



Meet Scepter™ Technology

Handheld Automated Cell Counter



Streamline Your Cell Culture Workflow with Scepter Technology

No more squinting through the microscope, straining your eyes and fingers. With its microfabricated, precision-engineered tip, the Scepter cytometer does all the work.



USE THE SCEPTER CYTOMETER TO:

- Count cells accurately for cell-based assays
- Split cells, seed and passage cells
- Count several samples quickly
- Quantify cell proliferation rates
- Monitor cell diameter and volume
- Determine effects of varying culture conditions on cell population distributions

SCEPTER CELL COUNTER AND ACCESSORIES

Description	Qty/Pk	Catalogue No.
Scepter Handheld Automated Cell Counter	1	PHCC00000
Includes:		
Scepter Cell Counter	1	
Scepter Software CD	1	
O-Rings	2	
Scepter Test Beads	1	PHCCBEADS
Scepter USB Cable	1	PHCCCABLE
Scepter Tips, 60 µm	50	PHCC60050
	500	PHCC60500
Universal Power Adapter	1	PHCCPOWER
Scepter O-Ring Kit, contains three O-rings and one filter cover	1 kit	PHCCOCLIP

RELATED PRODUCTS

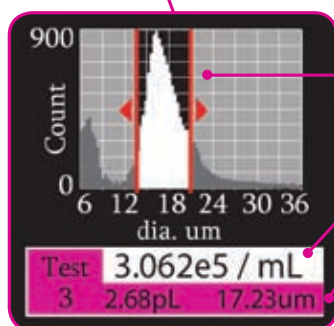
Description	Qty/Pk	Catalogue No.
EmbryoMax® 1x Dulbecco's Phosphate Buffered Saline w/o Ca ²⁺ and Mg ²⁺	1 L	BSS-1006-A



Experience Scepter Technology

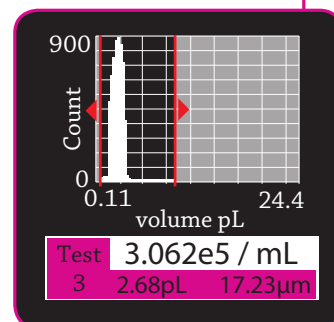
Liberate Yourself From the Microscope

- Easy to use
- Looks and works like a pipette
- On-screen instructions
- USB port for downloading data and charging
- Stores 72 histograms



A New Window on Your Cell Cultures

- Histogram data on cell populations, distributed by cell size or cell **volume**
- Cell concentration
- Mean cell volume and size
- Can apply custom gating
- Gain insight into cell health



Technology Packed into a Pipette Tip

- Integrated cell sensing electrodes
- Precision molded sampling chamber
- Precision manufactured electronic sensing zone
- Cell size discrimination at sub-micron resolution
- Cell volume discrimination at sub-picoliter resolution

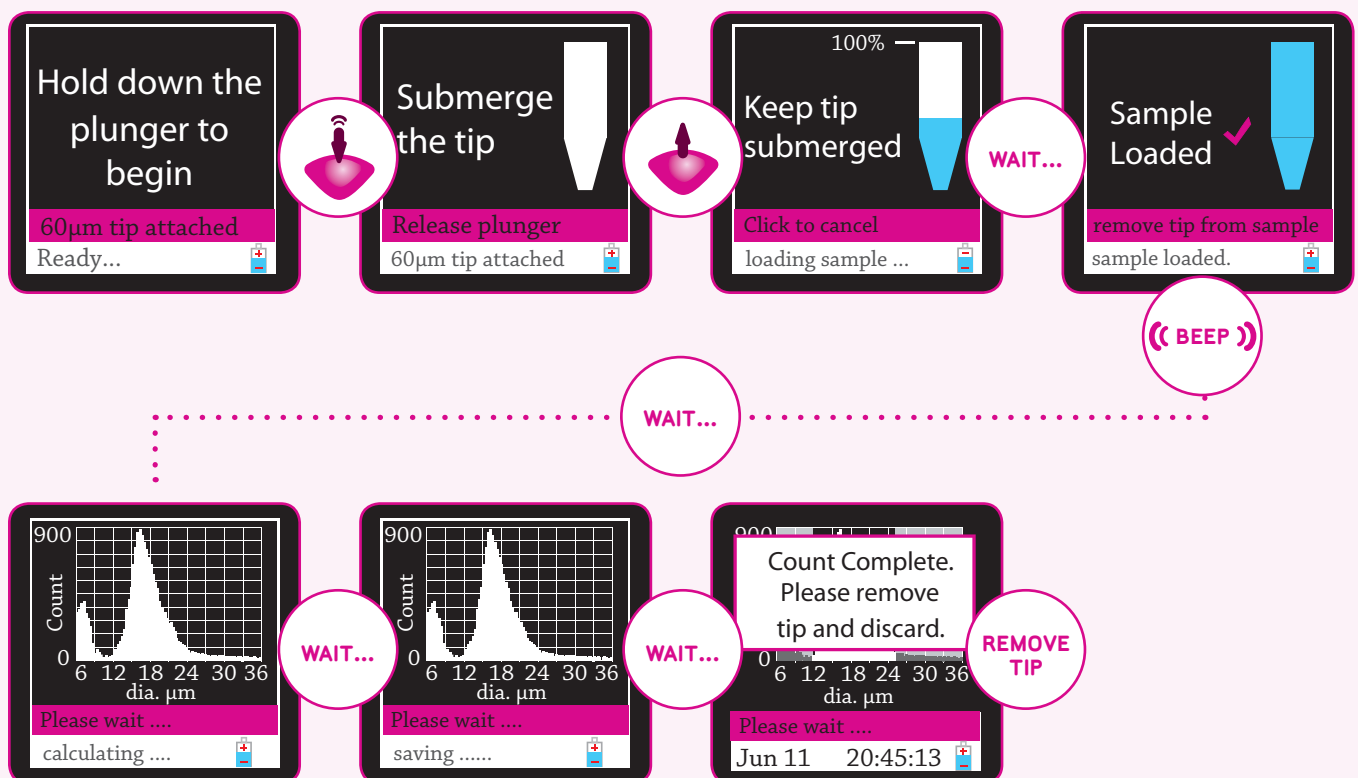
As easy as pipetting

Prepare the sample:

Start with a single-cell suspension, diluted to a total volume of 100 μL (recommended) in phosphate buffered saline (such as EmbryoMax® 1x DPBS) to 10,000-500,000 cells/mL (operating range) in a 1.5 mL microcentrifuge tube.

Perform cell count:

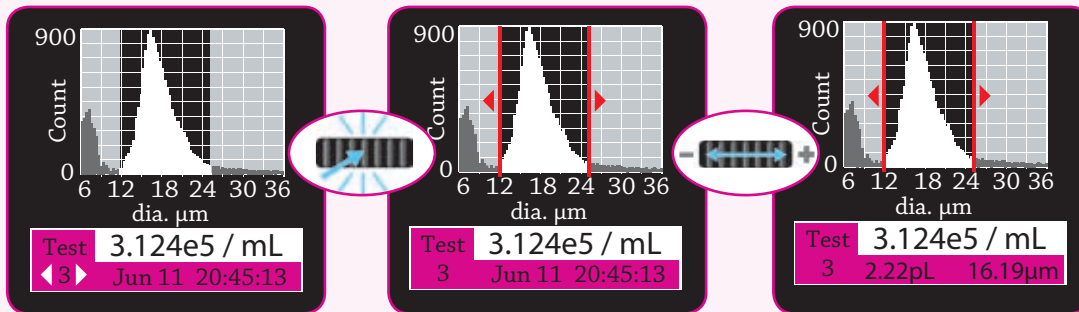
- Turn on the Scepter cytometer by pressing the toggle on the back of the instrument and wait for on-screen instructions to appear.
- When prompted, attach a tip to the end of the Scepter unit with the electrode sensing panel facing toward the front of the instrument, and you'll see detailed instructions for each step of the counting process.
- Pipette once to draw sample into the tip. 50 μL of your cell suspension is drawn into the microfabricated, precision-engineered channel embedded in the tip. The cell sensing zone detects each cell drawn into the tip and thus cell concentration is calculated.
- The sensing zone also measures cell sizes and cell volumes with sub-micron and sub-picoliter resolution, enabling the Scepter cytometer to display a histogram distribution of cell size or cell volume.



Intuitive data analysis

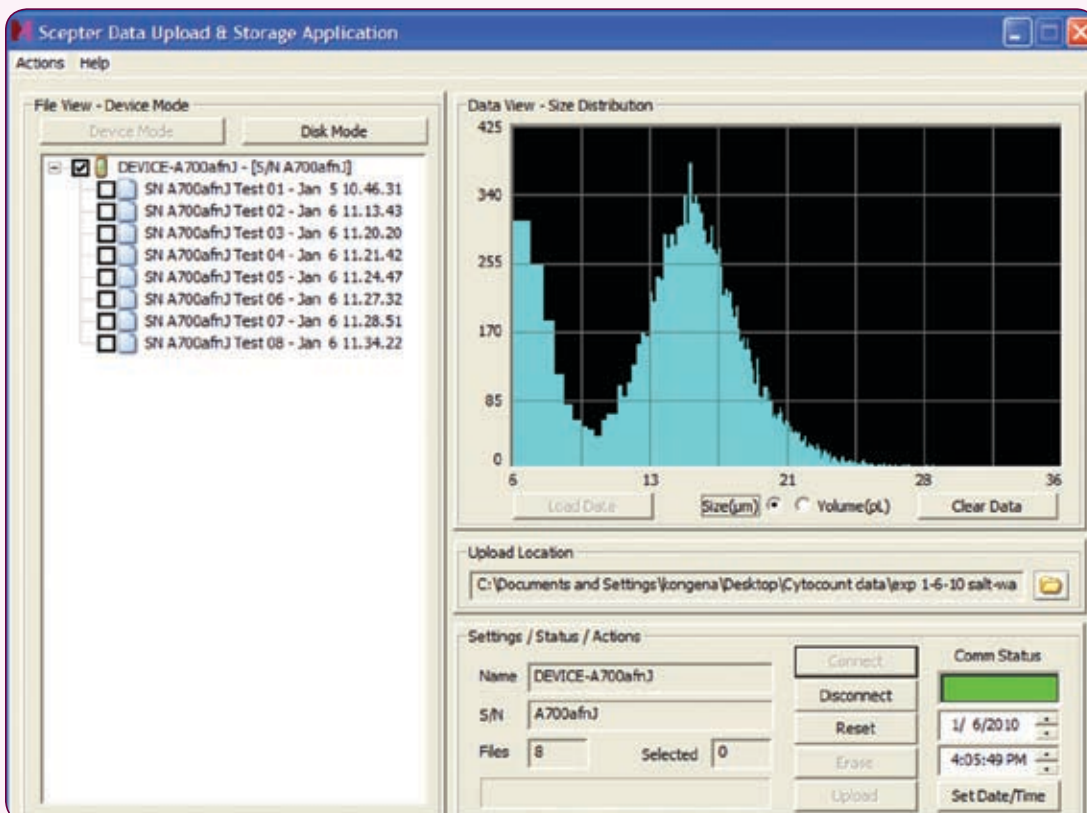
Set your gates:

Set your gates (upper and lower limits of the histogram) manually on the histogram profile or use the automatic gating capabilities matched to the previous count's gating.



