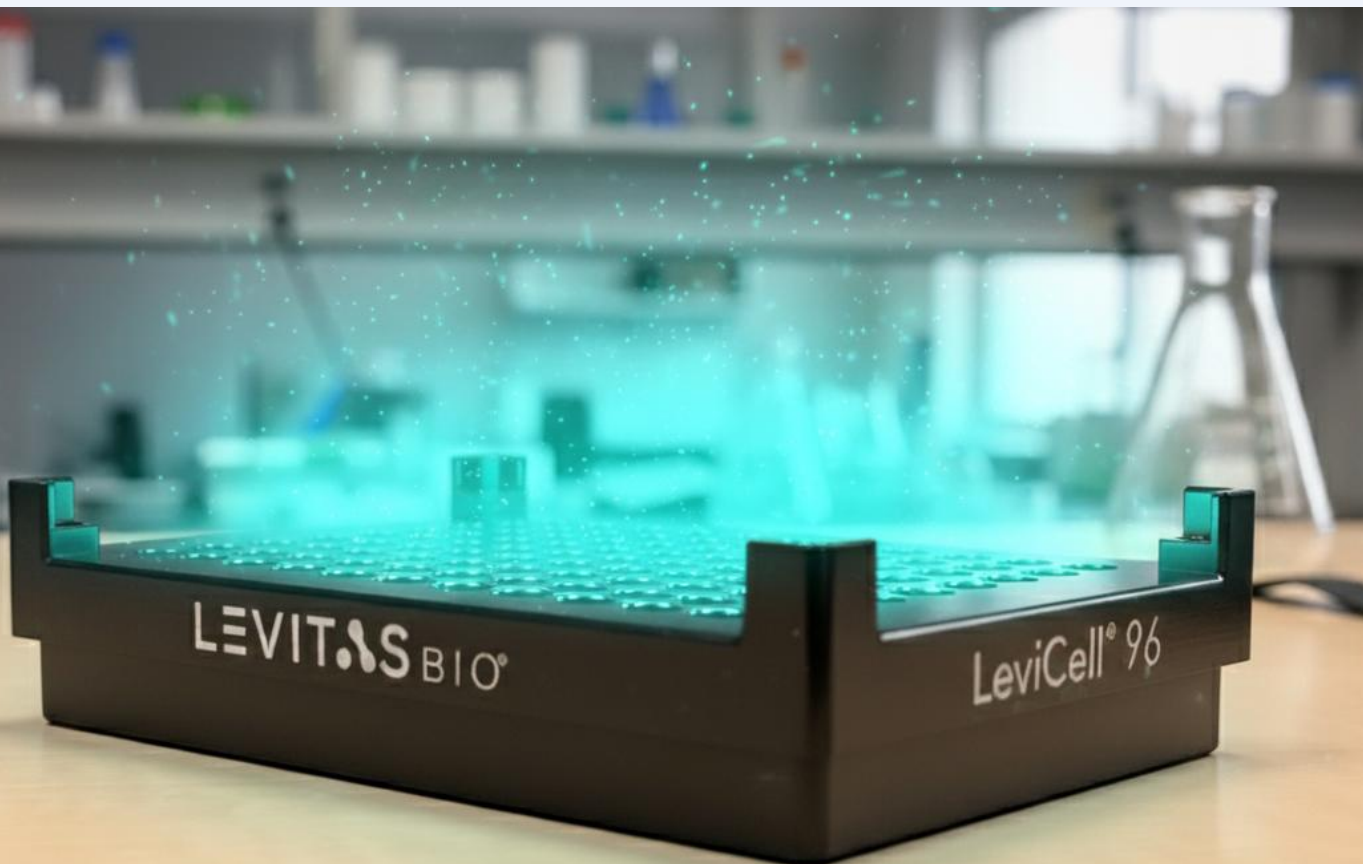


LEVITAS[®] BIO

Workflows Reimagined.
Biology Preserved.

LeviCell 12 | 96 | Pro
Levitation Array Systems



Scalable, reproducible cell preparation that preserves biology and accelerates discovery.

High-Throughput. Automation-Ready. Label-Free.

The **LeviCell Array** platform redefines cell and nuclei preparation for modern discovery workflows. Built on LevitasBio's proprietary **Selective Array Levitation Technology (SALT™)**, it uses finely tuned magnetic arrays and microfluidics to gently and label-free enrich viable cells—preserving their natural biology while eliminating bias.

Increase sample viability up to **99%**

Remove contaminating dead cells & debris

Depletion of specific cell types

Cut sample prep time by **>90%**

The LeviCell® Advantage



All-in-One Workflow

Simultaneous live cell enrichment and depletion of debris, RBCs, CD45 and myelin.



Scalable Solutions

From pilot studies to high-throughput, we have the right fit for you.



