NanoEntek

Less than 25 sec

ADAM

ADAM

ADAM CellT

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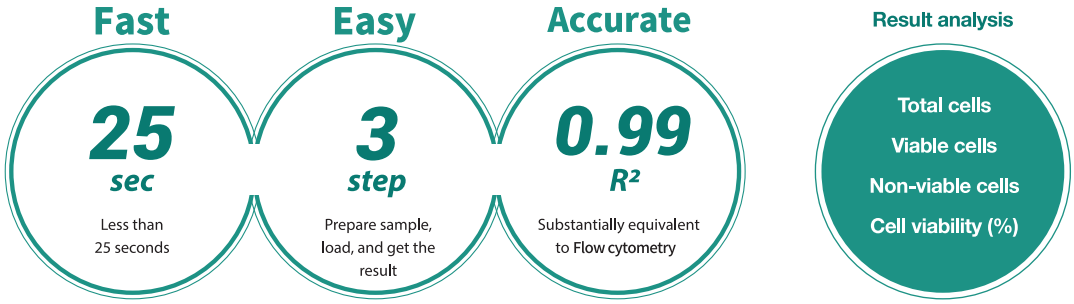
ADAM CellT

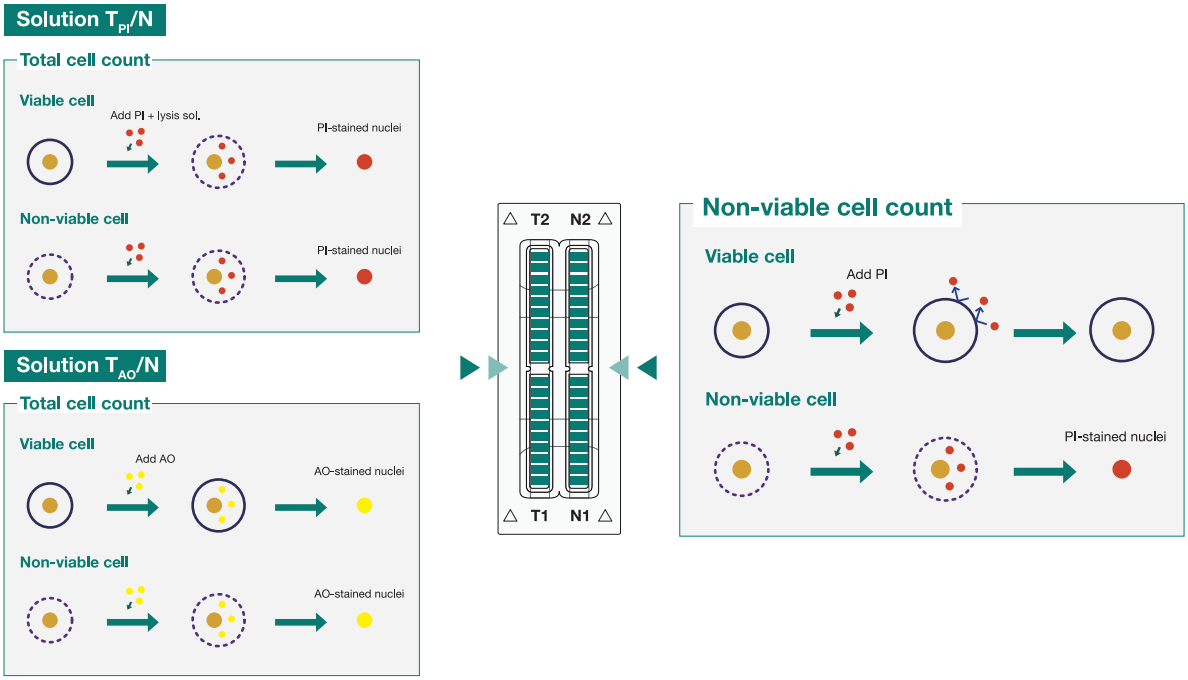
The Most Accurate Cell Counter

ADAM-MC2 and ADAM-CellT are new standard of automated fluorescence cell counters. ADAM stands for Advanced Detection and Accurate Measurement. ADAM utilizes sensitive fluorescence dye staining, LED optics and CMOS detection technologies to make the cell analysis more accurate and reliable. It measures the number of total cells, viable cells, non-viable cells and shows viability results. Combined with a disposable microfluidic chip, the operation is now extremely simple, easy, and cost-effective.



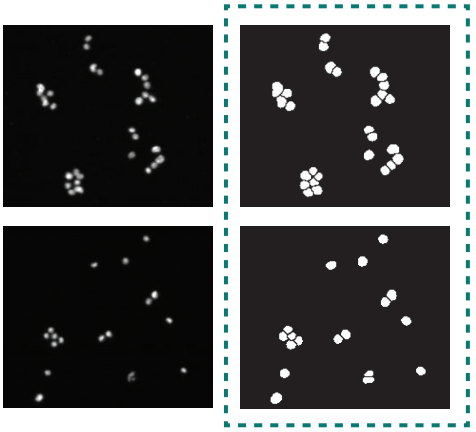
Principle of Viability Measurement (PI, AO-Staining Method)

There are two methods of viability measurement. After the samples are stained with fluorescent dye, propidium iodide (PI) or acridine orange (AO), which intercalates DNA to stain the nucleus of target cells, ADAM takes fluorescent images automatically. The obtained images are processed by image analysis software integrated inside the system.



ADAM CellT

Counting Aggregated and Irregular-Shaped Cells



HepG2
(Clumped cell line)

HeLa

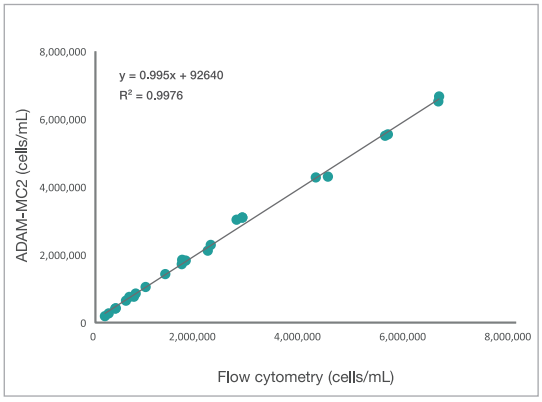
ADAM provides accurate and reliable results by counting aggregated and irregular-shaped cells.

- Accurate count based on cell size and shape
- Individual count of aggregated cells
- Debris is excluded from results

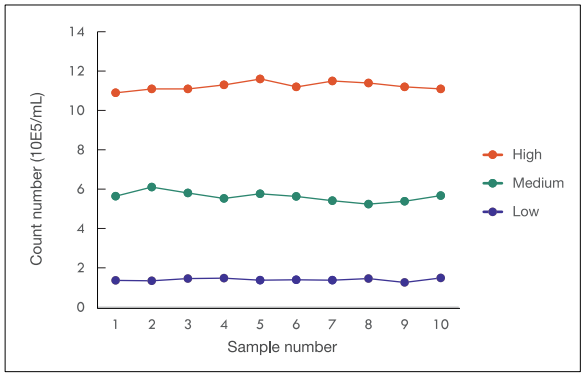
Among the images on the left, the images on the right side indicate cells that have been counted by ADAM.

Accuracy & Repeatability

Correlation of total cell counting between ADAM-MC2 and flow cytometry.



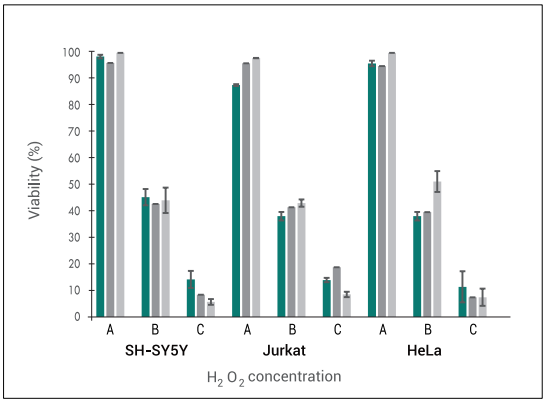
Samples of low, medium and high concentration of cells were counted with ADAM. The repeatability at each level of cell concentration is high.



	High	Medium	Low
	n=10	n=10	n=10
MEAN	1.12E+06	5.62E+05	1.40E+05
SD	21187.00	24679.28	7103.21
CV	1.88	4.39	5.06

ADAM CellT

Comparison of Cell Viability



Comparison of cell viability between ADAM, flow cytometry, and manual counting. SH-SY5Y, Jurkat, HeLa cells were treated with 100, 300μM H_2O_2 for 3 hours, then analyzed by ADAM, flow cytometry, and manual counting.

■: ADAM ■: FACS ■: Manual count
A: Untreated / B: 100 μM / C: 300 μM

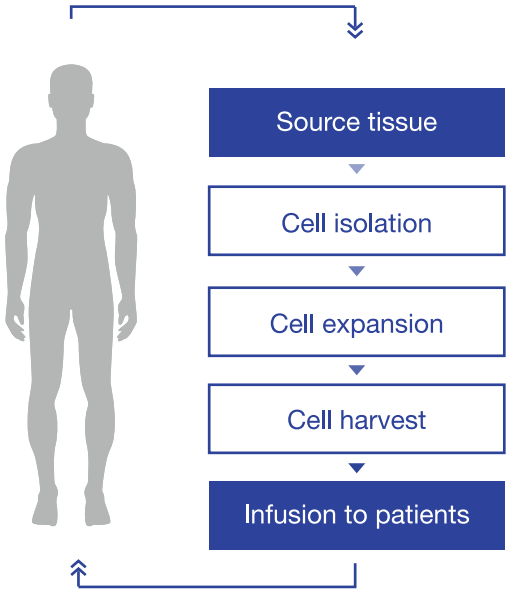
ADAM CellT | Cell Therapy

Cell Therapeutic Applications

ADAM can be used as a device for monitoring and QC of the cell numbers and viability in the process of manufacturing cells (CAR-T cells, stem cells, etc.) for Cell Therapy.
In addition, it is possible to use ADAM depending on the cell types (Whole blood cell, PBMCs, etc.)that need to be monitored during the manufacturing of cell therapy products.

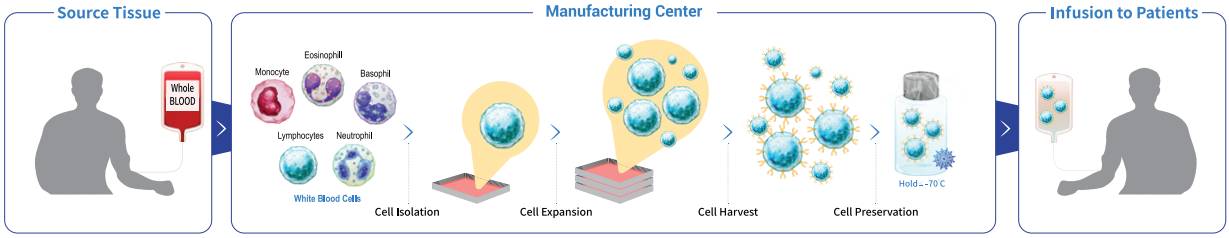
Application

01 Stem cell
02 CAR-T cell
03 CAR-NK cell
04 Adipose-derived stem cell
05 Whole blood cell
06 Aggregated cell
07 PBMCs
⋮



QC Platform for Producing CAR-T cell

It is easy to monitor all different steps of the purification, expansion, and formulation of CAR-T cells using the ADAM to ensure precise and reliable results. ADAM can be used for cGMP, process control and quality control of CAR-T cell.



ADAM CellT

For R&D, Process Control, Quality Control of CAR-T cell

Monitoring the whole process from leukapheresis to the formulated product using the ADAM

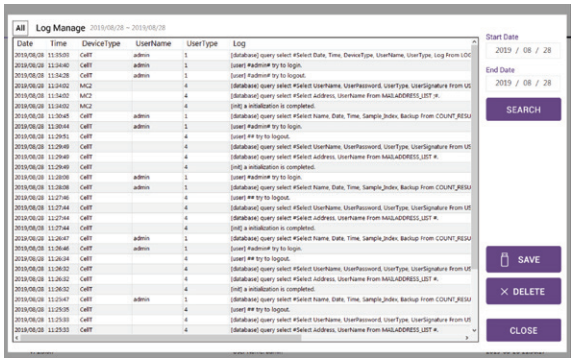
ADAM CellT

21 CFR Part 11 Compliance

ADAM-CellT is an automated cell counter that is available in cGMP production environment. ADAM-CellT complies with 21 CFR Part 11 which is a regulation on electronic records and signatures for use in cGMP facilities. The data cannot be modified by any user. Every action of users is recorded in an audit trail which includes the date, time, and specific details of the action.

Electronic records

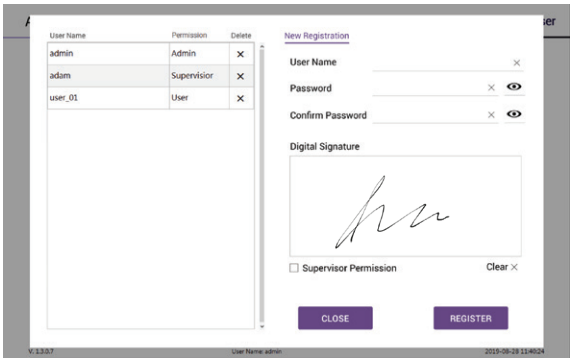
Audit trail, Data management to prevent data modification



<Log management>

Electronic signatures

Equivalent to handwritten signatures on paper



<User management>

User management

Access level and rights of users

	Admin	Supervisor	User	Other
Access to ADAM-CellT	O	O	O	X
Access Data (Export)	O	△ (only data of supervisor)	△ (only data of user)	X
Create Account	O	△ (only for supervisor & user)	X	X
Access to Electronic Records	O	X	X	X
Access to Saved Document Records	O	X	X	X
Access to Deleted Document Records	O	X	X	X
F/W, S/W Update	O	O	X	X
Date/Time Setting	O	O	X	X

Specifications

ADAM-CellT

| ADAM-CellT

Hardware	
Focus	Auto-focusing
LED	4W Green LED
Weight	7.0 kg
Size (LxWxH)	277 x 276 x 270mm

AccuChip Kit

Cat. No. AD4K-200 (4 channel)

Performance	4channel
Analysis time	< 25 sec/test
Loading volume	13 µL
Measuring volume	3.4 µL
Measurement range	5 X 10^4 ~ 4 X 10^6 cells/mL (PI)
	5 X 10^4 ~ 2 X 10^7 cells/mL (AO/PI)

Ordering Information

Catalog Number	Product Name
ADAM-MC2	ADAM-MC2
ADAM-CellT	ADAM-CellT
AD4K-200*	AccuChip 4x Kit (PI) (4 channel, 200 slides/kit, PI viability kit)
AD4K-200AO	AccuChip 4x Kit (AO/PI) (4 channel, 200 slides/kit, AO/PI viability kit)

AD4K-200: Total cell is counted by PI with lysis buffer.

Catalog Number	Product Name
ADR-1000*	Accustain Solution (PI Accustain solution)
ADR-1000AO	Accustain Solution (AO/PI Accustain solution)
ADB-500	ADAM Calibration Bead

ADR-1000 : Total cell is counted by PI with lysis buffer.

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