SimPLY COUNTED.

22 seconds

• pipette 20 μL of human renal carcinoma cells into the disposal counting chamber
• insert it into a Cellometer Auto T4, click “Count”
• and get an image of the cell sample plus accurate cell counts, mean cell diameter and viability

Total cells: 810
Live cells circled in green: 778
Dead cells circled in red: 32
Mean cell diameter: 19.3 μm
Dilution factor: 2
Live cell concentration: 4.41 x 10⁶ cells/ml
Viability: 96%
Cell type: A498 – human renal carcinoma
Cellometer cell counters use advanced brightfield and fluorescence technologies.

- **Cellometer Auto M10**: Optimized for small cell counting.
- **Cellometer Auto T4**: Ideal for most cell counting applications with trypan blue viability.
- **Cellometer Auto X4**: Fluorescence-assisted cell counting with a wide range of fluorescence color choices for complex samples.
- **Cellometer Vision**: High sensitivity fluorescence and brightfield cell counting, plus analysis of fluorescent cell populations with two fluorescence channels on the same cell sample.

- **Disposable counting chamber means:**
  - No washing between samples
  - No risk of broken glass
  - No sample cross-contamination

- **Pipette Sample**: 20 μL is all you need in the disposable counting chamber.
- **Insert Slide**: Cellometer records and analyzes the image.
- **Get Data**: Results are displayed on your computer and saved along with the image for future use. Print the results with a click, or export to Excel for analysis and comparison.

And it’s incredibly easy to use:

- **World-Class Product and Application Support**
  - Nexcelom Bioscience provides exceptional customer support directly from our Boston area headquarters.
  - Our support team is staffed with experts in cell biology and digital imaging systems, including many biologists, who have a deep knowledge of cell applications across many industries. They are available via phone or email to help you set up, configure, and use your Cellometer automated cell counter. We also welcome the opportunity to collaborate with you on new applications. Please contact us directly.
  - Online and onsite Cellometer demos and new user training are available. We also assist you with new applications via real-time Internet-based support sessions.

Cellometer rentals and leasing are available if you would like to use one for a particular experiment or time period. We also offer trade-ins when upgrading to newer Cellometer products, maximizing your equipment investments.
Some procedures in cell biology are more tedious than they need to be. Counting cells manually with a hemacytometer may be at the top of the list.

Cellometer® automated cell counters eliminate the drudgery of manual cell counting and deliver more accurate, consistent results in a mere fraction of the time.

Typically in less than 30 seconds per sample, Cellometer cell counters provide cell sample analysis results that include:

- cell count
- cell concentration
- trypan blue viability
- cell diameter
- cell images, and more

The time savings are dramatic, allowing you to concentrate on more important work.

That’s why researchers worldwide in medical research, biotech, pharmaceutical, general research and university labs use Cellometer cell counters today to achieve unprecedented levels of productivity.

Since inventing the Cellometer in 2005, we have delivered industry-leading cell counting solutions to thousands of customers worldwide. The innovative imaging and fluorescence technology of the Cellometer allows you to:

- View cell morphology in real time, for visual confirmation after cell counting
- Take advantage of 300+ cell types and easy, wizard-based parameter set-up
- Save sample images with results securely on your computer, plus autosave results on the network for added convenience and data protection

Compact and mobile:

The Cellometer Auto T4 is only 3½ inches (89 mm) wide, 4 inches (101 mm) deep, 12 inches (305 mm) high, and weighs approximately 10 pounds (4.54 kg).
Cellometer automated cell counters offer significant advantages vs. manual counting with a hemacytometer:

- **Fast, accurate, repeatable results**: delivers superior results in less than 30 seconds, without the variability introduced by different operators
- **Proven technology**: studies validate its superior accuracy and repeatability compared to manual counting
- **Maintenance-free operation**: no calibration required
- **Economical**: enables such significant productivity, it can pay for itself in a few months
- **View/archive cell images**: you gain the benefits of automated cell counting without sacrificing the ability to visually review the cell morphology

**Our advanced imaging software** is the result of close collaboration with our customers

It can accurately recognize 300+ cell types from 2 to 250 microns in size, including cells of irregular shape, cells in clumps, cells with large size variation, and in samples with high levels of debris.

- **De-clusters cells**: Our advanced cell counting algorithm measures individual cells in the cluster or clump by identifying live cells with bright centers surrounded by dark membrane.
- **Measures irregular shapes**: Cellometer software can also count irregularly shaped cells.
After reviewing the counting results, you may need to adjust the sample to get the desired concentration or target number of cells. Simply enter the target concentration or target number of cells in the calculator. The software will determine automatically what sample volume you’ll need for the desired result.

"Using the Auto T4 has greatly increased the efficiency and ease of counting cells in our lab, especially on high volume sample days. It is the only counter that consistently works for non-human primate applications. Before it would take 2-3 hours to count, now it’s less than 20 minutes…" – A scientist at the National Cancer Institute

With a single mouse click, you can save the sample image with data to disk, print the results, display cell size distribution in a histogram, or populate an Excel spreadsheet for additional analysis.
Cellometer Auto T4

Ideal for determining concentration and trypan blue viability in cell lines

Cellometer Auto T4 offers simple-to-use software and user interface, and takes up almost no bench space.

Because it works with your desktop computer or laptop, you get a full screen display, easy data input, and the ability to import/export data to a local or network location.

The ideal choice for counting cell lines, Cellometer Auto T4 is easily shared among multiple users. Each user can customize cell types for improved accuracy and store them in a drop-down menu for easy access.

Trypan blue
Because the Cellometer Auto T4 recognizes cells based on size, brightness and morphology, cellular debris can be excluded easily for maximum cell count accuracy.

Comprehensive cell data
Cellometer Auto T4 provides fast, accurate data about your cell count, including cell diameter distribution.

Cellometer Auto M10

Optimized for small cell counting

The Cellometer Auto M10 is specialized for counting cells as small as 2 to 12 microns, including yeast, algae and platelets.

Yeast, platelet and algae cells counted by a Cellometer Auto M10
The Cellometer Auto X4 combines bright field microscopy with fluorescence to identify selected cells. Users can switch fluorescence optics modules to detect a wide range of fluorophores with excitation wavelengths from UV to red.

The Cellometer Auto X4 provides all of the features of the Cellometer Auto T4, and adds fluorescence detection. It is ideal for counting complex samples such as fresh PBMCs, bronchoalveolar lung lavage, splenocytes and other digested tissue samples. The Auto X4 uses fluorescence technology to counter high debris levels for enhanced accuracy.

It is also configurable for providing fast determination of cell concentration and viability using fluorescence probes, such as propidium iodide (PI viability).

Cell concentration and trypan blue viability
Concentration of nucleated cells stained by acridine orange
Concentration and PI viability
Concentration of DAPI positive cells

Cellometer Auto X4
Fluorescence assisted cell counting

The Cellometer Auto X4 combines bright field microscopy with fluorescence to identify selected cells. