
- Fractionation analysis of biomass
- Compare parallel samples



BETTER DATA IN LESS TIME

Gain Deeper Insights

By removing problematic dead cells and debris, data quality is improved by increasing the signal-to-noise ratio, ensuring that each sample contributes meaningfully to downstream analyses such as flow cytometry, functional assays, and single-cell sequencing.

Improve Viability

- Enrich for viable cells
- Remove debris
- Gain access to unusable samples

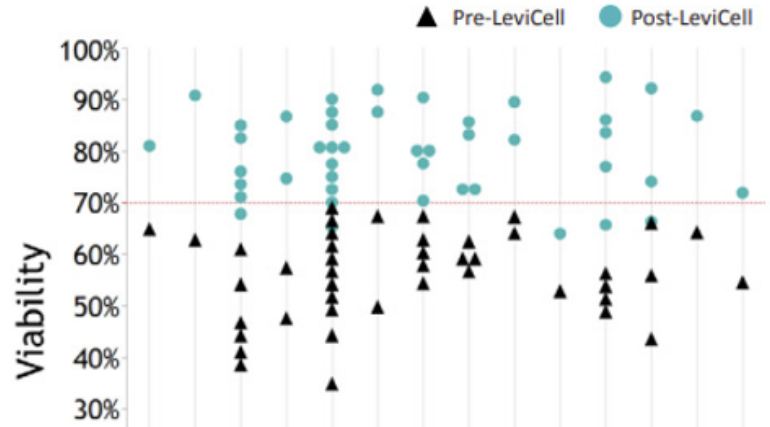


Figure 1. Rescue viable DTCs from challenging tissues

Facilitates Flow Cytometry

- Reduce dead cells and debris by 5x
- Shorten run time
- Start with as few as 10,000 cells

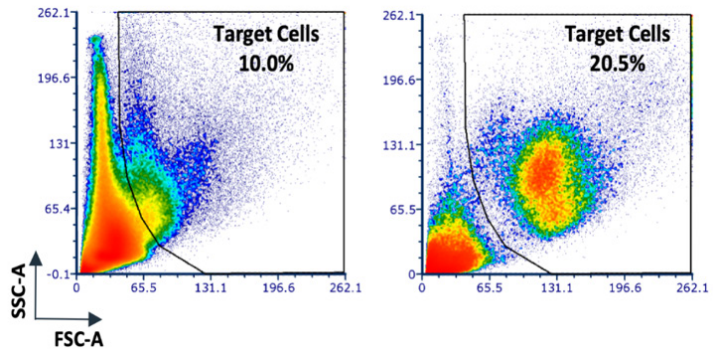


Figure 2. Improved resolution of target cells

Better Sequencing Results

- More genes detected
- Lower mitochondrial reads
- More usable data

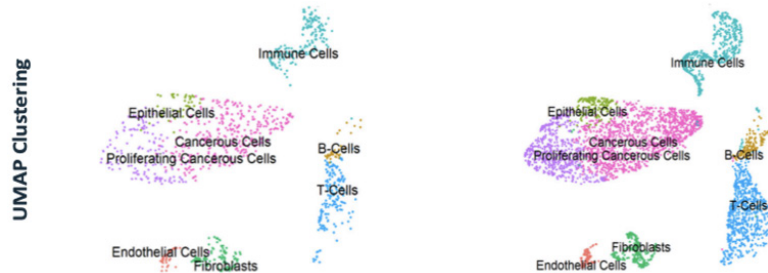


Figure 3. Gain deeper sequencing insights

THE ORIGINAL GAME CHANGER

Increase Sample Viability up to 99%

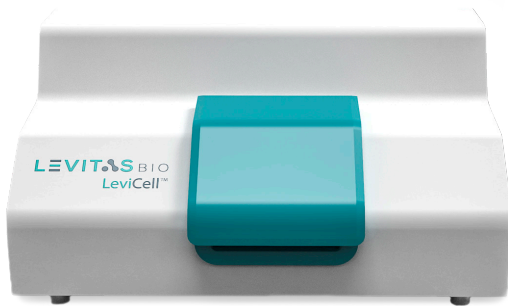


Figure 4. LeviCell® 1.0 & Access

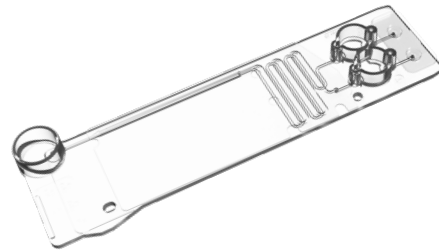


Figure 5. Cartridge Consumable

The LeviCell® 1.0 and LeviCell® Access systems gently and efficiently enrich for viable cells while preserving their native states. Ideal for sensitive downstream assays and analyses, LeviCell® systems enhance research accuracy and reliability, saving samples, time, and resources.