Label-Free & Gentle

Preserve cell viability and phenotype integrity.



Streamlined Workflow

Exponential hands-on time and step savings.



Exceptional Purity

Isolate target cells with unparalleled precision.



Flexible Input

Works with cells, nuclei, and organoids.

Leverage Physical Forces to Obtain Native State Biology

The Workflow

Add Levitation Agent

 **5** min

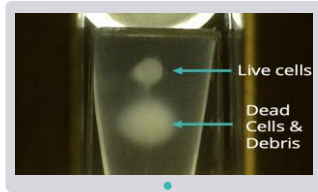
- Levitation Agent dispensed
- Levitation begins
- For interaction studies Assay of interest added



Levitate

 **20-60** min

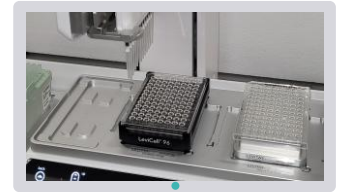
- Levitation begins
- Levitation ends
- Results



Collect

 **5** min

- Cells, nuclei or organoids of interest collected for downstream



Designed for Automation and Scale

SBS-Plate Format

Processes entire plates in one run for seamless robotic integration.

End-to-End Automation

Fully compatible with Beckman, Hamilton, and Tecan systems.

Throughput for Discovery

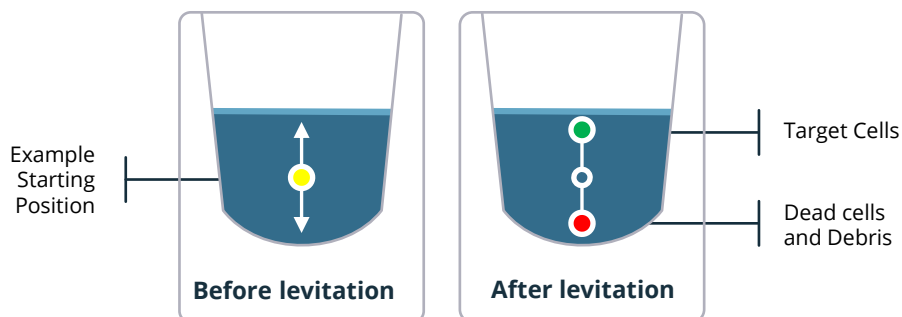
Generate hundreds of enriched, ready-to-analyze samples in hours.

Unbiased Biological Data

No labels, no beads—just true cellular behavior.

Scalable Infrastructure

From pilot studies to continuous screening campaigns.



SBS-Compatible LeviCell Arrays



scRNA-Seq

Live Cell Enrichment & debris removal

- Automate entire plate prep for large-scale, reproducible enrichment.
- Preserve transcriptomic and epigenetic fidelity.
- Generate large model ready datasets across hundreds of samples.



CITE-Seq & Cytometry

Live Cell Enrichment & debris removal

- Ultra clean samples
- Minimal hands-on time with high reproducibility
- Targeted depletion

Cell washing & background removal

- Unbound antibody

Key Applications



Compound Screening & Phenotypic Discovery

Incorporates pre-sorting enrichment

- Run 96 compounds in parallel with consistent, automated prep.
- Eliminate prep-based variability in high-content screening.
- Produce unbiased data ready for ML/AI analytics.



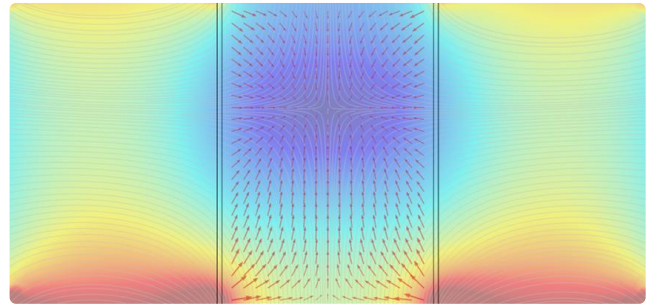
3D Culture

Organoid & spheroid enrichment

- Preserve fragile 3D structures with gentle levitation.
- Process full plates of conditions or replicates simultaneously.
- Deliver viable, representative cells for sequencing or imaging.

Revolutionary Selective Array Levitation Technology (SALT™)

Unique, High Precision Magnetic Array with Patented Technology



Each LeviCell Array is a complex magnetostatic architecture, designed and calibrated to achieve unprecedented field uniformity and repeatability.

Contains hundreds of custom-engineered permanent magnets, individually characterized for magnetic flux density and polarity balance.

The design, calibration, and manufacturing processes required goes far beyond any generic plate-based magnetic array, integrating custom metrology, micro-machining, and automated QA validation pipelines.

