EVE™

Automatic cell counter

Counting with EVE, affordable automatic cell counting

Benchtop automatic cell counter, *EVE*!
No more manual counting!

NanoEntek

EVE™, Automatic cell counter, with states-of-the-art optics provides image analysis for cell counting.

The EVE™ is a benchtop size counter, designed to measure live, dead, and total counting, which gives us capability for viability with accuracy and precision.

Key features and benefits

Fine distinction of clumped cell

- An advanced analysis algorithm provides accurate results in clumped cell

Applicable for broad range of cell sizes and types

- From primary (tissue, blood) cell lines to stem cells

User friendly

- 7 inch LCD touch screen • Benchtop size • No maintenance needed

Data storage and analysis

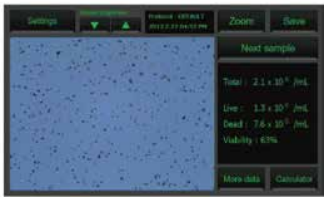
- Stores 500 test results, transfers the data to PC using USB drive • Provided PC software will give you more in-depth analysis

Cell size gating function

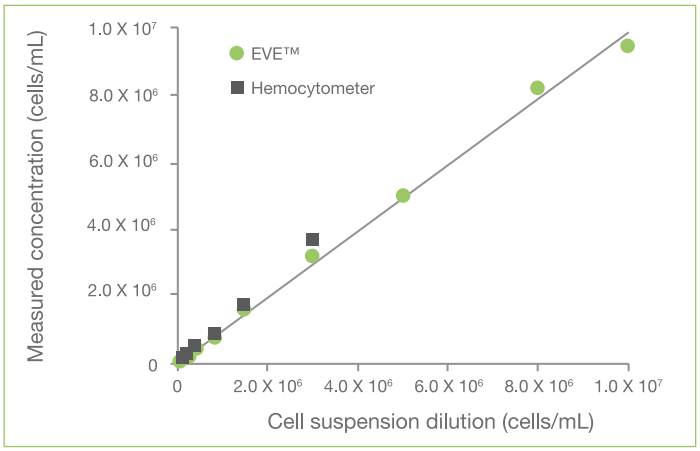
- Select range of cell size

Convenient for use

1. Load the sample → 2. Adjust the focus → 3. Obtain the results



Correlation of EVE™ and manual counting

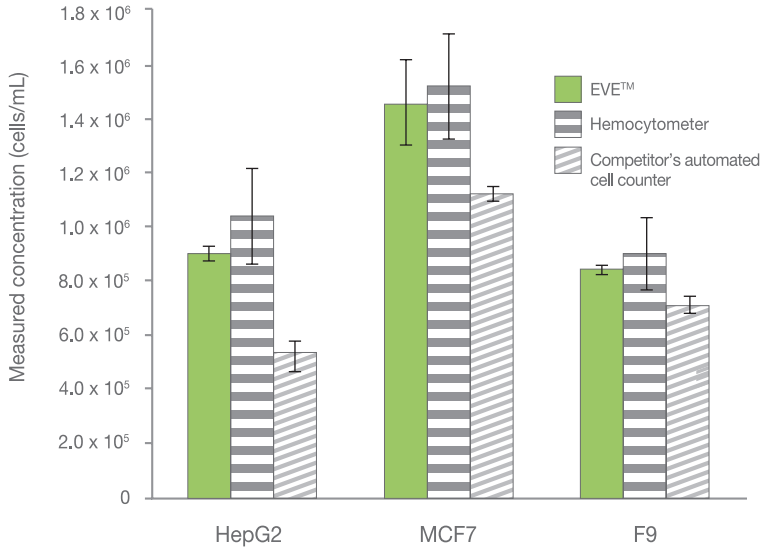


Measuring from the EVE™ extends further the high concentration range than hemocytometer readings

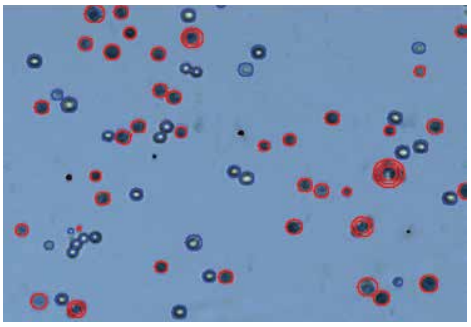
More data window to check the detail result and select the cell size gating

Faster! Accurate! Easy to use!

Total cell counting result (Clumped cell)



The MCF7 breast cancer cell line can be clumpy.The EVE™ counting algorithm identifies and counts individual cells within these cell clumps for accurate analysis.



Clumped cells (HepG2, MCF7, F9) were counted with EVE™, a hemocytometer and the competitor's automated cell counter. In accuracy and precision, EVE™ is comparable to the hemocytometer for all cell lines. The competitor's cell counter was shown significantly less numbers in clumped cell. Cell counting results were obtained seven times repetition.

Cell lines validated on EVE™

Cell Type	Animal	Organ	Growth Properties
HeLa	Human	Skin	Adherent
NIH-3T3	Mouse	Embryo	Adherent
U-2 OS	Human	Bone	Adherent
Jurkat	Human	Blood	Suspension
KG-1	Human	Blood	Suspension
HepG2	Human	Liver	Adherent
Hep3B	Human	Liver	Adherent
LNCaP	Human	Prostate	Adherent
SH-SY5Y	Human	Brain	Adherent
SCN2.2	Rat	Brain	Adherent
F9	Mouse	Embryo	Adherent
MCF7	Human	Breast	Adherent
A549	Human	Lung	Adherent
GH3	Rat	Pituitary gland	Adherent

Specifications

Item	Description
Countkig time	< 20seconds
Cell measurement range (cells/mL)	$1x10^4$-$1x10^7$
Optimal measurement range (cells/mL)	$1x10^5$-$4x10^6$
Cell size range	5-60 μm
Sample volume	10 μL
Staining Method	Trypan blue stain
Display	7" LCD touch screen
Exporter fomats	JPEG (image), CSV(raw data)
Data export	USB drive
Dimensions	27cm(w)x20cm(d)x19cm(h)
Weight	2.1 kg (4.6 lb)

Ordering information

Cat No.	Description	Contents
EVE-MC	EVE™ Automatic cell counter	Main device, Power supply, USB drive, EVE™ Cell counting slide (50 slides)
EVS-050	EVE™ Cell counting slide	50 slides (100 counts)
EVS-1000	EVE™ Cell counting slide	1,000 slides (2,000 counts)
EVS-5000	EVE™ Cell counting slide	5,000 slides (10,000 counts)
EBB-001	Test beads Concentration (avg.) 1.0×10^6	1 mL

