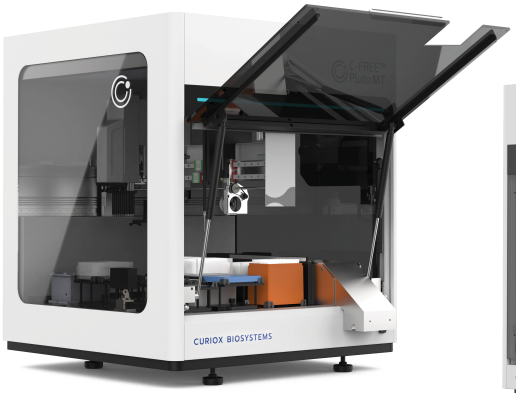
CURIOX
BIOLOGY AT ITS BEST

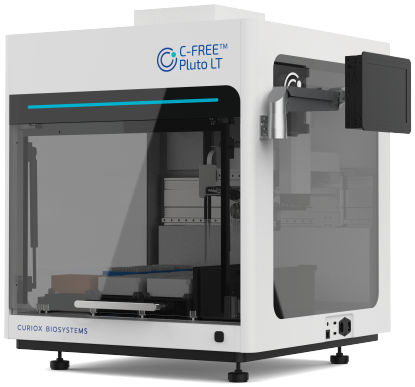
Curiox C-FREE Pluto Systems

Affordable, personalized automation systems for cell analysis workflows

The Curiox C-FREE™ Pluto Systems are designed to make sample preparation simpler with an automated liquid handling platform that enables cell staining and washing. The Pluto family of instruments comes installed with pre-programmed protocols that support one touch operation using the Curiox scripting service.



Pluto MT System



Pluto LT System

Pluto Code

1. End-to-end automation of liquid handling and cell washing
2. Minimal assay optimization supports an easy transition from manual flow cytometry workflows
3. Uses standard-format 96-well microplates, deep-well plates, tubes and pipette tips

C-FREE Technology

Curiox C-FREE™ technology uses laminar flow to delicately wash cells, reducing mechanical stress and preventing cell loss associated with centrifugal methods. This automated gentle handling process is critical for maintaining the physiological states of cells, pivotal for sensitive assays across various applications.

Gentle Cell Handling
Laminar flow gently removes supernatants, preserving cell integrity and viability.

Enhanced Reproducibility
Automation reduces human error, ensuring that each sample undergoes identical processing.

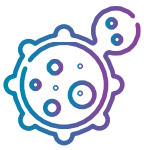
Scalability and Versatility
C-FREE systems are designed for different throughput needs and can adapt to various laboratory sizes - from research labs to high-throughput clinical settings - without sacrificing sample quality.

Regulatory Compliance
Built to meet stringent standards, including 21CFR Part 11*, making it suitable for use in regulated clinical environments and ensuring data integrity.

**Coming soon*

Research areas include:

Immunology



Cancer research

Pharmaceutical development

The goal of C-FREE technology is to provide more accurate data, deeper insights and faster advancements.

The Pluto Systems

The Pluto systems use C-FREE technology with the addition of personalized automation. This results in the customization and standardization of processes to dramatically reduce the potential for human error and ensure consistent, reproducible results across all samples. The Pluto systems are designed to scale with your needs without sacrificing sample quality.

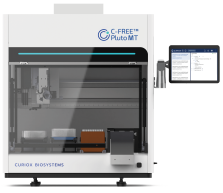
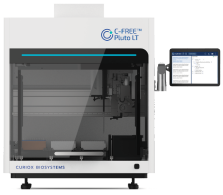
Key additional benefits are:

Controlled Fluid Dynamics
Ensures effective washing while maintaining high particle retention, avoiding the need for pellet formation.

Automation Ready
Integrates seamlessly with existing liquid handling workstations, turning even basic pipetting robots into sophisticated sample preparation systems.

Enhanced Data Integrity and Reproducibility
Provides consistent results by reducing variability and potential sample disturbance.

Eliminates Manual Processes
Automates the last manual step in lab workflows, freeing up valuable time and enabling high-throughput operations.

	Pluto MT System	Pluto LT System	Pluto Code
			
Throughput	24 - 72	8 - 32	Workstation dependent
Pipette Configuration	1 + 24 Channel	1 + 8 Channel	Workstation dependent
Numbers of Wells/Wash	24	8	Workstation dependent
Pipette Volume	1 - 1,000 mL	1 - 1,000 mL	Workstation dependent
Average Wash Time	8 minutes/24 wells	8 minutes/8 wells	Workstation dependent
“Walk Away” Automation	Yes	Yes	Workstation dependent
Audit Trail/21CFFR Part 11	Yes, est. 1/2025	Yes, est. 1/2025	Workstation dependent

