



Advanced Detection Accurate Measurement



Digital Bio

Digital Bio

ADAM

A New Standard of Automatic Cell Counter

NanoEnTek
DigitalBio is brand name of NanoEnTek

New standard of automatic cell counting

The Digital Bio ADAM series automatic cell counter measures total cell numbers and cell viabilities through cutting-edge detection technologies. Instead of trypan blue staining which can lead an inaccurate data, ADAM utilizes sensitive fluorescence dye staining, led optics and CCD detection technologies to make the cell analysis more accurate and reliable.

Combined with a disposable microchip, the operation of Automatic Cell Counter is now extremely simple, easy and cost-effective. The need for routine calibration of the device is completely eliminated. Cleaning and warm-up time is no longer necessary with ADAM.

The disposable chip greatly reduces the risk of the exposure to hazardous samples, such as patients' blood samples, virus infected cells, etc.

New Technology behind the Accuracy of ADAM

ADAM automatic cell counter is a precision microscope integrated with fluorescence optic and image analysis software. After the samples are stained with fluorescent dye, propidium iodide, which intercalates DNA to stain the nucleus of target cells, fluorescent images are taken automatically. The system takes the 22 ~ 60 images by the movement of automatic X-Y stage. The obtained images are processed by image analysis software integrated inside the system. All procedures are automatic once the stained sample has been dropped to the disposable chip.

- LED excitation
- Precision automatic stage
- Automatic focusing
- Sensitive CCD detection
- Automatic image analysis
- Large counting volume guarantees accurate results

Disposable Microchips

Conventional automatic cell counters utilize flow cell or counting chamber, which is permanently integrated inside the device. During or after cell counting, tubings or counting chambers are easily clogged by cell debris. For this reason, for the conventional automatic cell counter routine maintenance with a cleansing process is necessary.

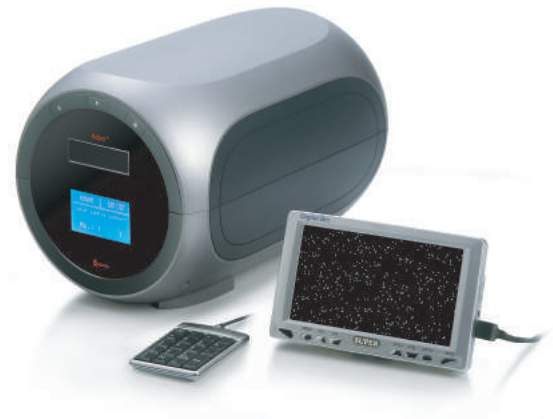
ADAM automatic cell counter utilizes a precision disposable microchip to eliminate the problem of a permanent counting chamber. Each microchip is designed for single use. Pumping, cleansing, and waste bottle are not necessary for the ADAM cell counter. Also, the risk of exposure to the potential hazardous materials, such as patients' blood samples, is completely eliminated with the disposable chips. Each microchip is produced by state-of-the-art manufacturing facility and validated for accuracy.



Disposable chip & regents

The Design You Must Have !

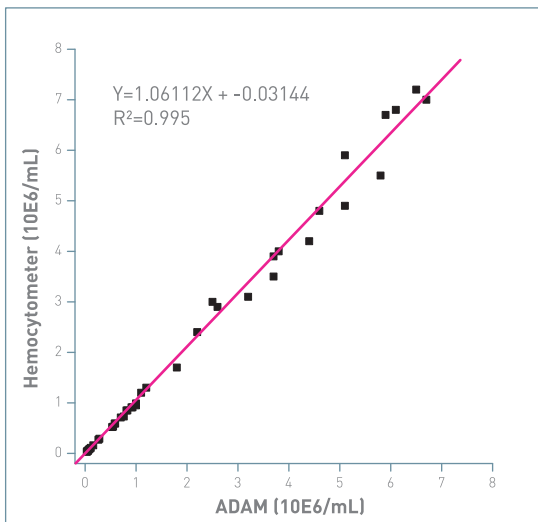
- Ergonomic design
- Small and compact
- Plug and play technology
- Easy to operate
- External monitor to view the cell images



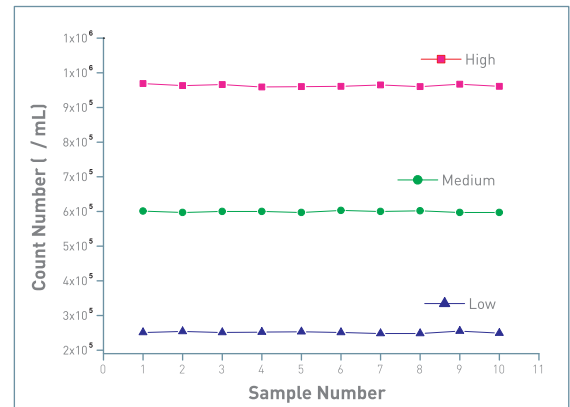
The Data You Can Trust

Accuracy & Repeatability

Correlation of total cell counting between hemocytometer and ADAM using CHO cells.



Samples with low, medium and high concentrations of cells were counted with ADAM



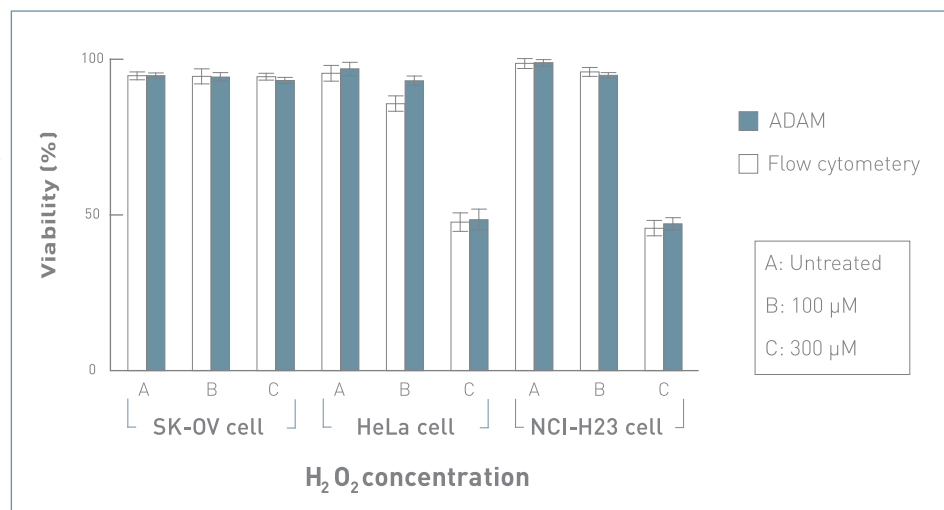
	Low Sample	Medium Sample	High Sample
	n=10	n=10	n=10
MEAN	2.51 X10 ⁵	5.99X10 ⁵	9.63X10 ⁵
SD	0.24 X10 ⁵	0.23X10 ⁵	0.35X10 ⁵
CV	0,95 %	0,38 %	0,36 %

Comparison with flow cytometry

Comparison of the cell viabilities between ADAM and flow cytometry.

SK-OV, HeLa and NCI-H23 cells were treated with 100, 300 μM H₂O₂ for 3 hours, then analyzed by ADAM and flow cytometry.

Values are given as means ± SD of three experiments.



Specifications

Hardware

- Power: AC100 ~ 240V, 50 ~ 60 Hz
- Objective lens: 4 x
- Light source: Green LED
- CCD camera: B/W CCD
- Filter: Excitation filter, Dichroic filter, Emission filter

Experiment

- Measuring range: $5 \times 10^4 \sim 4 \times 10^6$ cells/ml
- Analysis time: 2 min/test
- Loading sample volume: 12 μ L/test
- Measuring volume: 3 μ L/test

Physical property

- Weight : 9 Kg
- Size (WxLxH) : 220 x 375 x 250 mm

Accessory

- Key pad
- External video monitor (optional)

Contents & Accessories

Devices

ADAM-MC Main device with Starter Kit

Accessories

ADM-001 External video monitor (optional)

Disposables

AD4K-200 **Accuchip 4x Kit**
4 channel Accuchip with Accustain solution
(Max. 800 tests/kit)

ADR-1000 **AccuStain**
Stain solution (1,000 tests/set)

NanoEnTek
DigitalBio is brand name of NanoEnTek

NanoEnTek, Inc.