EVE™

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

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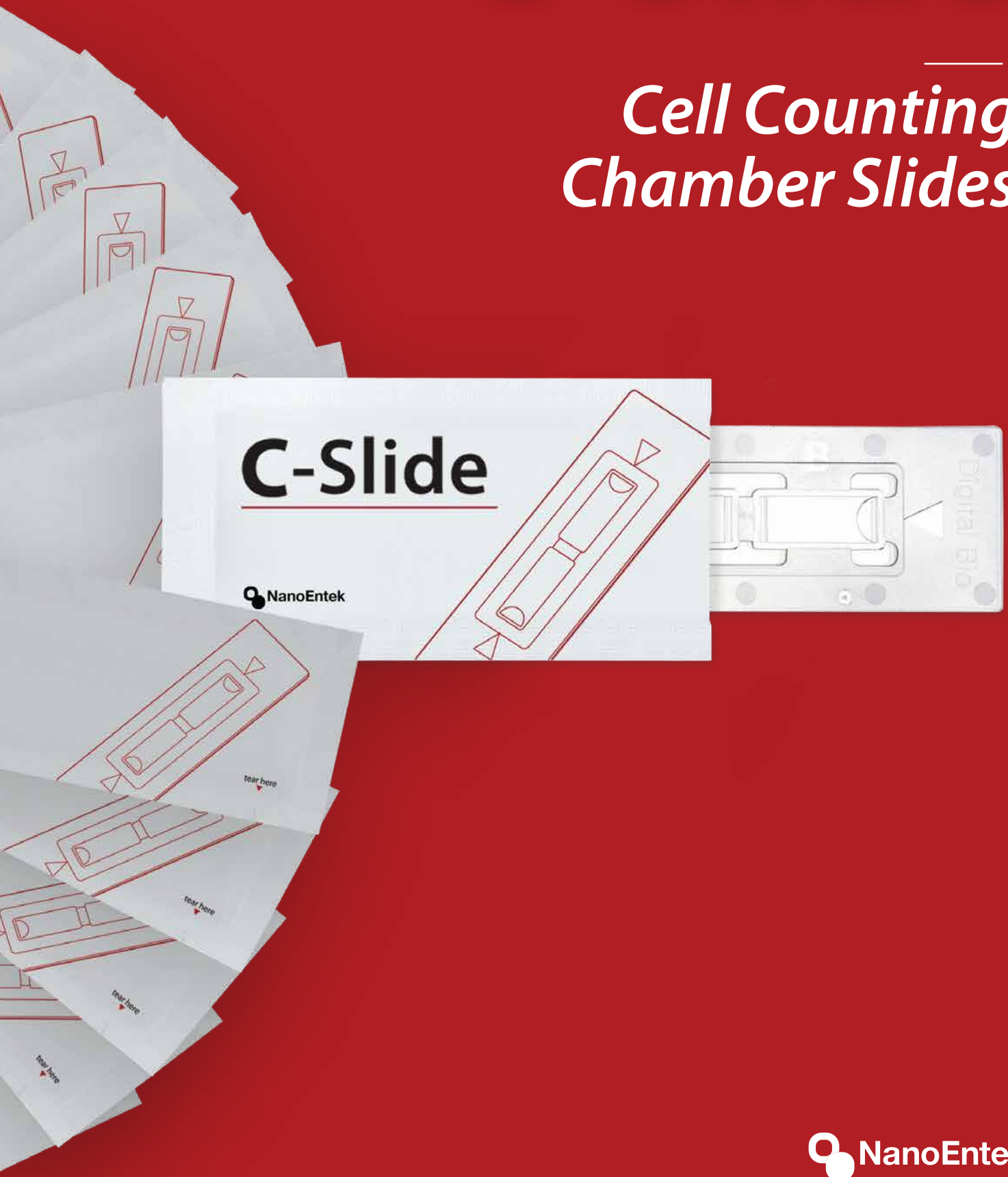
CE

C-Slide

Cell Counting Chamber Slides



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C-Slide

Cell Counting Chamber Slide For Used With Automated Cell Counters

- No need for coverslips
- Disposable, eliminates the need for washing
- Reduce exposure to infectious samples and risk of contamination
- Guaranteed reproducibility and reliability
- Made of sturdy quartz grade optical plastic

Scan me

Specifications

Sample volume : 10 µL
Staining method : Trypan blue stain
Dimension : 75 (L) x 25 (W) x 1.8 (H) mm

Ordering information

Catalog Number	Product Name
CS-050	C-Slide, Cell counting chamber slides 50 slides (100 tests)

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NESCT-CS-001E (V.0.3)

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THE WORLD'S FASTEST AUTOMATED CELL COUNTER

LESS THAN 1 SEC !

EVE™ PLUS

NanoEntek

EVE™ PLUS, **Automated cell counter,** with states-of-the-art optics provides image analysis for cell counting.

The EVE™ PLUS is a benchtop size counter, designed to measure live, dead, and total counting, which gives us capability for viability with accuracy.

Key features and benefits

FAST

- Count less than 1 second

EASY

- Trypan blue staining method
- Auto focus, Manual focus
- Monitor to view the cell images
- Not required maintenance
- Small and compact (benchtop size)

ACCURATE

-Automated image analysis

-Count aggregated cell

-Cell size gating function (select range of cell size)

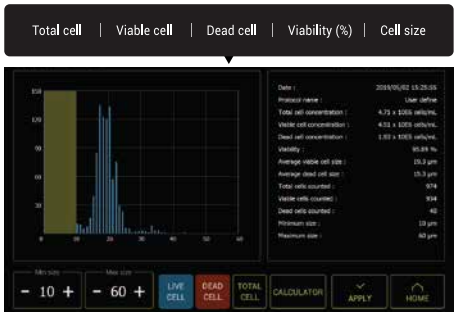
-Applicable for broad range of cell sizes and types

Convenient for use

STEP 01. Load the sample

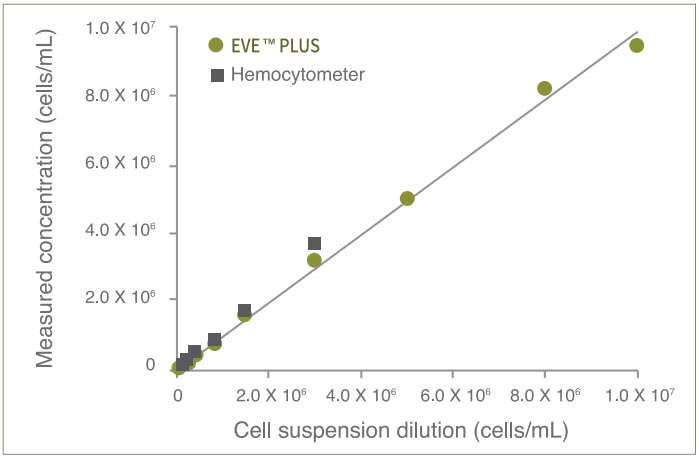
STEP 02. Adjust the focus

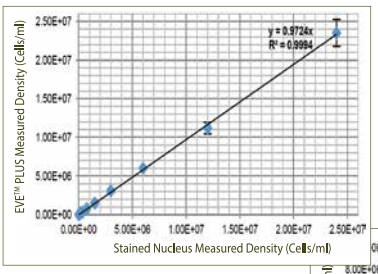
STEP 03. Get the results



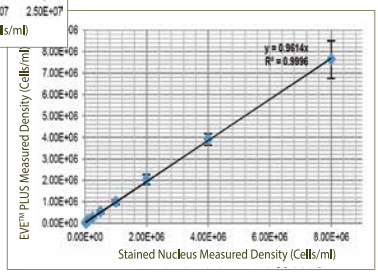
Results of Accuracy test

Measuring from the EVE™ PLUS extends further the high concentration range than hemocytometer readings