Store, upload, and manipulate data:

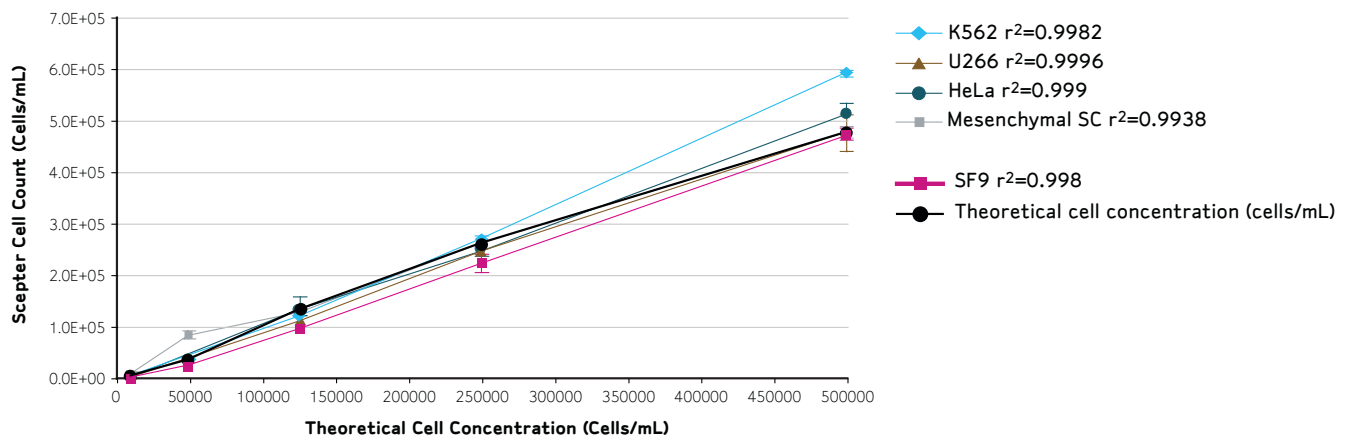
Store up to 72 histograms on the Scepter unit, or upload to a personal computer with included software. Scepter Application Software displays uploaded volume and size distribution data as shown below. Easily share your data or conduct in-depth analysis by exporting uploaded files to Microsoft® Excel® spreadsheet software.



Why use Sceptor counting over other cell counting systems?

Because Sceptor counting is LINEAR across diverse cell types.

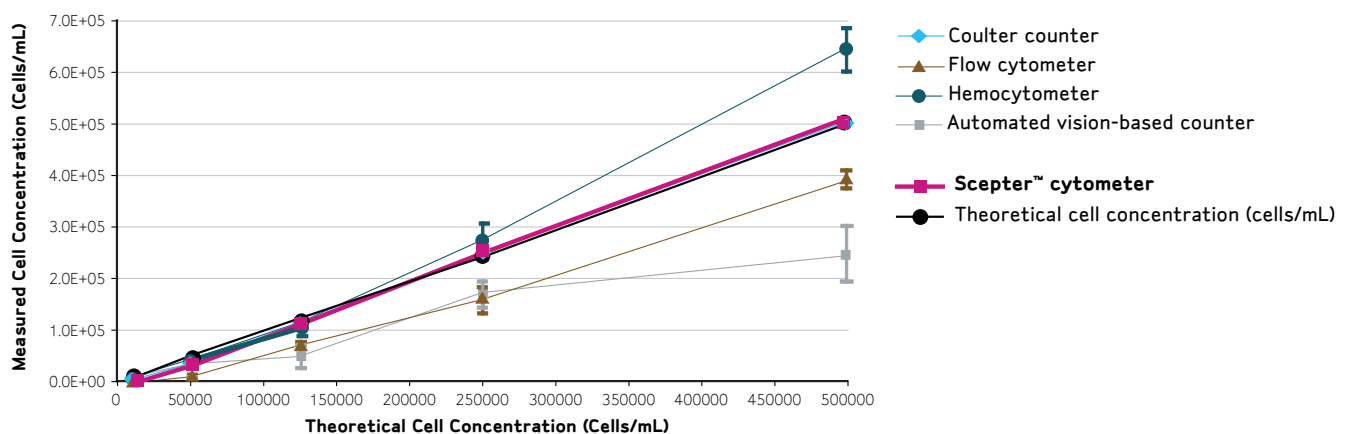
We tested over 20 cell lines – including adherent, suspension, differentiated and progenitor cells – to validate the Sceptor cytometer's precision and operating range.