851-14, Seohae-ro, Paltan-myeon, Hwaseong-si,
Gyeonggi-do, 18531, Korea

Tel: +82-2-6220-7940 / Fax: +82-2-6220-7999

NanoEnTek America, Inc.

240 Bear Hill Road, Suite 101, Waltham, MA 02451, USA

Tel: +1-781-472-2558 / Fax: +1-781-790-5649



ADAM MC2

A New standard of
Automated Cell Counter

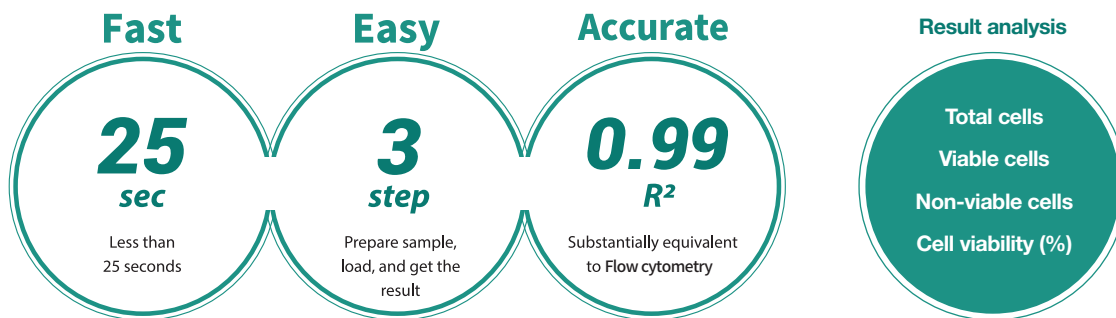
- Stem cell
- CAR-T cell
- CAR-NK cell
- Adipose-derived stem cell

Less than
25 sec



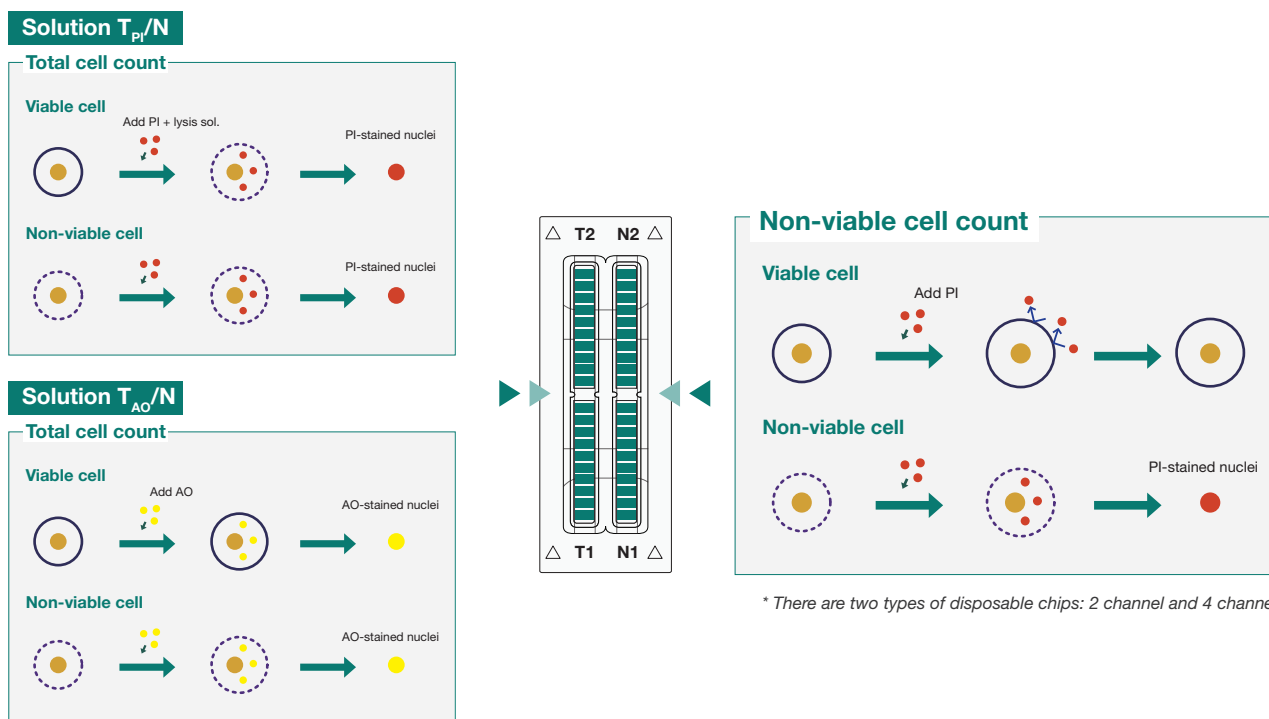
Most Accurate Nucleus Cell Counter

ADAM-MC2 is a new standard of automated fluorescence cell counter. ADAM stands for Advanced Detection and Accurate Measurement. ADAM-MC2 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.



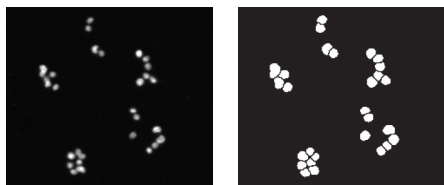
Principle of Viability Measurement (AO, PI-Staining Method)

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-MC2 takes fluorescent images automatically. The obtained images are processed by image analysis software integrated inside the system.

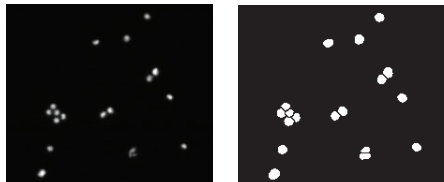


Counting Aggregated and Irregular-Shaped Cells

HepG2
 (Clumped cell line)



HeLa



ADAM-MC2 provides accurate and reliable results because it counts aggregated and irregular-shaped cells.

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

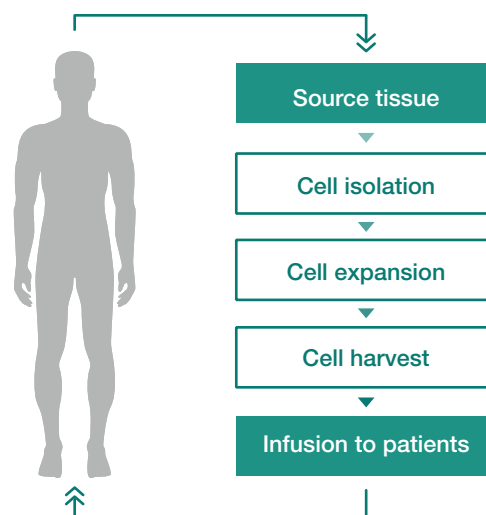
Among the images on the left, the images on the right side indicate cells that have been counted by ADAM-MC2.

Cell Therapeutic Applications

ADAM-MC2 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-MC2 depending on the cell types (Whole blood cell, PBMCs, etc.) that needs to be monitored during the manufacturing of cell therapy products.

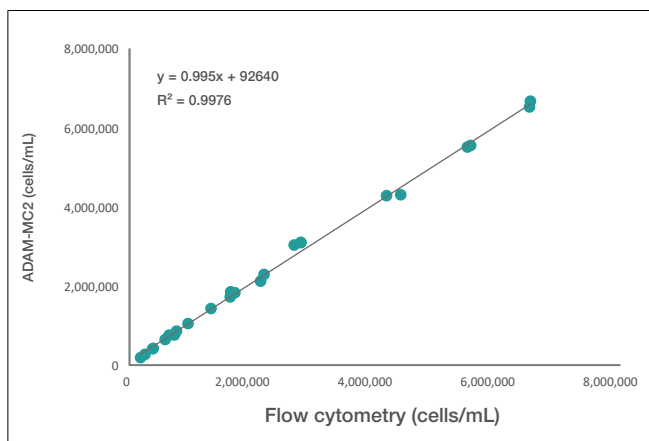
Application

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

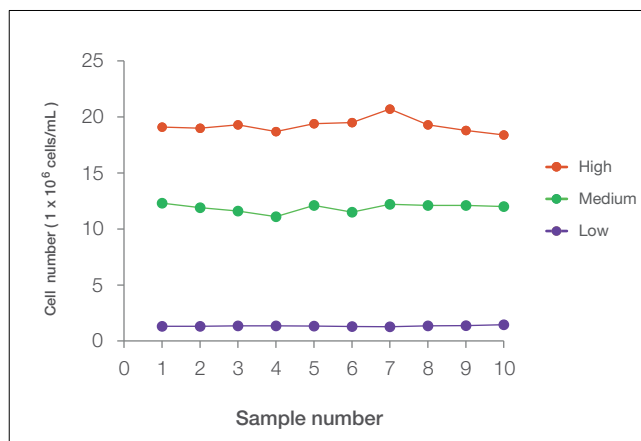


Accuracy & Repeatability

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

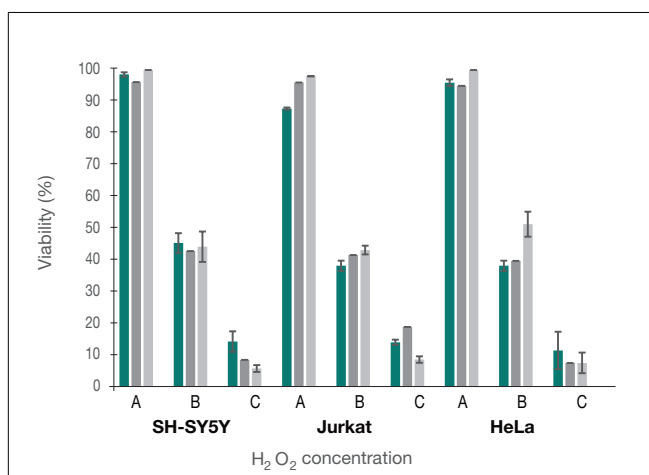


Sample with low, medium and high concentration of cells were counted with ADAM-MC2. The repeatability at each level of cell concentration is high.



	High n=10	Medium n=10	Low n=10
Mean (cells/mL)	1.9×10^7	1.2×10^7	1.3×10^6
SD	623253	375500	49001
CV (%)	3.24	3.16	3.65

Comparison of Cell Viability



Comparison of cell viability between ADAM-MC2, flow cytometry, and manual counting. SH-SY5Y, Jurkat, HeLa cells were treated with 100, 300 μM H_2O_2 for 3 hours, then analyzed by ADAM-MC2, flow cytometry, and manual counting.

■ : ADAM MC2 ■ : FACS ■ : Manual count
A: Untreated / B: 100 μM / C: 300 μM

Specifications

ADAM-MC2

Cat No. ADAM-MC2

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 uL
Measuring volume	3.4 uL
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
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.



NESCT-AMC2-001E (V.0.4)

NanoEntek, Inc.

851-14, Seohae-ro, Paltan-myeon, Hwaseong-si, Gyeonggi-do, 18531, Korea
Tel : +82-2-6220-7940 / Fax : +82-2-6220-7999

website www.nanoentek.com
e-mail sales@nanoentek.com

Less than 25 sec

ADAM

ADAM

ADAM

ADAM

ADAM

ADAM

ADAM

ADAM



ADAM MC2

Automated Cell Counter
for R&D

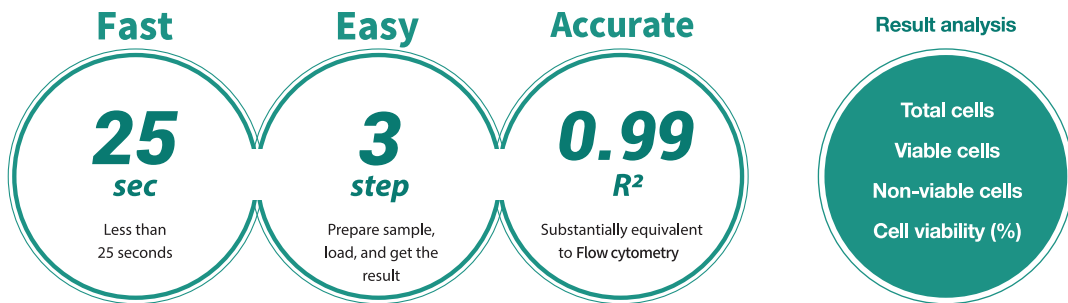
ADAM CellT

Automated Cell Counter
for cGMP

ADAM MC2 & CellT

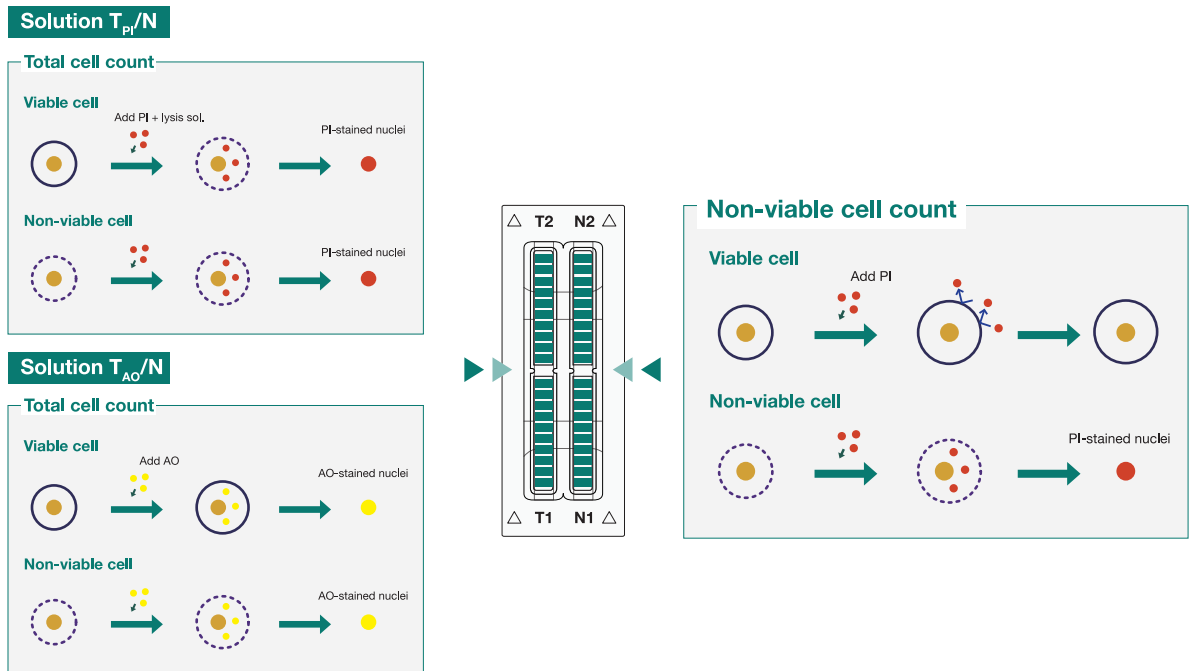
The Most Accurate Cell Counter

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.



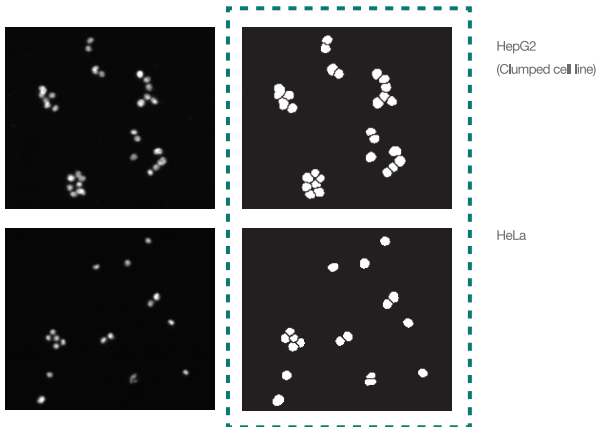
Principle of Viability Measurement (PI, AO-Staining Method)

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 MC2 & CellT

Counting Aggregated and Irregular-Shaped Cells



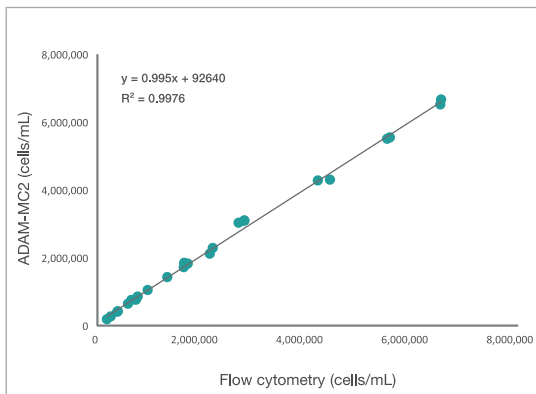
ADAM provides accurate and reliable results by counting aggregated and irregular-shaped cells.

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

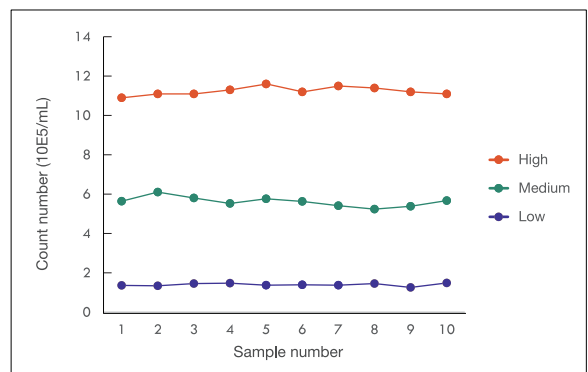
Among the images on the left, the images on the right side indicate cells that have been counted by ADAM.

Accuracy & Repeatability

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



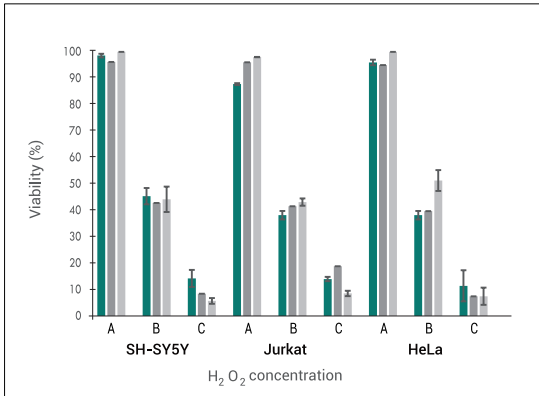
Samples of low, medium and high concentration of cells were counted with ADAM. The repeatability at each level of cell concentration is high.



	High n=10	Medium n=10	Low 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 MC2 & CellIT

Comparison of Cell Viability



Comparison of cell viability between ADAM, flow cytometry, and manual counting. SH-SY5Y, Jurkat, HeLa cells were treated with 100, 300 μM H₂O₂ for 3 hours, then analyzed by ADAM, flow cytometry, and manual counting.

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

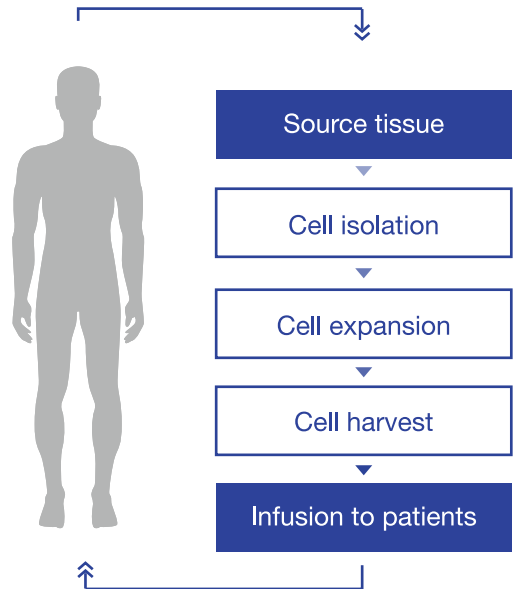


ADAM MC2 & CellIT | Cell Therapy

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.

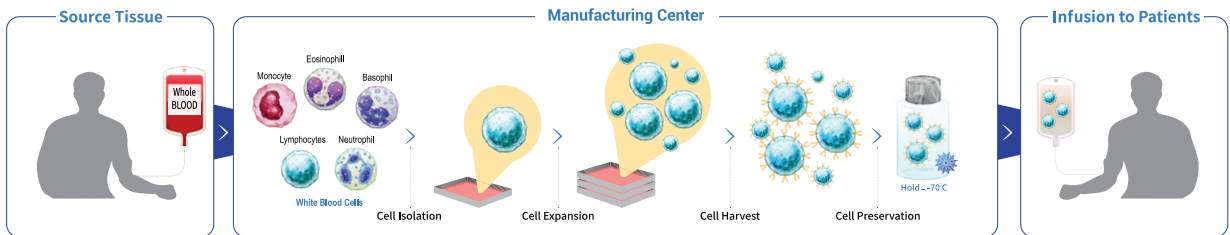


Application

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

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 MC2

ADAM CellIT

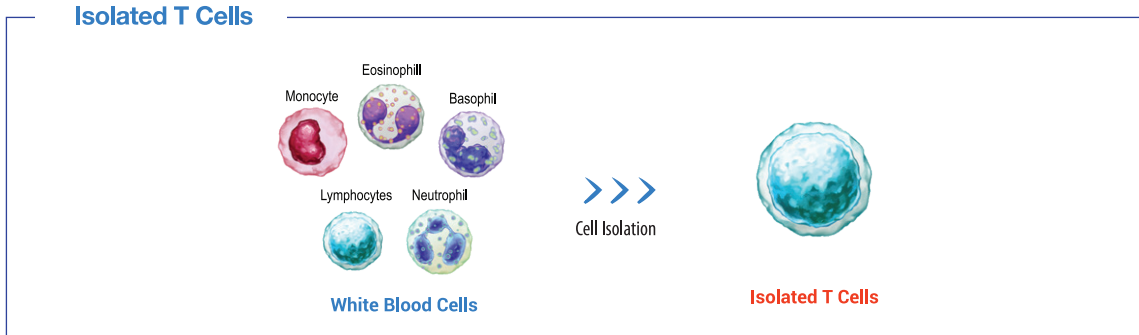


For R&D, Process Control, Quality Control of CAR-T cell

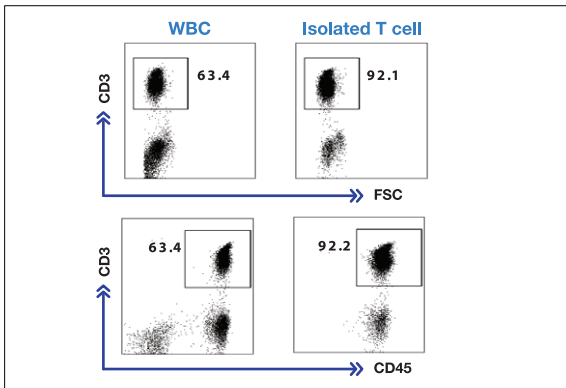
Monitoring the whole process from leukapheresis to the formulated product using the ADAM

ADAM MC2 & CellIT | Cell Therapy

Performance Test from Isolated T Cells



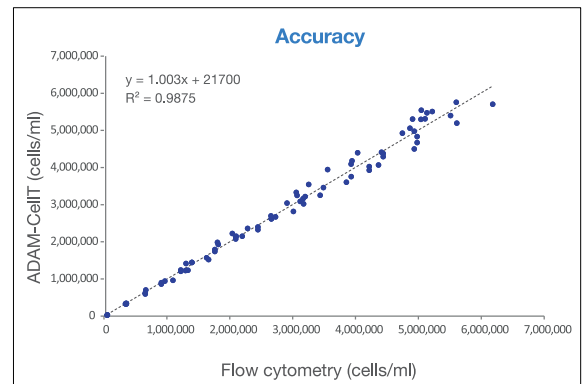
The profiles of T cells which was used for performance evaluation - Flow cytometric analysis of CD3 expression on unsorted (WBC; left panel) or sorted (Isolated T cell; right panel) human peripheral blood lymphocytes.