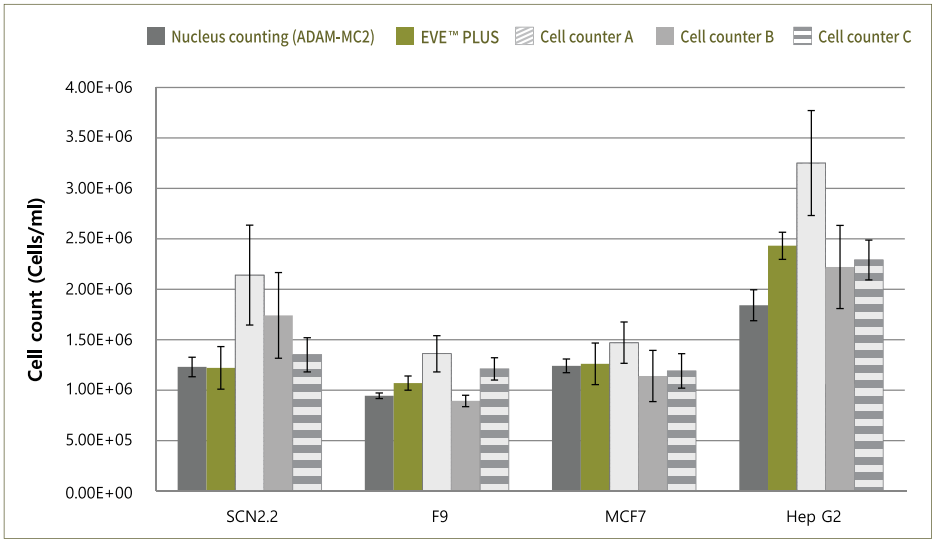
◄ Single cell

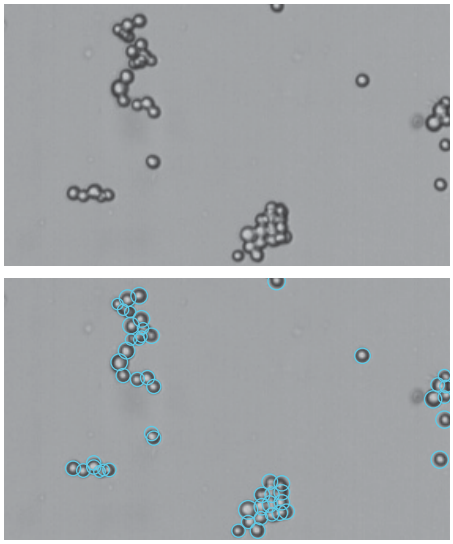


Clumped cell ►

The World's Fastest Automated Cell Counter

Results of Correlation test (Clumped cell)





Clumped cells were counted with EVE™ PLUS, nucleus counting, and the automated cell counters A, B, C. NanoEnTek's ADAM-MC2 device was used for nucleus counting. It is accurate in clumped cells by counting the stained nuclei through the PI staining method. EVE™ PLUS is comparable to the nucleus counting for all cell lines with accuracy and precision. The other automated cell counters A, B, and C were shown inaccurate numbers in the clumped cell. EVE™ PLUS identifies and counts the individual cells within the clumpy cells for accurate analysis.

Cell lines validated on EVE™ PLUS

Cell Type	Animal	Organ	Growth Properties
HeLa	Human	Skin	Adherent
NIH-3T3	Mouse	Embryo	Adherent
U-2 OS	Human	Bone	Adherent
Jurkat	Human	Blood	Suspension
KG-1	Human	Blood	Suspension
HepG2	Human	Liver	Adherent
Hep3B	Human	Liver	Adherent
LNCaP	Human	Prostate	Adherent
SH-SY5Y	Human	Brain	Adherent
SCN2.2	Rat	Brain	Adherent
F9	Mouse	Embryo	Adherent
MCF7	Human	Breast	Adherent
A549	Human	Lung	Adherent
GH3	Rat	Pituitary gland	Adherent

Specifications

Item	Description
Counting time	<1 sec (Manual focus) <10 sec (Auto focus)
Cell measurement range(cells/mL)	1 x10^4 - 2x10^7
Cell size range	5 - 60 µm
Sample volume	10µL
Staining Method	Trypan blue stain
Display	Tablet PC
Exporter formats	JPEG(image), CSV(raw data), PDF
Data export	USB drive, Wifi
Dimensions	27.4(w) x 23.3(d) x 27.4(h) cm
Weight	4 kg
Technical support	provide remote assistance

Ordering information

Cat. No.	Description	Contents
EVE-MC2	EVE™ PLUS, Automated cell counter	Main device, Power supply, USB Wifi dongle, EVE™ Cell counting slide (50 slides)
EVS-050	EVE™ Cell counting slide	50 slides (100 counts)
EVS-1000	EVE™ Cell counting slide	1,000 slides (2,000 counts)
EBB-001	Test beads Concentration (avg.) 1.0 x 10^6	1mL

EVE™ PLUS

NanoEntek

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This product is not approved for diagnostic or therapeutic use.

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A HIGH-THROUGHPUT AUTOMATED CELL COUNTER

EVE™ HT

AN IDEAL CELL COUNTER YOU CAN TRUST

48 Counts

3 Minutes

20 µL Samples

21 CFR Part 11 Compliance

High efficiency

NanoEntek

EVE™ HT

A HIGH-THROUGHPUT AUTOMATED CELL COUNTER

Consistent results are essential

EVE™ HT is a high-throughput automated cell counter that can count 48 samples in just 3 minutes. EVE™ HT provides a perfect solution for cell line development and a large scale cell production.

Simple yet Sophisticated Cell Counter

EVE™ HT offer you a better cell counting method.

3 minutes

Results in no time

EVE™ HT only takes 3 minutes to test one plate with 48 samples.

20 µL volume

Considering your valuable samples

Only 20 µL of sample volume is required for cell counts and viability.

48 channels

Up to 48 samples at a time

EVE™ HT counting plate with 48 channels allows you to test up to 48 samples simultaneously.

High efficiency

Run different cell lines with one plate

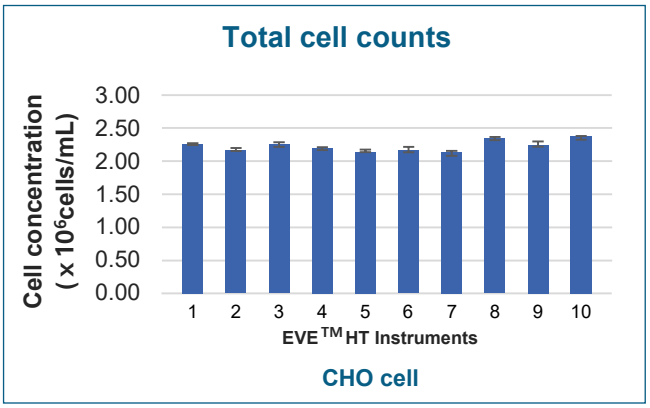
A highly efficient disposable counting plate allows for different cell lines analysis using the same plate and provides multi test results.

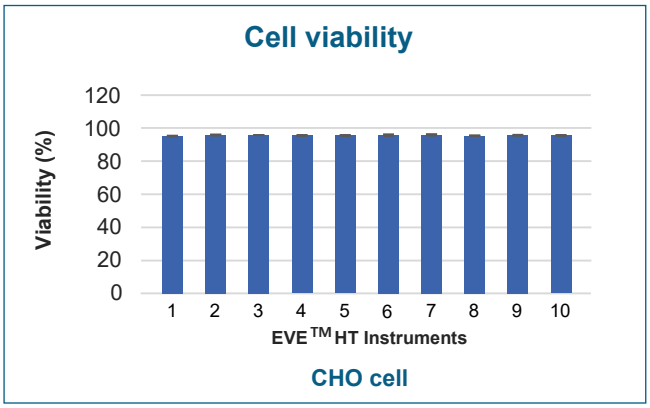
Disposable EVE™ HT assay plate

Manufactured with high precision,
EVE™ HT plate provides time-saving workflow that is easy to use.

High multi-instrument precision for CHO cells

Multiple experiment data for total count and viability using ten EVE™ HT showed high device-to-device comparability.



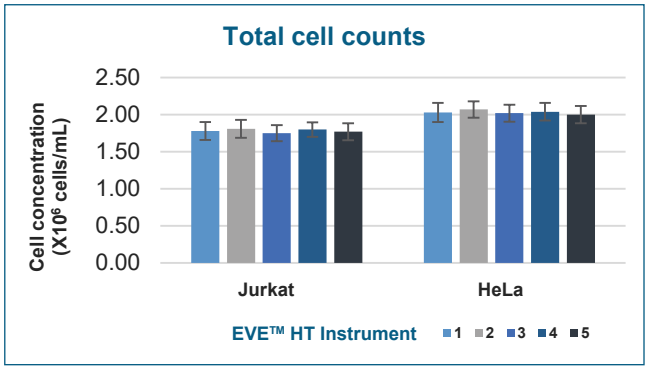


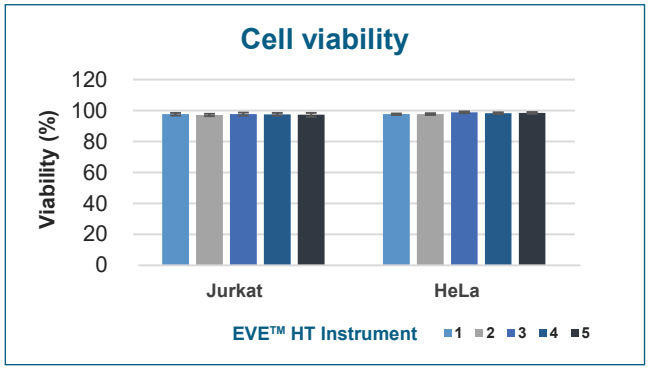
EVE™ HT precision	Cell total count (CV)	
	Average	CV
Well to well	2.18 × 10E6	4.3%
Plate to plate	2.30 × 10E6	3.5%
Instrument to instrument	2.31 × 10E6	0.5%
System-wide precision	2.27 × 10E6	7.0%

EVE™ HT precision	Viability (CV)	
	Average	CV
Well to well	97%	0.9%
Plate to plate	97%	0.3%
Instrument to instrument	96%	0.4%
System-wide precision	97%	0.9%

Low instrument-to-instrument variability

With five EVE™ HT, consistent results have been demonstrated across different instruments.



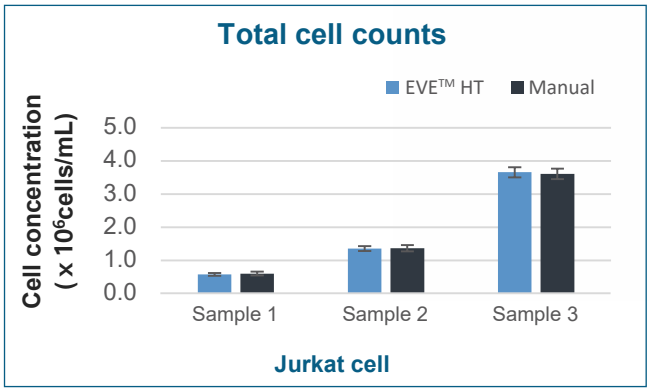


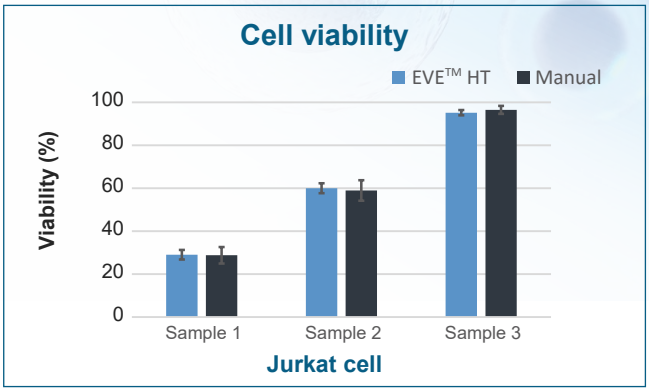
EVE™ HT precision	Cell total count (CV)	
	Jurkat	HeLa
Well to well	4.9%	4.8%
Plate to plate	2.4%	1.2%
Instrument to instrument	1.6%	1.1%
System-wide precision	6.3%	5.9%

EVE™ HT precision	Viability (CV)	
	Jurkat	HeLa
Well to well	0.7%	0.6%
Plate to plate	0.2%	0.1%
Instrument to instrument	0.4%	0.5%
System-wide precision	1.0%	0.7%

Comparision between EVE™ HT and manual counting

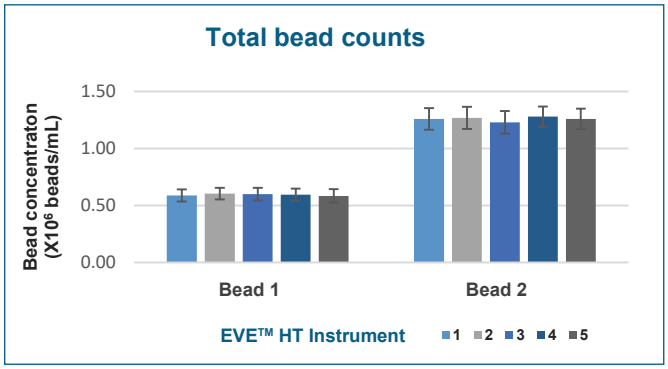
Compared to traditional hemocytometer, EVE™ HT provides highly compatible results in varying concentrations and viabilities.





High instrument-to-instrument consistency

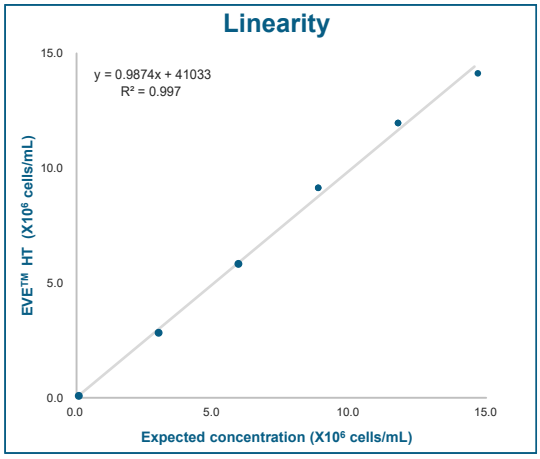
Beads solution stained with trypan blue was loaded into a total of 96 wells of two counting plates for analysis where each plate consists of 48 wells. The same sample was analyzed for comparison using a different instrument.
As a result, high device-to-device comparability was shown.



EVE™ HT precision	Bead total conc. (CV)	
	5 x 10⁵ beads/mL	1 x 10⁶ beads/mL
Well to well	8.1%	6.4%
Plate to plate	0.4%	0.8%
Instrument to instrument	1.5%	1.2%
System-wide precision	9.2%	7.6%

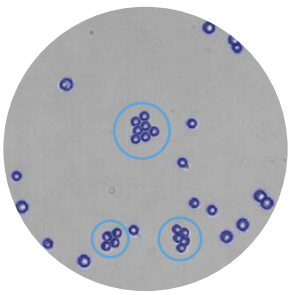
High linearity with expected concentration

Manual counting using hemocytometer was used to compare low and high concentration within optimal range for EVE™ HT linearity test. A high linearity was shown as a result.



Advanced counting – Declustering algorithm

Counting clumped and irregular-shaped cells with declustering algorithm is now available on EVE™ HT.



» With EVE™ HT, you can

- Individually count cells when they are aggregated
- Count each cell based on size and shape
- Exclude debris from results

21 CFR Part 11 Compliance

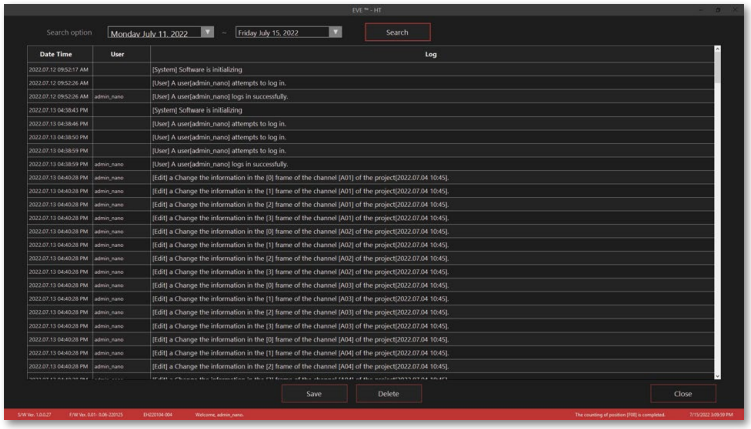
EVE™ HT offers an optional feature to safeguard data integrity required by 21 CFR Part 11. With this feature, not only a company can easily manage users and only give authority to specific users to manage data, but also allows EVE™ HT to save every user activity and create an audit trail.