Cells of various types (adherent cancer cells (HeLa), suspension differentiated cells (U266, K562), suspension insect cells (SF9), and mesenchymal stem cells) were harvested and counted with a Sceptor cytometer. Counts are averages of 4 replicates, and error bars represent standard deviation.

Because Sceptor counting is PRECISE and ACCURATE.

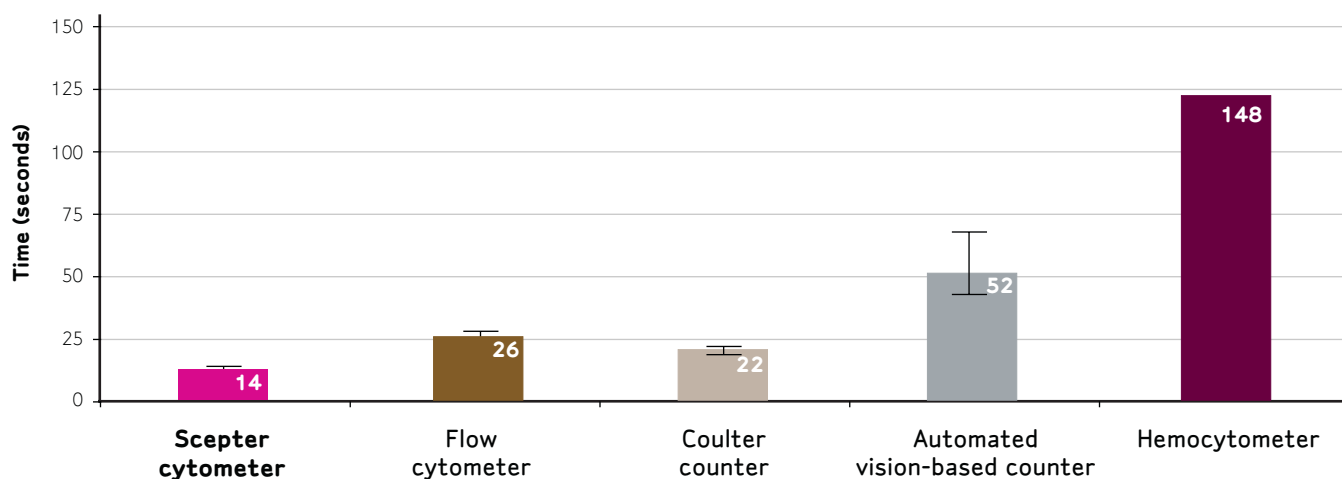
Sceptor counting shows comparable accuracy and linearity to Coulter counting, without the strain of manual counting.



Multiple cell types (COS7 cells shown here) were harvested and counted using the methods shown. Counts are averages of 4 replicates, and error bars represent standard deviation.

Because Scepter counting is FAST.

Scepter counting is ten times faster than hemocytometry, and faster than other automated counters, too. With Scepter technology, you'll save time and eliminate tedium.



Cells (SF9, MCF7, and HEK293) were counted using the methods shown, and average time required to measure cell concentration was recorded. (Hemocytometry was performed only once per sample.)

New! Millicell® HY Multilayer Culture Flasks

Your big experiment is just a few passages away.

- Consistently high cell yields, uniform health across all layers
- Same media requirements (volume per unit area) as traditional T-flasks
- Familiar form enables easy transition from single-layer culture flasks
- Easy media removal from flask with ergonomic cap location
- Uniform culture conditions without media leaking or spillover between layers
- Fits under microscopes for monitoring cell health and confluency
- Stackable design saves incubator space
- Barcoding available for automated cell culture systems



Description	No. of Layers	Total Surface Area (cm ²)	Qty/Pk	Catalogue No.
Millicell HY Flask* [§]	3	600	16	PFHYS0616
STEM CELL TESTED	5	1000	8	PFHYS1008

* Available with barcodes – please contact technical service for more information.

[§] Stem cell testing was conducted by using the device in question for culturing mESC for five passages, then verifying by flow cytometry that viability and pluripotency are unchanged.

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