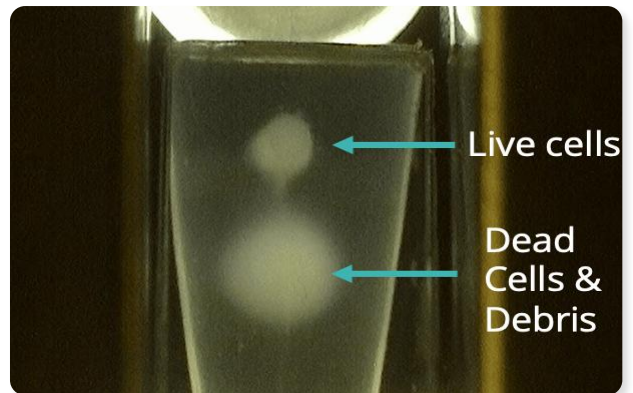
Precision alignment and calibration deliver magnetic-field uniformity within $\pm 10 \mu\text{m}$ across the 96-well plane—critical for maintaining levitation equilibrium consistency across all channels

The result is a high-stability levitation environment, seamlessly integrated with robotic liquid-handling systems and optical detection subsystems, forming the core of SALT™ performance.

Start With Debris-Free, Highly Viable Sample Every Time

Proven Performance

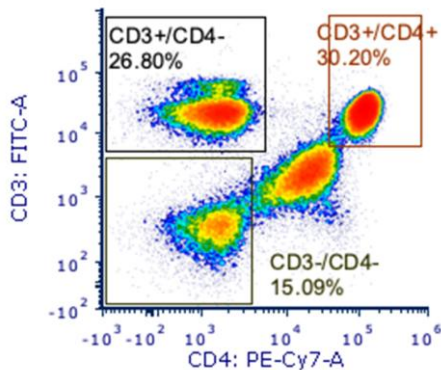
- **96 samples per run** — full SBS-plate throughput
- **>90% viability retention** with fragile samples
- **99% dead/debris removal** for clean, unbiased prep
- **10× faster** than manual workflows
- **Seamless robotic integration** for walk-away automation
- **Trusted by leading innovators** — BMS, AstraZeneca, Broad Institute, MD Anderson, and others



A superior performance to manual processing in every way

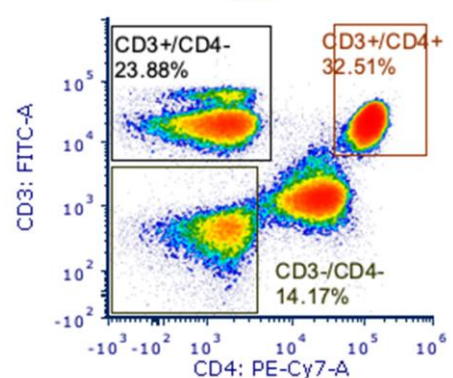
2X Manual washes

RW full stain 1_Data Source - 1.fcs compensat
Live



Levitation

SD2 full stain 1_Data Source - 1.fcs compensa
Live



LevitasBio is able to wash away unbound cell type markers conjugated to conventional fluorescent dyes without the challenges of manual processing.

100x throughput. 10x cheaper. Zero compromises



100X Throughput

Fully automated
96-well workflow

- 1-96 samples at a time
- Parallel enrichment and targeted depletion
- SBS format, automated workflow



10X Cheaper

\$10 per
sample all in

- Includes live cell enrichment and debris removal
- No additional steps required
- Reproducible results well x well



The Payoff

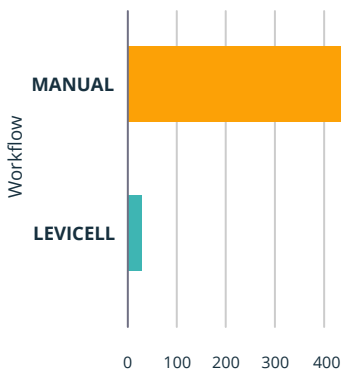
Samples to insights
Exponentially faster.
Cheaper. Better.

- **Exponential** returns on ROI
- **Scale up** like never before
- **Leapfrog** competition with better data models

Are you ready for the sample prep revolution?

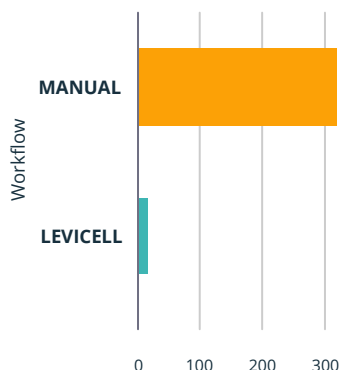
100-fold time and step savings on the LeviCell 96 System