Accuracy

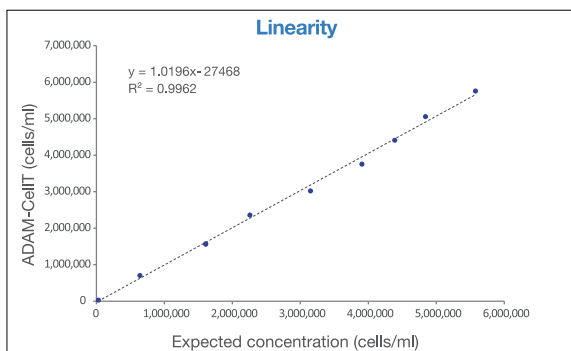
Correlation of T cell counting between flow cytometry and ADAM in Isolated T cells.

Method comparison between ADAM and flow cytometry.



Linearity

Linearity test between ADAM-CellIT and expected concentration using isolated T cells.



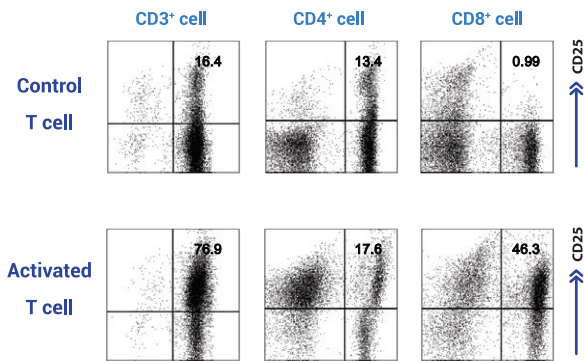
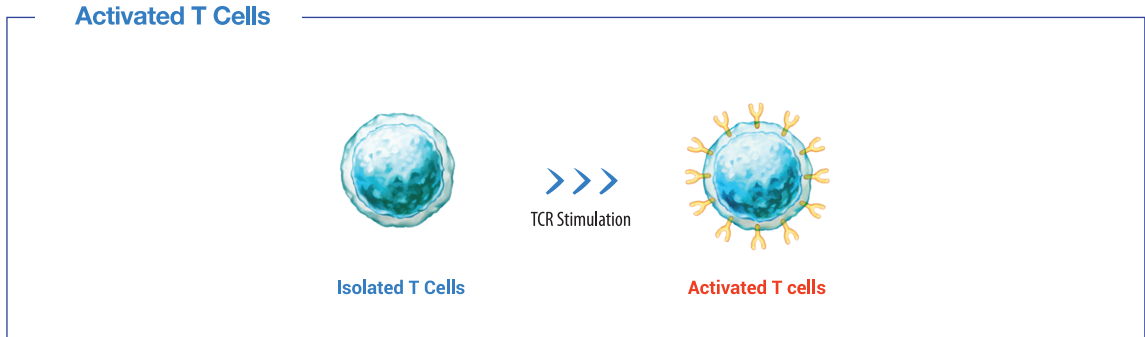
Repeatability

The samples of low, medium, and high concentration of isolated T cells were counted with ADAM.

	Low	Medium	High
MEAN	486,336	1,446,250	2,905,800
CV	4.97	3.05	1.65

ADAM MC2 & CellT | Cell Therapy

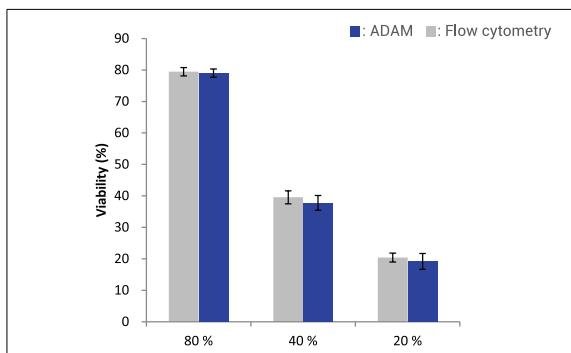
Performance Test from Activated T Cells



The phenotypes of activated T cells which was used for performance evaluation - Flow cytometric analysis of CD25 expression on TCR stimulated (Activated T cell; bottom panel) or unstimulated (control T cell; upper panel) T cells.

Viability

Comparison of viability between flow cytometry and ADAM-CellT in Activated T cells.



Repeatability

The samples of low, medium, and high concentration of activated T cells were counted with ADAM.

	Low	Medium	High
MEAN	514,470	1,436,925	2,887,715
CV	9.46	6.47	5.05

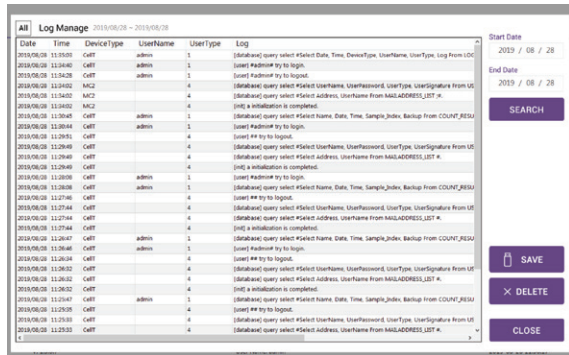
ADAM CellIT

21 CFR Part 11 Compliance

ADAM-CellIT is an automated cell counter that is available in cGMP production environment. ADAM-CellIT 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

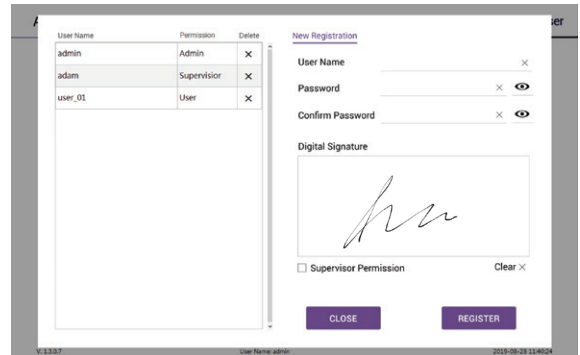
Audit trail, Data management to prevent data modification



<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-CellIT	0	0	0	X
Access Data (Export)	0	△ (only data of supervisor)	△ (only data of user)	X
Create Account	0	△ (only for supervisor & user)	X	X
Access to Electronic Records	0	X	X	X
Access to Saved Document Records	0	X	X	X
Access to Deleted Document Records	0	X	X	X
F/W, S/W Update	0	0	X	X
Date/Time Setting	0	0	X	X

Specifications

ADAM-MC2, ADAM-CellIT

Cat. No. ADAM-MC2 | ADAM-CellIT

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-CellIT	ADAM-CellIT
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.

ADAM MC2&CellIT



Scan for more information.

NanoEntek, Inc.

851-14, Seohae-ro, Paltan-myeon, Hwaseong-si, Gyeonggi-do,
18531, Korea Tel : +82-2-6220-7940 / Fax : +82-2-6220-7999

NanoEntek America, Inc.

220 Bear Hill Road, Suite 102, Waltham, MA 02451, USA
Tel : +1-781-472-2558 / Fax : + 1-781-790-5649

website	www.nanoentek.com
e-mail	sales@nanoentek.com



» **MC Plus**
For R&D

» **CellT Plus**
For cGMP

ADAM™ MC Plus & CellT Plus

Most Accurate Fluorescence Cell Counter

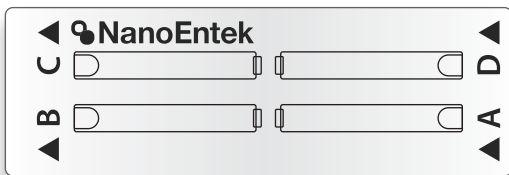
PBMCs	10 sec per test
Stem cells	15 µL sample loading volume
Primary cells	3.2 µL measuring volume
Cell lines	13 captured images per channel

ADAM™ MC Plus & CellT Plus are

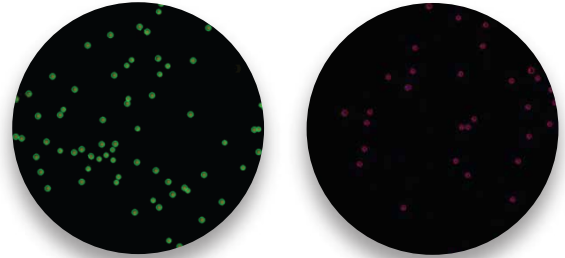
the highly accurate automated fluorescence cell counter equipped with bright field and two fluorescent channels (AO/DAPI).