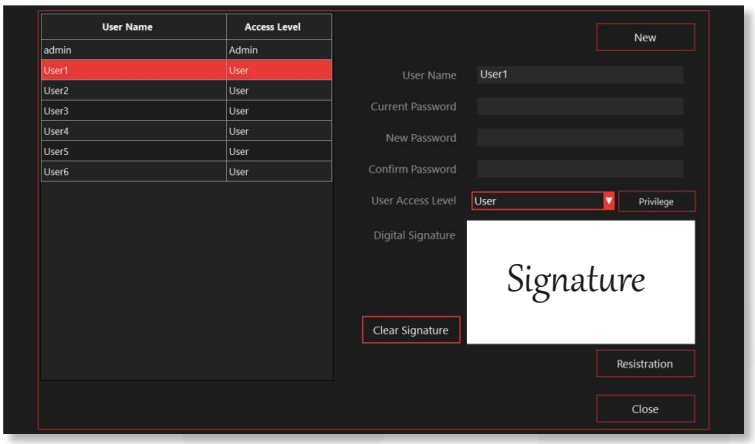
Data integrity

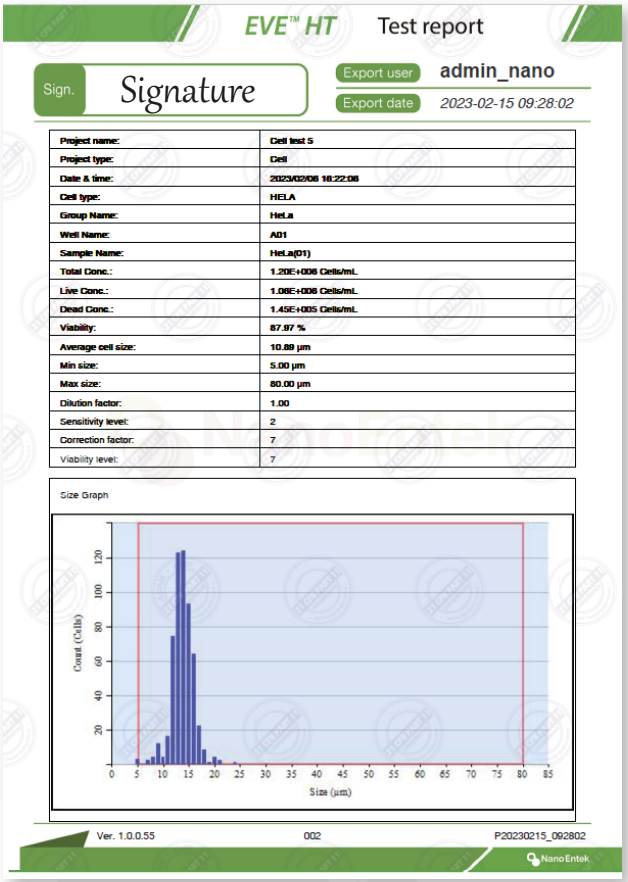
Electronic signatures

User management

Audit trail







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Ordering Information

Cat. No.	Product
EVE-HT	A High-throughput automated counter, EVE™ HT
EVH-020	EVE™ HT Counting kit · Counting plate (48 channels) · Mixing well plate (96 wells) · Trypan blue stain 0.4% · Reservoir

Cat. No.	Product
EHPQ-001	EVE™ HT QC plate - Low level (Optional)
EHPQ-002	EVE™ HT QC plate - Middle level (Optional)
EHPQ-003	EVE™ HT QC plate - High level (Optional)
EHPP-001	EVE™ HT Preparation plate (Optional)

Specification

Item	Product
Channels (optics)	Bright field
Staining method	Trypan blue
Counting Speed	3 minutes (48 samples)
Loading sample vol.	20 µL / channel
Measurement range	1 x 10^4 ~ 1 x 10^7 cells/mL

Item	Product
Cell size range	5 ~ 80 µm
21 CFR Part 11	Available
Operation System	Windows 10 Enterprise LTSC
Dimensions	588 x 461 x 458 mm (W x L x H)
Weight	58 kg

NanoEntek

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

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Blog www.blog-nanoentek.com

Count with confidence, Count with EVE HT FL!

EVE™ HT FL

High-throughput
Fluorescence Cell Counter

- Primary Cells
- PBMCs
- Stem Cells
- Cell Lines

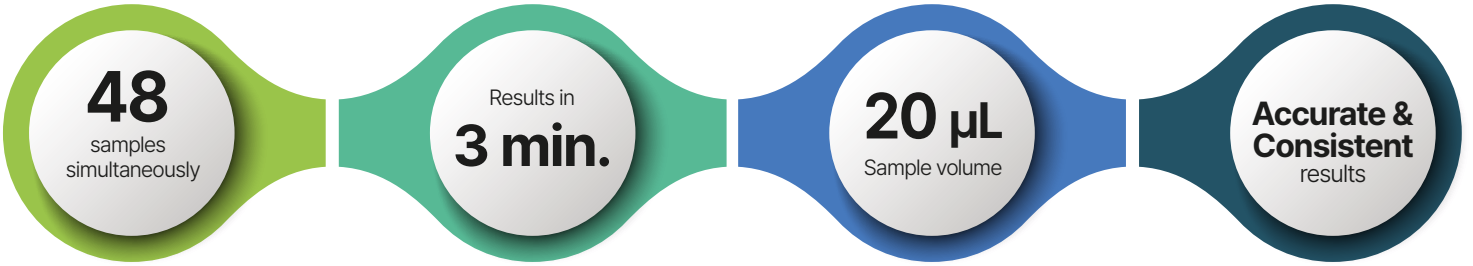
NanoEntek

EVE™ HT FL

Introduction

EVE™ HT FL is a high-throughput automated fluorescence cell counter equipped with **bright field** and **dual fluorescence channels (AO/DAPI)**. In just **3 minutes**, up to **48 samples** can be counted and analyzed. EVE™ HT FL delivers precise and accurate results, making it the best option for both cell lines and primary cell counting in a variety of applications.

Features

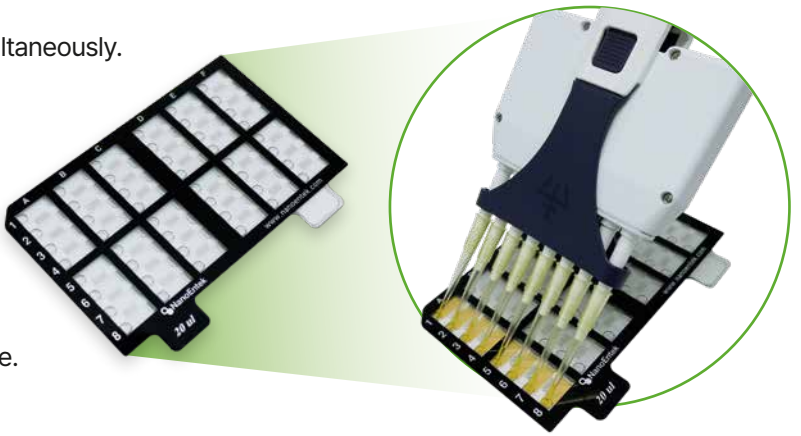


Level Up Your Productivity

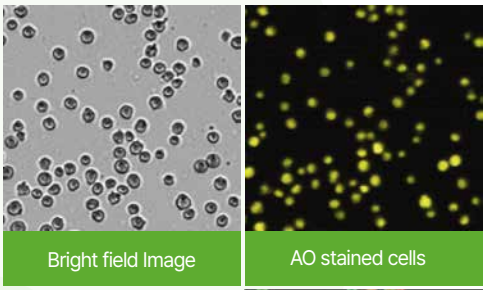
In just **3 minutes**, up to **48 samples** can be counted simultaneously.
Don't wait! Count your samples in 3 minutes.
Leading to substantial time saving by eliminating the need for frequent reloading and waiting periods.

Small Sample Volume

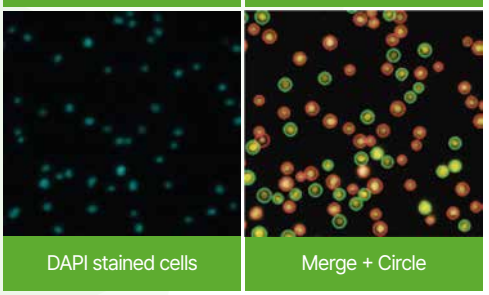
EVE™ HT FL only needs **20 µL** of your valuable samples.
Save your cells for more measurements or better outcome.



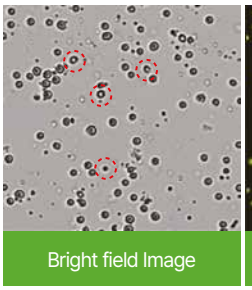
Dual fluorescence for accurate measurements of primary cells or PBMCs

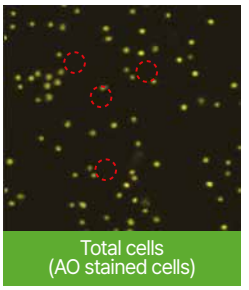

Bright field Image

AO stained cells


DAPI stained cells

Merge + Circle


Bright field Image


Total cells
(AO stained cells)

Counting PBMCs ONLY!
PBMCs are often mixed with RBCs or platelets. Use EVE HT FL to count only nucleated cells such as PBMCs. Fluorescence based counting is more accurate than traditional Trypan Blue based counting.

Diverse Cell Counting Applications

- Primary Cells
- PBMCs
- Cell Lines
- Stem Cells
- Hepatocytes
- Leukocytes
- Splenocytes
- Adipocytes

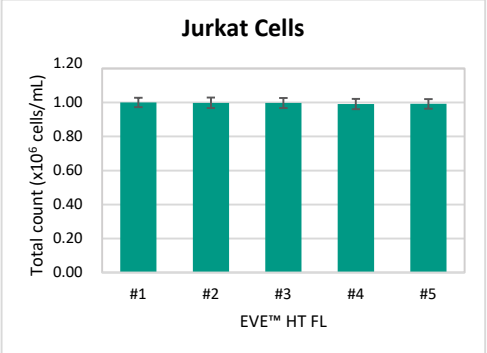
EVE™ HT FL

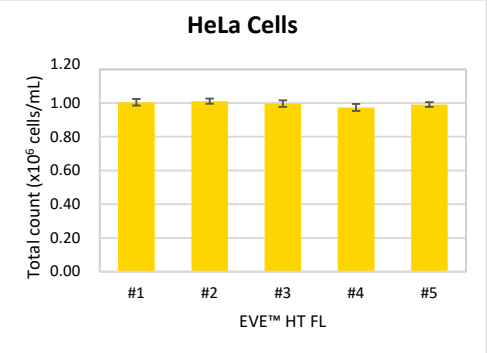
You can rely on EVE™ HT FL with confidence!

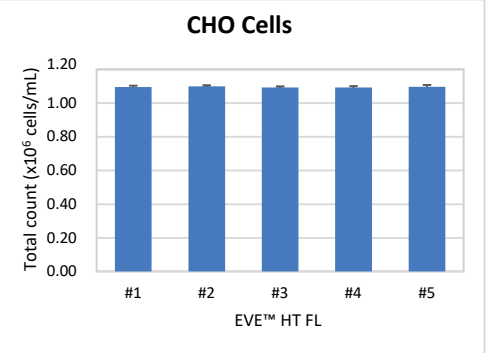
Accurate and Precise Results

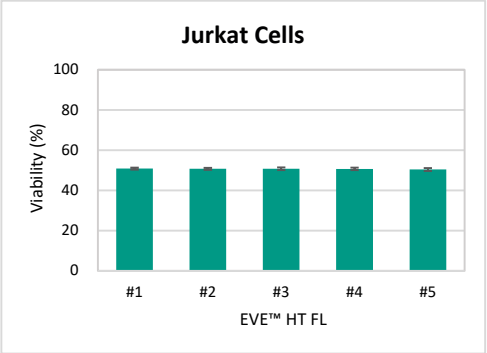
Instrument-to-instrument Variability with Cell Lines

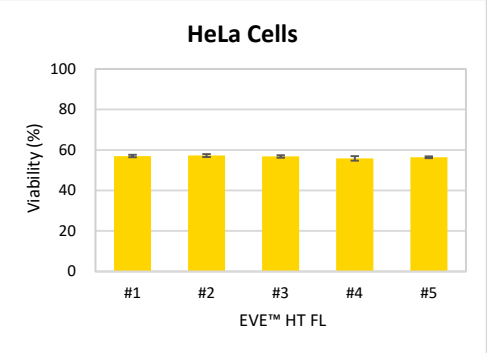
5 EVE™ HT FL instruments were put to the test using three different cell line samples (Jurkat, HeLa, and CHO) to compare their differences. The results below show very low instrument-to-instrument variability.

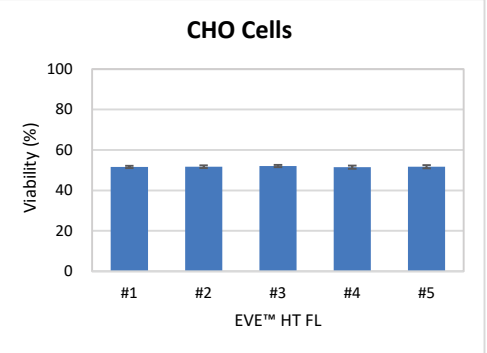












Jurkat	Total count (CV)	Viability (CV)
Instrument to instrument	0.44%	0.21%
Plate to plate	2.77%	0.99%
Whole result	5.70%	4.38%

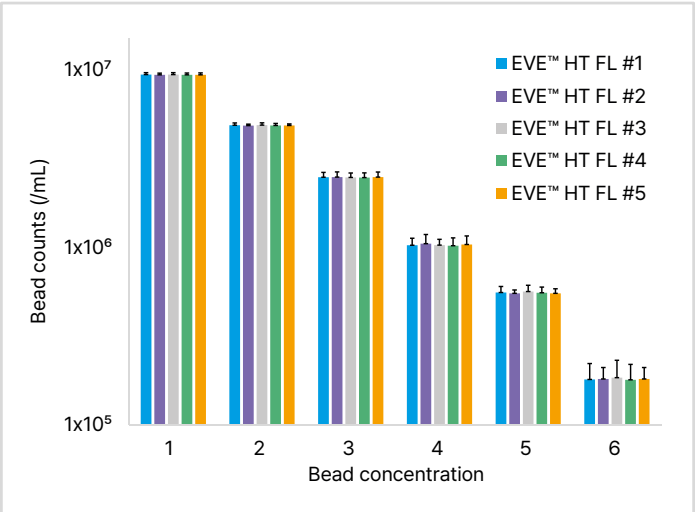
HeLa	Total count (CV)	Viability (CV)
Instrument to instrument	1.14%	0.91%
Plate to plate	1.45%	0.85%
Whole result	5.29%	3.73%