LeviCell® 1.0 & LeviCell® Access

- Simple, 3 step process
- Compatible with any sample type
- Built for any budget

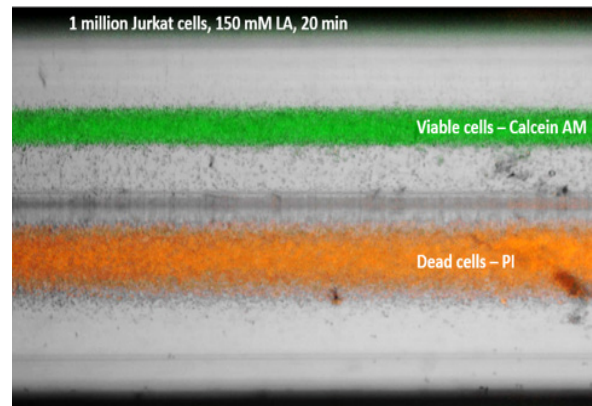


Figure 6. Levitated Jurkat Cells

Michelle Galeas-Pena, MD, PhD
Research Assistant Professor
Tulane University School of Medicine



“The LeviCell® 1.0 system is easy and intuitive to use, enabling us to enrich for precious viable cells from cell suspensions with viabilities below 40%, dissociated from frozen blood-banked tissues for single-cell sequencing.”

Nidal Karagic, PhD
Postdoctoral Researcher
Inst. of Biotechnology, University of Helsinki



“Thanks to the LeviCell® system, our single-cell experiments have seen a significant increase in viable cell recovery. Fragile cells are handled with care resulting in 2-3 time higher yields!”

SCALABILITY MEETS FLEXIBILITY

More Throughput. More Possibilities



Figure 7. LeviCell® EOS



Figure 8. LeviCell® EOS Cartridge

Building upon the reliability of LeviCell® 1.0, the LeviCell® EOS offers an increase in throughput, processing up to 4 samples per 20-minute run. This system delivers best-in-class cell isolation and enrichment through a simple, 3-step process, significantly enhancing research efficiency and productivity.

LeviCell® EOS

- Efficiently process up to 4 samples
- Up to 16 samples per run
- Optional temperature control



Figure 9. Levitated Jurkat Cells

Michelle Galeas-Pena, MD, PhD
Research Assistant Professor
Tulane University School
of Medicine



“The LeviCell® EOS system has been a key addition to our scRNA-seq workflow. The data obtained indicates sample suitability for further analysis, preventing us from proceeding with sub-optimal samples and thus saving both our unit and our users significant time and money.”

Nidal Karagic, PhD
Postdoctoral Researcher
Inst. of Biotechnology,
University of Helsinki



“The LeviCell® EOS system allows our lab to process several low-viability samples, which is absolutely critical for single-cell sequencing analyses. The LeviCell® EOS will increase our throughput and quality for rare and difficult samples.”

BREAKING SAMPLE PREP BARRIERS

Solving Your Challenges Exponentially



Figure 11.
The LeviCell® 96 System

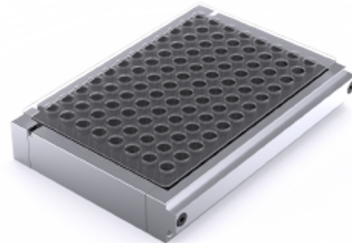


Figure 12.
The LeviCell® 96 Levitation Array

The LeviCell® 96 system offers high-throughput, label-free cell enrichment, processing up to 96 samples per run with capacities ranging from 10,000 to 500,000 cells per well. This gentle, automated platform enhances efficiency and data quality across diverse research applications.

LeviCell® 96

- Walk-away automation
- Cell-specific enrichment and depletion
- Effective cell washing

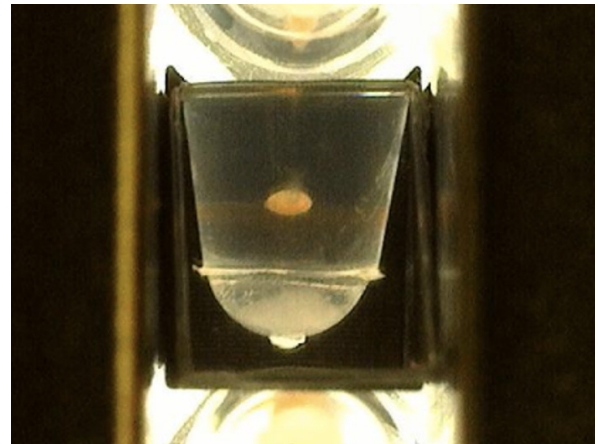


Figure 10. *Levitated Jurkat Cells*

500X

More data
per run

100X

Higher throughput vs.
traditional methods

10X

Lower cost
per sample

THE LEVITATION ADVANTAGE

Discover More **Spend Less**

LevitasBio® Products and Solutions

1

Our customers save money, increase throughput and improve their results.

2

New products and applications solve fundamental sample preparation bottlenecks

3

The LeviCell® 96 system is a true game changer regarding throughput and scalability.



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