ADAM™ MC Plus is used for R&D, ADAM™ CellT Plus is available in cGMP production environment.

4 tests on 1 slide



Bright field &
Dual fluorescence (AO/DAPI)



▲ AO (Live)

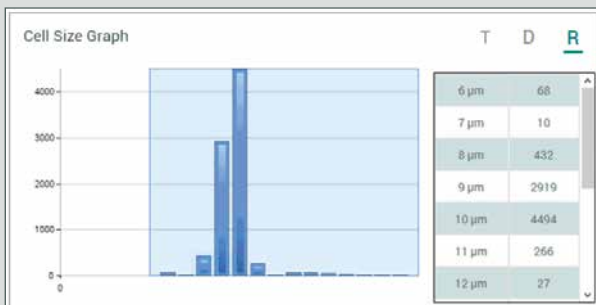
▲ DAPI (Dead)

ADAM™ MC Plus & CellT Plus

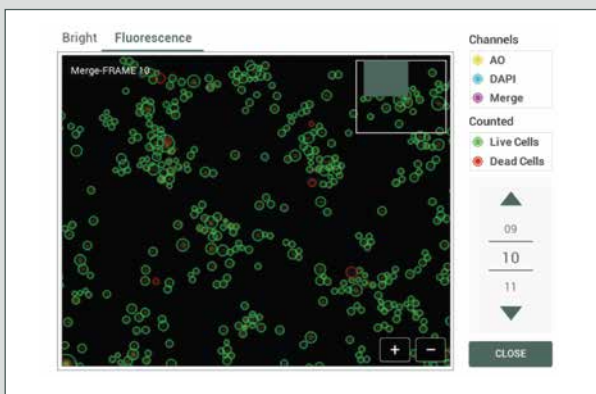
ADAM™ MC Plus & CellT Plus measures the number of total cells, viable cells, non-viable cells and shows viability results. In addition, they analyze the cell size and cell aggregation ratio as well.

Applicable to a various cell lines

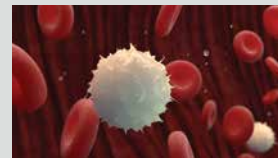
It is possible to use ADAM™ MC Plus & CellT Plus depending on the cell types (PBMCs, etc.) that needs to be monitored during the manufacturing of cell therapy products.



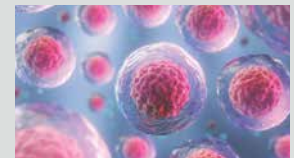
▲ Cell Size



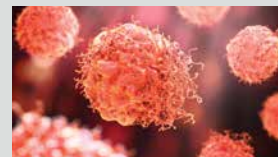
▲ Cell aggregation ratio (Aggregation 36.43%)



PBMCs



Stem cells



Primary cells



Cell lines

PBMCs
Clinical immunology

Stem cells
Regenerative medicine

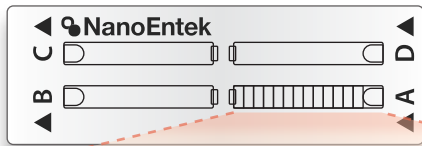
Primary cells/Cell lines
Basic research

Splenocytes
Vaccine development

Various applications

Large measuring volume

13 images
3.2 µL measuring volume

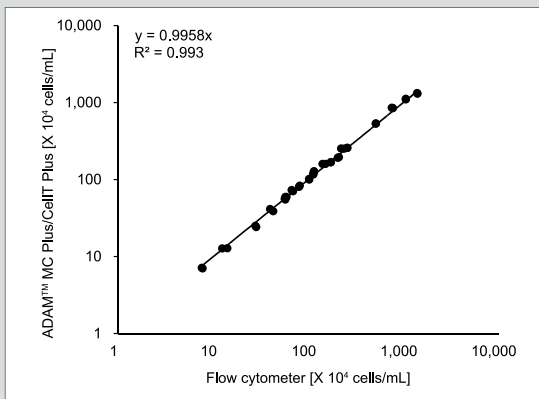


Large measurement volume obtained by detecting multiple images of the samples through moving stage provides more accurate results compared to other manufacturers' products.

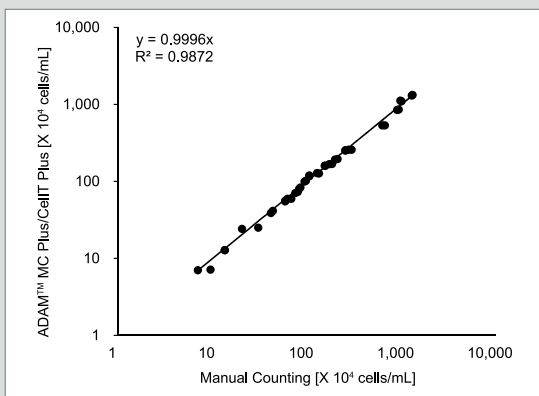
- Cell counting accuracy depends on the counting volume (measurement volume).
- The obtained multi-images are processed by image analysis software integrated inside the system.

Accuracy & Repeatability

Correlation of PBMCs total counting between flow cytometry, manual count and ADAM™ MC Plus & CellT Plus.

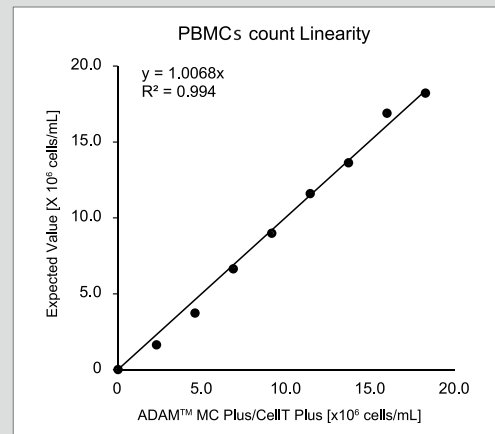


Data were compared between flow cytometer and ADAM™ MC Plus & CellT Plus results in 20 different PBMCs concentration samples.



Data were compared between manual count and ADAM™ MC Plus results in 20 different PBMCs concentration samples.

Linearity & Reproducibility



A high-concentration (1.8E+07cells/mL) of PBMCs was diluted and a dilution series was counted by ADAM™ MC Plus & CellT Plus. It shows excellent dilution linearity and reproducibility.

	High	Medium	Low
Mean	1.8.E+07	9.0.E+06	1.6.E+06
SD	2.7.E+05	2.3.E+05	3.8.E+04
CV (%)	1.5 %	2.5 %	2.3 %

Sample with low, medium and high concentration of PBMCs were counted with three ADAM™ MC Plus & CellT Plus.

Accurate result

Specifications I



ADAM™ MC Plus & CellT Plus

Hardware	
Measuring range	$5 \times 10^4 \sim 2 \times 10^7$ cells / mL
Optimal range	$4 \times 10^5 \sim 4 \times 10^6$ cells / mL
Analysis time	fast mode 10 sec / test real cell size mode 30 sec / test
Measuring volume	3.2 μ L
Focus	Auto-focusing
Objective lens	4 X
Weight	7.0 kg
Dimensions (W x D x H)	277 x 276 x 270 mm

AccuPlus Slide & Reagent

Performance	
Staining method	Acridine orange (AO) & 4',6-diamidino-2-phenylindole (DAPI) stain
Sample loading volume	15 μ L/test

Ordering Information

Cat. No.	Description	Contents
ADAM-MC Plus	Fluorescence cell analyzer	<ul style="list-style-type: none"> Main device User manual
ADAM-CellT Plus	Fluorescence cell analyzer for cGMP	<ul style="list-style-type: none"> Main device User manual 21 CFR PART 11 requirement support appendix
APAD-400	Cell viability reagent	<ul style="list-style-type: none"> 20 mL x 1 bottle
AP4S-100	AccuPlus Slide 4ch.	<ul style="list-style-type: none"> 4ch. Slide 100 ea
APB-001	Test Beads	<ul style="list-style-type: none"> 1 mL x 1 tube / pack
QCS-002	QC Slide	<ul style="list-style-type: none"> 1 QC Slide / case User manual

FOR RESEARCH USE ONLY. This product is not approved for diagnostic or therapeutic use.



website www.nanoentek.com
e-mail sales@nanoentek.com

NanoEntek, Inc.