CHO	Total count (CV)	Viability (CV)
Instrument to instrument	0.24%	0.37%
Plate to plate	0.58%	1.07%
Whole result	5.33%	4.28%

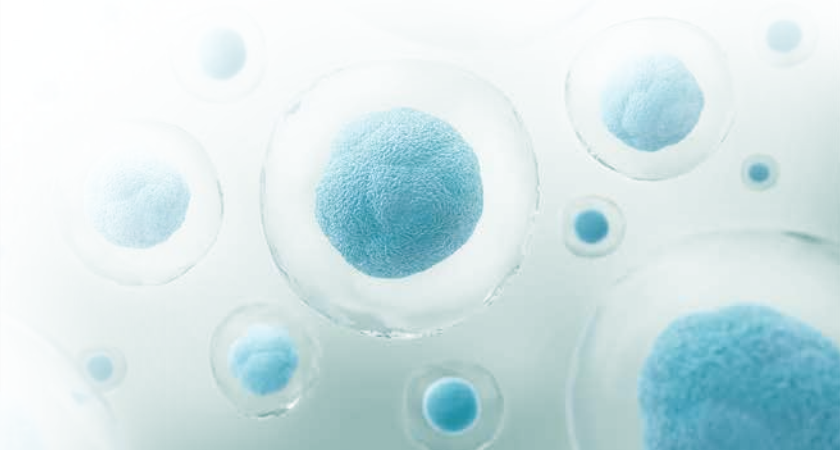
*Whole result: CV value was calculated by combining a total of 400 results measured 16 times each on 5 instruments and 5 plates.

Instrument-to-instrument Variability with Beads

5 EVE™ HT FL were used to measure fluorescent reference beads(for AO channel) at 6 different concentrations. The results below show very little instrument-to-instrument variability.

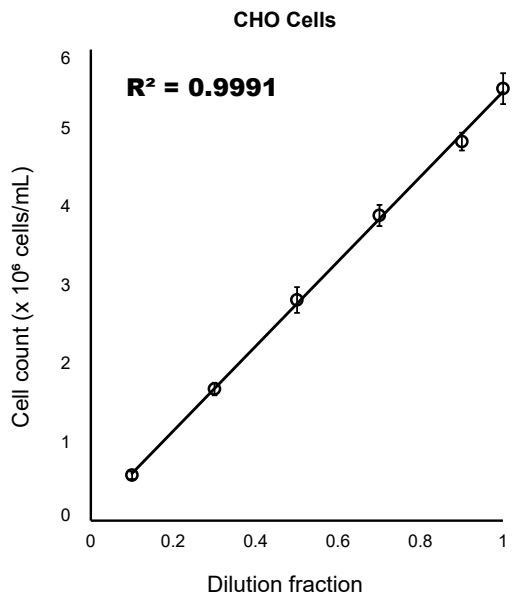


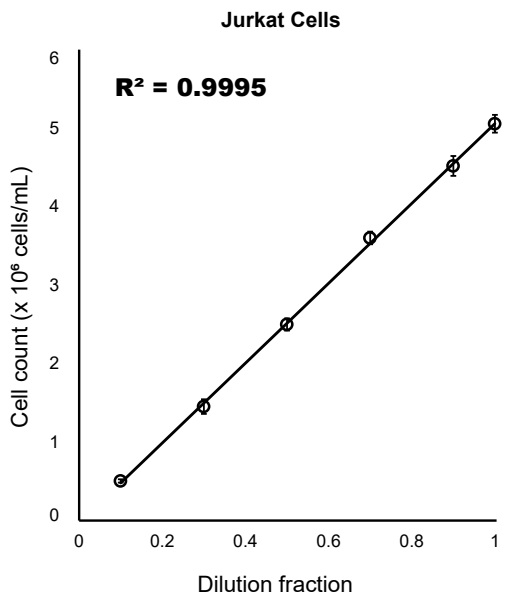
	Bead 1	Bead 2	Bead 3	Bead 4	Bead 5	Bead 6
Instrument to instrument (CV)	0.17 %	0.28 %	0.28 %	1.02 %	0.98 %	1.04 %



Excellent Linearity Across Wide Range

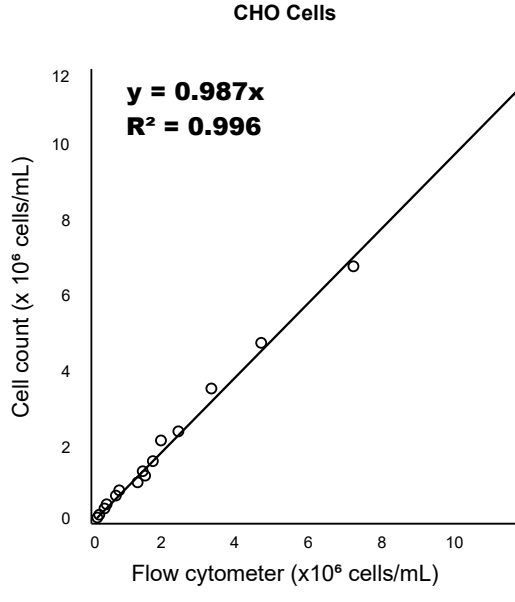
Following ISO standard for cell counting, we evaluated linearity of EVE™ HT FL using 2 cell lines (CHO cells and Jurkat cells). The following results demonstrate outstanding linearity.

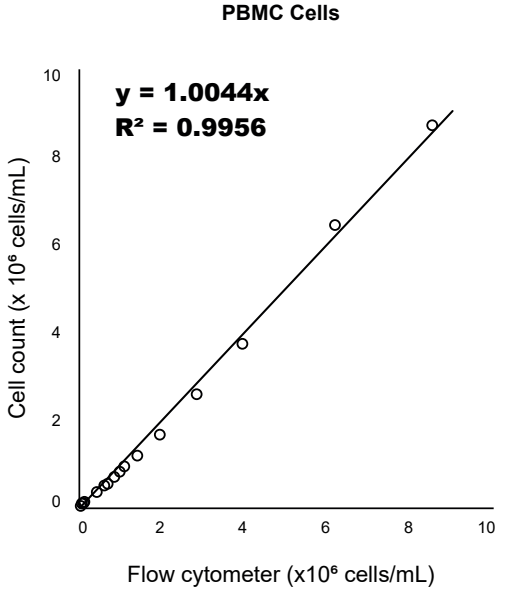




High Correlation Between EVE™ HT FL and a Flow Cytometer

Cell samples were measured using EVE™ HT FL and a flow cytometer. For both CHO cells and PBMCs, total cell counts measured by EVE™ HT FL were highly correlated with those measured by a flow cytometer.