Hands-on Steps:
96 Samples



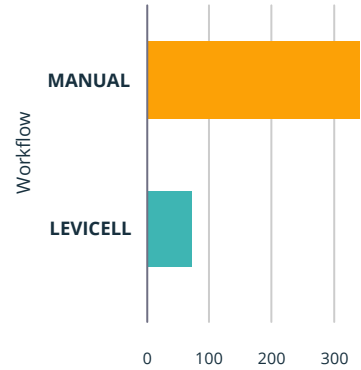
Hands-on Steps

Hands-on Time:
96 Samples



Time (min)

Total Time:
96 Samples

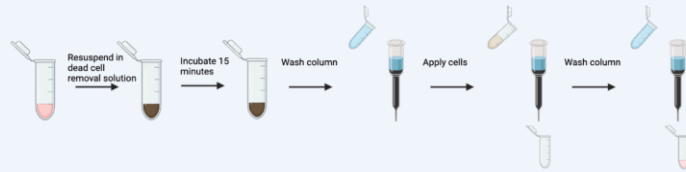


Time (min)

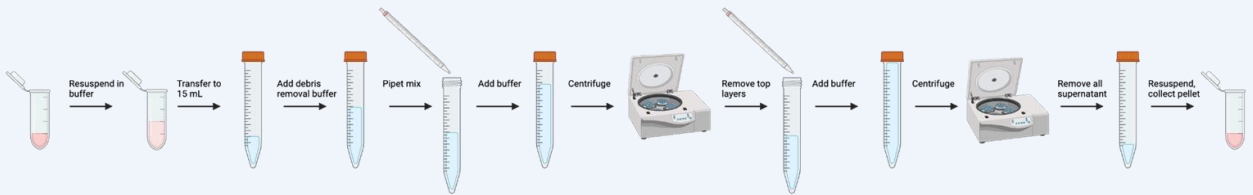
Automate Dozens of Manual Steps into One Automatic Step

Traditional:

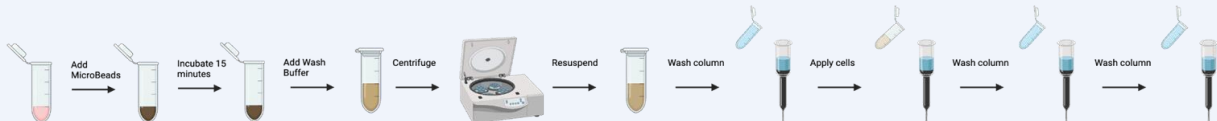
Live cell enrichment using magnetic beads



... then debris removal w/ gradient centrifugation



... then targeted depletion using another set of magnetic beads



Live Cell Enrichment | Dead Cell Removal | RBC, CD45, Myelin Depletion

ALL IN ONE

LEVITAS BIO®



Add nanospheres

Add Levitation Buffer

Levitate your sample for 60 min

Clean and viable cells

Your Research. Your Scale. Our Technology



Array + Liquid Handling Robot



**Array Only for
Third-Party Robots**

LeviCell 12

Quality for
Every Insight

- 12 samples / run
- Fast, simple, low-cost
- Fully upgradable

Best For >

- Lower-throughput studies
- Individual experiments
- Pilot & optimization studies
- Flexible sample inputs

LeviCell 96

High-Throughput
Uncompromising Quality

- 96 samples / run
- Enrichment and cell washing
- Sample flexibility

Best For >

- Medium to high-throughput studies
- Single-cell genomics
- Standardized assays
- Running sample replicates

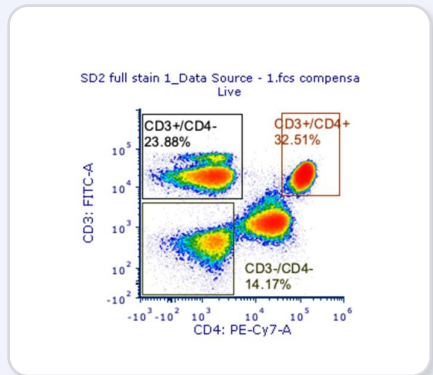
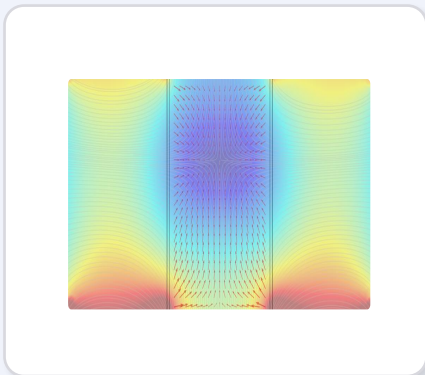
LeviCell Pro

Integrated
Automation at Scale

- Integration into existing liquid handler
- Walk away automation
- Full flexibility

Best For >

- Large-scale studies
- Fully automated labs
- Leveraging existing liquid handling capabilities
- Maximizing walk-away time



LEVITAS BIO[®]

LevitasBio drives scientific discovery by delivering solutions that enable accurate, reliable, and reproducible results

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🌐 www.levitasbio.com