Head Office
12F, 5, Digital-ro 26-gil, Guro-gu, Seoul, 08389, Korea
Tel +82-2-6220-7940 / Fax +82-2-6220-7999

NanoEntek America, Inc.

220 Bear Hill Road, Suite 102, Waltham, MA 02451, USA
Tel +1-781-472-2558 / Fax + 1-781-790-5649

NanoEntek Europe | med-tech supplies GmbH

Lochhamerstr. 4a, 82152 Martinsried, Germany
Tel +49-89-21-55-38-43 / Fax +49-89-99-95-46-60

NanoEnTek

ADAM SCC

Automatic Somatic Cell Counter

Better way to check milk quality





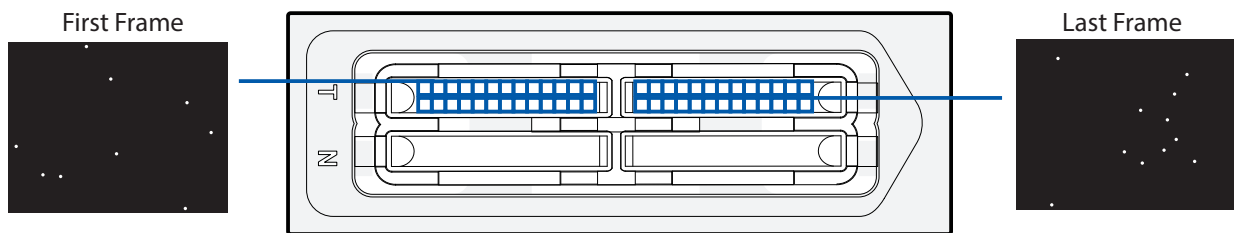
Fully automated somatic cell counter, ADAM-SCC

ADAM-SCC is fully compatible to the Direct Microscopic Somatic Cell Count (DMSCC).

The ADAM-SCC is designed for the performance of accurate somatic cell counting with the unique image cytometer technology. The ADAM-SCC can be used as an ideal equipment for dairies, smaller labs and veterinary institutes working with somatic cell analysis. It will be helpful to the implementation of milk quality control, which favors farmers who want to supply milk with the improved quality.

Principal

ADAM somatic cell counter is a precision microscope integrated with fluorescence optic and image analysis software.



Features

► Accurate & Reliable results

- Compatible to the Direct Microscopic Somatic Cell Count
- Scanning the sample with 22 images (4ch)
- Optimized image processing software

► Easy of use

- Just 2 step to run
- High speed measurements (analysis tme :Max2.5 min for 4test)

► Low cost to run

- Low maintenance cost
- Calibration free (DMSCC)

► Compact Design

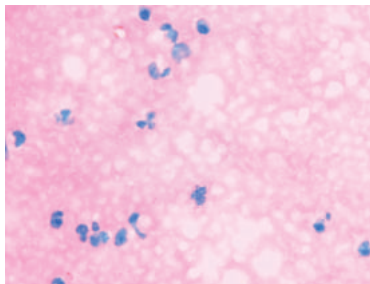
- Light weight and small size (9 kg / W 220 x L 375 x H 250mm)
- Instance print-out available (optional)





Validation and verification Principal

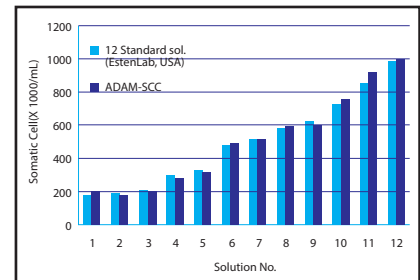
**Accuracy : Comparison between ADAM-SCC and Direct Microscopic Somatic Cell Counting
by National Veterinary Research & Quarantine Service (SOUTH KOREA)**



Somatic cell image
(DMSCC X1000)



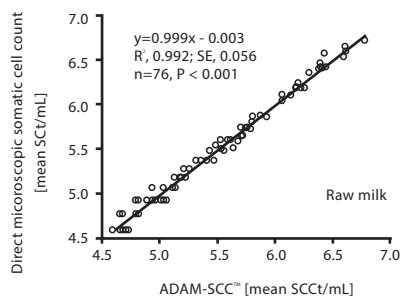
Somatic cell image
(ADAM-SCC)



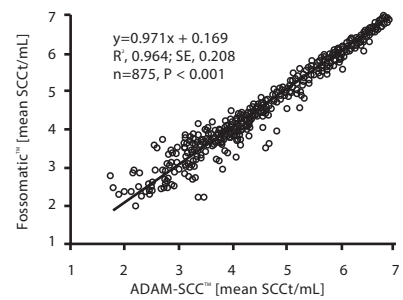
Correlation between 12 standard somatic cell solution (Eastern Lab., USA) and ADAM-SCC

**Compatibility : Data correlation between ADAM-SCC and Conventional Equipments
by National Veterinary Research & Quarantine Service (SOUTH KOREA)**

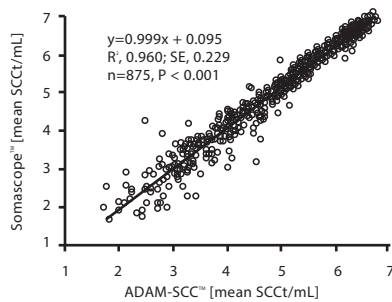
[ADAM-SCC and D]



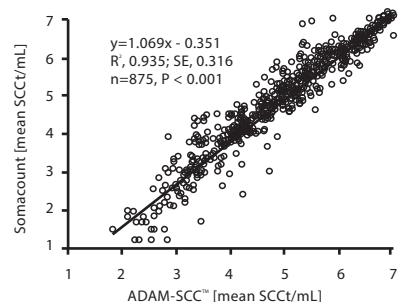
[ADAM-SCC and F]



[ADAM-SCC and S1]

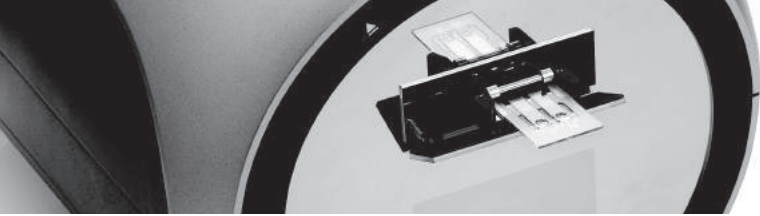


[ADAM-SCC and S2]



ADAM-SCC		Fo***		De***		So***	
SCC(cell/mL)	*CV(%)	SCC(cell/mL)	*CV(%)	SCC(cell/mL)	*CV(%)	SCC(cell/mL)	*CV(%)
100,000	5%	100,000	7%	100,000	12%	100,000	5%
400,000	3%	300,000	5%	400,000	8%	300,000	3%
600,000	2%	500,000	4%	100,000	7%	500,000	2%

*CV (Coefficient of Variation)



[Hardware]

Dimension	220 x 375 x 250mm (8.66 x 14.76 x 9.84inch)
Weight	9kg (19.84lb)
Power	AC100~240V, 50~60Hz
Objective lens	4X
Light source	Green LED
CCD Camera	B/W CCD
Filter	Excitation filter, Dichroic filter, Emission filter

[Experiment]

Measuring range	0.05 ~ 1.15 x 10 ⁶ cells/mL
Analysis time	Max 2.5min for 4tests
Loading Volume	12ul/test (For Somachip 4x)
Measuring Volumen	3ul/test (For Somachip 4x)

[Ordering Information]

Cat No.	Description	Contents
ADAM-SCC	ADAM-SCC	Main Device, USB cable, Power cord, Key pad
CRS-K02	4 channel Soma kit	Disposable Chips(100pcs, 400tests), Solution(400x100ul)
ADAM-001	External Video Monitor(Optional)	
ADP-001	Printer(Optional)	

ADAM SCC2
Automated Somatic Cell Counter

Better way to check **MILK QUALITY**

Less than
13 sec



Milk Quality Control with ADAM-SCC2

ADAM-SCC2 is an automated somatic cell counter integrated with fluorescence optic and image analysis software. ADAM-SCC2 counts the number of somatic cells to determine the quality of raw milk with unique image cytometer technology. ADAM-SCC2 can be used as an ideal equipment in the research field, dairy farms, milk manufacturing facilities, and veterinary institutes working with somatic cell analysis. It will be helpful to manage the milk quality to provide the best grade of milk.