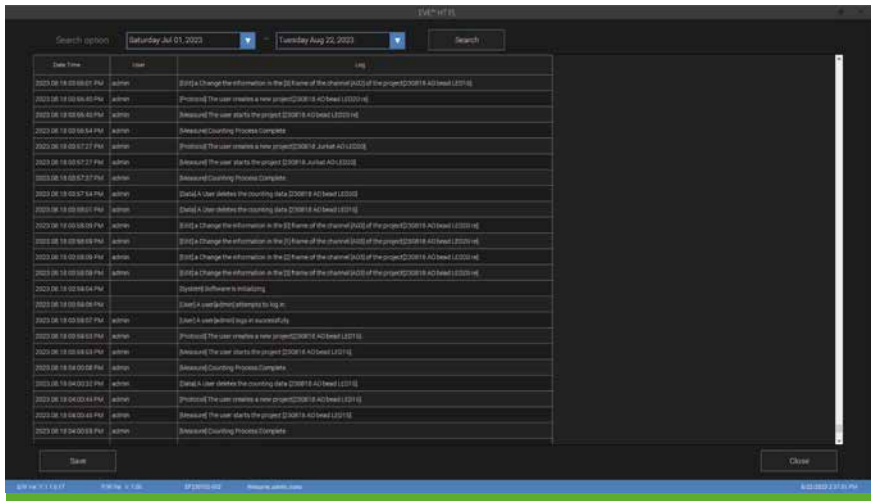




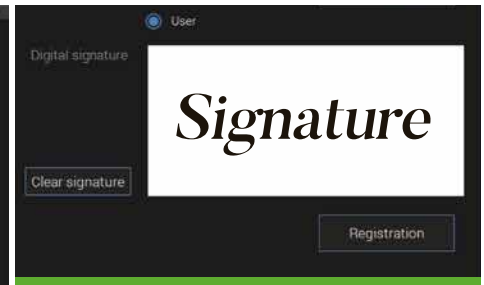
21 CFR Part 11 Compliance READY

EVE™ HT FL is ready for 21 CFR part 11 compliance for cGMP facilities.

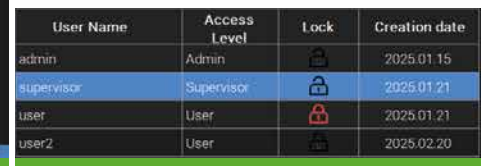
Electronic Records | Audit Trails | Electronic Signatures | User Management



Audit Trail



Electronic Signatures

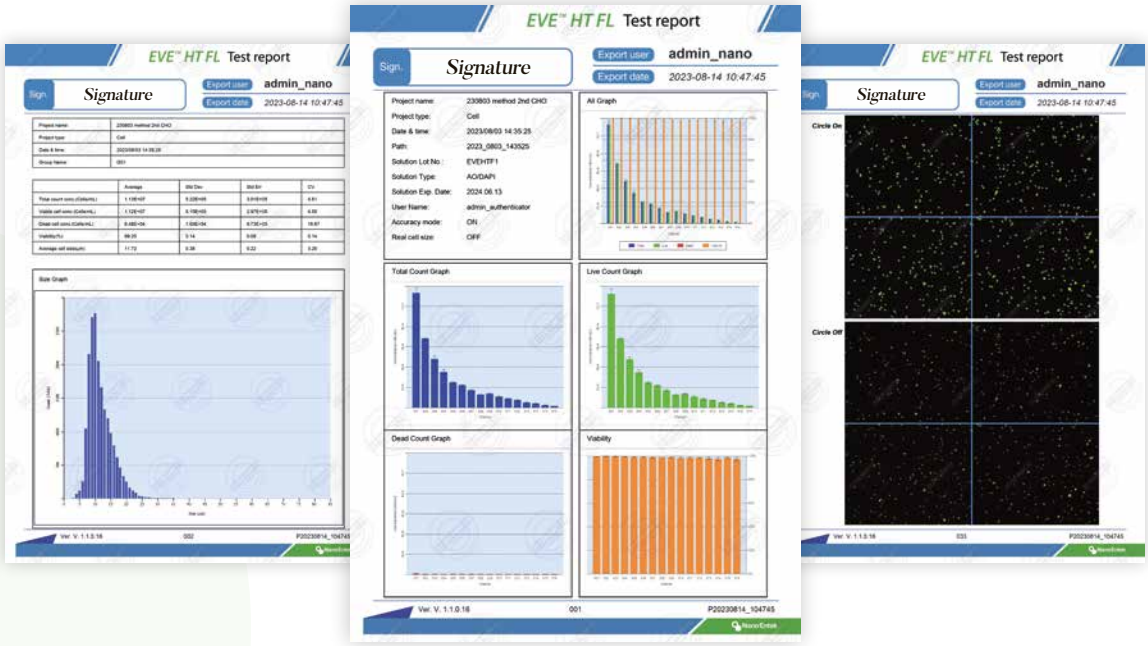


User Name	Access Level	Lock	Creation date
admin	Admin		2025.01.15
supervisor	Supervisor		2025.01.21
user	User		2025.01.21
user2	User		2025.02.20

User Management

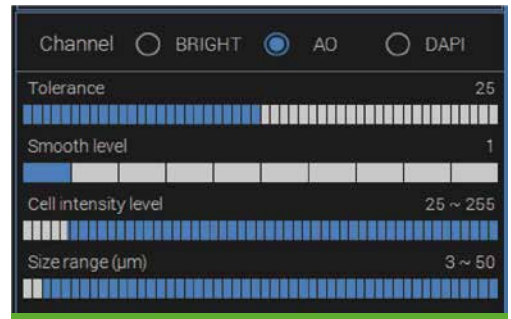
Data Analysis Report

Results can be easily saved as a PDF report and your data can be easily shared with anyone. Also, more detailed results and raw images can be exported in Excel and JPG files to help you run more extensive data analysis or prepare presentations.



Customizable Setting for Cell Counting

Users can customize image analysis parameters which can be saved and easily imported for next measurements. This feature allows users to find best sets of parameters that help identify only those cells of their interest and minimize the effects of non-cell debris or unwanted subtypes of cells.



Set parameters for each channel

Scan me

Ordering Information

Cat. No	Product	Contents
Device and Accessories		
EVE HT FL	High-Throughput Fluorescence Cell counter	Main device, Desktop, Monitor, Multi pipette
EHPP-001	Preparation Plate	Preparation Plate, 1 plate
Kit and Consumables		
EVFL-020	EVE HT FL Counting Kit	960 tests / kit Counting plate (48 channels × 20 plates) Mixing well plate (96 wells × 10 plates) Reservoir (5 pcs × 4 packs)
EVAD-960	AO/DAPI Staining Solution	20 mL × 2 bottles Acridine orange (AO) & 4′,6-diamidino-2-phenylindole (DAPI) stain
EVTB-960	Trypan Blue Stain	20 mL × 2 bottles Trypan blue stain (0.4 %)
EVEB-960	Erythrosin B Stain	20 mL × 2 bottles Erythrosin B stain (0.05 %)
QC Plate and Beads		
EHGQ-001	EVE HT FL QC Plate Fluorescence	Low level, 1 plate
EHGQ-002	EVE HT FL QC Plate Fluorescence	Middle level, 1 plate
EHGQ-003	EVE HT FL QC Plate Fluorescence	High level, 1 plate
EHBQ-001	EVE HT FL QC Plate Bright	Low level, 1 plate
EHBQ-002	EVE HT FL QC Plate Bright	Middle level, 1 plate
EHBQ-003	EVE HT FL QC Plate Bright	High level, 1 plate
EFB-001	EVE HT FL Test Beads	1 mL x 1 tube
EHB-001	EVE HT BR Test Beads	1 mL x 1 tube
Software		
EVE HT FL 21 CFR Part 11	EVE HT FL 21 CFR Part 11 software	21 CFR Part 11 software

Specifications

Analysis Time	3 - 20 minutes for 48 samples
Measuring Range	Detectable range: 1 × 10^4 - 2 × 10^7 cells/mL Optimal range: 1 × 10^5 - 1 × 10^7 cells/mL
Cell Size Range	Detectable size: 1 - 85 µm (Fluorescence mode) 5 - 85 µm (Brightfield mode) Optimal size: 5 - 80 µm (Fluorescence mode) 10 - 80 µm (Brightfield mode)
Channel	Dual fluorescence channels (AO & DAPI) Brightfield channel

Loading Sample Volume	20 µL per channel
Operation System	Windows 10
Power	100 - 240V, 50/60Hz
Dimensions	586 × 461 × 458 mm (W×D×H)
Weight	61 kg
Staining Solution	AO/DAPI mixed solution Trypan blue stain Erythrosin B stain
21 CFR Part 11 Compliance	Available (Optional)

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