Improved wash efficiency compared to conventional centrifuge method

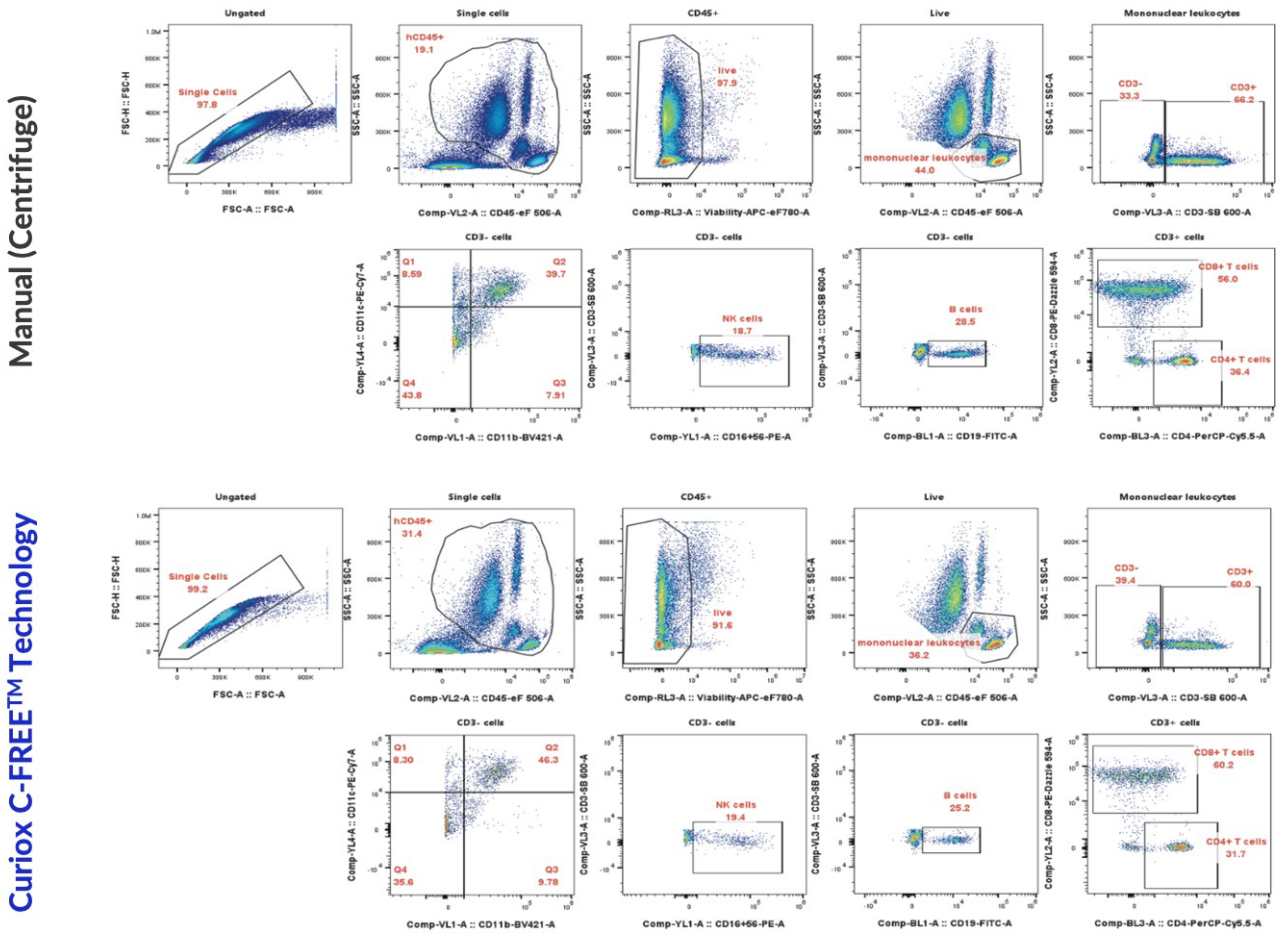


Figure 1. Pluto LT system whole blood (WB) sample preparation for flow cytometry analysis. Representative dot plots of one donor WB (technical replicates n=4) processed with conventional centrifuge method or the Pluto LT system are shown.

Lower non-CD45+ events in the Pluto LT system-washed samples indicates better wash efficiency compared to the conventional centrifuge method. Population resolution and frequencies are consistent between both methods. Samples were stained with basic immunophenotyping panel (Viability stain eF780, CD45 (HI30) eF506, CD3 (OKT3) SB600, CD4 (OKT4) PerCP-Cy5.5, CD8 (SK1) PE-Dazzle 594, CD19 (HIB19) FITC, CD16+CD56 (B73.1+HCD56) PE, CD11b (ICRF44) BV421, CD11c (Bu15) PE-Cy7) and acquired at a rate of 100 µL/min on an Invitrogen™ Attune™ NxT Flow Cytometer.

See the future of cell sample preparation automation at www.curiox.com/pluto

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