Combined with a disposable microfluidic chip, the operation of ADAM-SCC2 is extremely simple, easy, and cost-effective. The microfluidic technology of disposable chip consumes less reagent and makes the milk quality control easy.

FAST

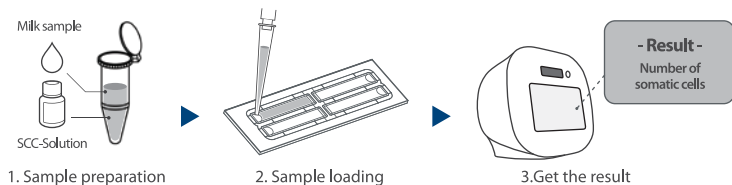
13
sec

- 01 High-speed measurement
- 02 Less than 13 seconds for a test (4 channel)
- 03 Up to 400 tests are available per kit (4 channel)

EASY

3
steps

- 01 Simple and easy to operate, even for the untrained operators



- 02 No need for calibration
- 03 Can be used without diluting raw milk
- 04 User-friendly interface with a touchscreen tablet computer

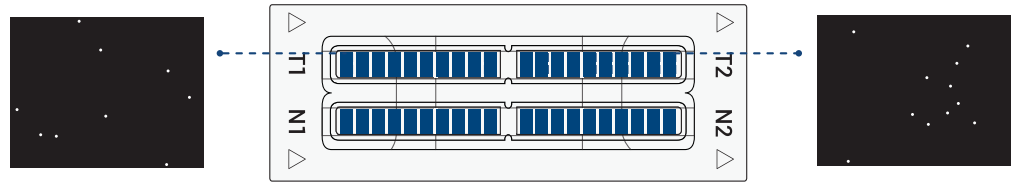
ACCURATE

0.99
R²

- 01 Substantially equivalent to the DMSCC (Direct Microscopic Somatic Cell Count)
- 02 Taking multiple images and averaging the values increase accuracy and reliability
- 03 Optimized image analysis software

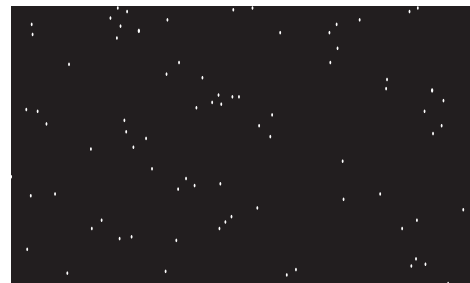
Principle of Counting Somatic Cell

After the samples are stained with fluorescent dye, propidium iodide, which intercalates DNA to stain the nucleus of target cells, then simply drop the sample into a chip and slide it into ADAM-SCC2, then ADAM-SCC2 takes images automatically. The obtained images are processed by image analysis software to count the somatic cells. Multiple images are taken and their values are averaged out, so the result is accurate and reliable.

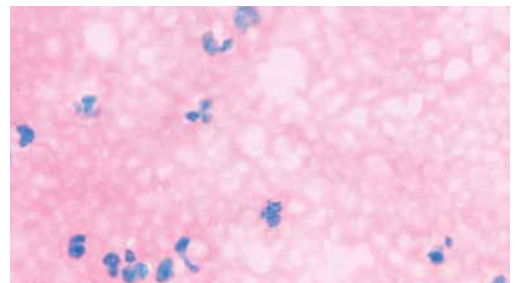


* There are two types of disposable chips: 2 channel and 4 channel.

Comparison of somatic cell image between ADAM-SCC2 and Direct Microscopic Somatic Cell Count



ADAM-SCC2



DMSCC X1000

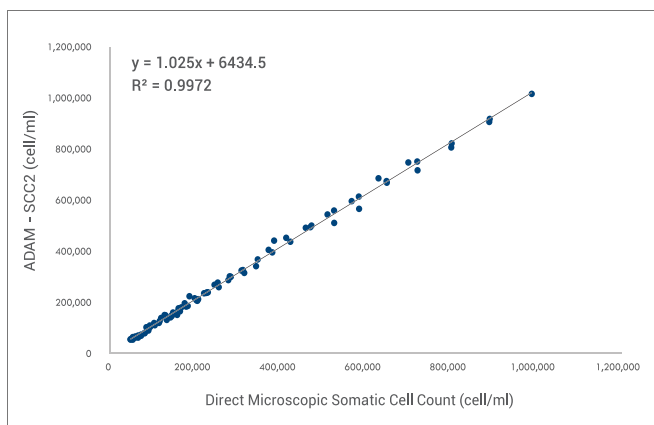
Repeatability

The data on the right shows that sample with low, medium, and high concentrations of cells were counted with ADAM-SCC2.

	High	Medium	Low
MEAN	600,000	400,000	100,000
CV	2%	3%	5%

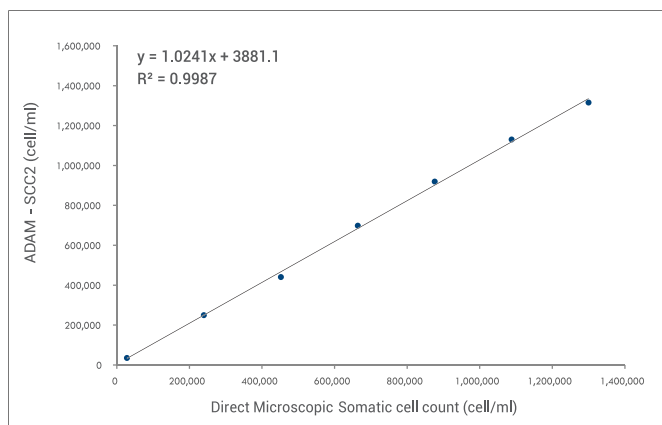
Accuracy

Comparison between ADAM-SCC2 and Direct Microscopic Somatic Cell Counting



Linearity

Comparison between ADAM-SCC2 and Direct Microscopic Somatic Cell Counting



Specifications

ADAM-SCC2

Cat No. ADAM-SCC2

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



Somatic Cell Count Kit

Cat No. CRS-K01 (2 channel) | CRS-K02 (4 channel)

Performance	2 channel	4 channel
Analysis time	< 25 sec/test	< 13 sec/test
Loading volume	23 uL	13 uL
Measuring volume	8.6 uL	3.4 uL
Measurement range	0.05 ~ 1.15 X 10 ⁶ cells/mL	



Ordering Information

Catalog Number	Product Name
ADAM-SCC2	ADAM-SCC2
ADB-500	ADAM Calibration Bead

Catalog Number	Product Name
CRS-K01	SOMA chip 2x Kit (2 channel, 50 slides/kit)
CRS-K02	SOMA chip 4x Kit (4 channel, 100 slides/kit)

*CRS-K01 : please consult your distributor or manufacture for availability.



NanoEntek, Inc.

Head Office

12F, 5, Digital-ro 26-gil, Guro-gu, Seoul, 08389, Korea
Tel: +82-2-6220-7940 / Fax: +82-2-6220-7999

NanoEntek America, Inc.

220 Bear Hill Road, Suite 102, Waltham, MA 02451, USA
Tel: +1-781-472-2558 / Fax: +1-781-790-5649

website

www.nanoentek.com

e-mail

sales@nanoentek.com

Blog

www.blog-nanoentek.com

NESCT-ASC2-001E (V.0.1)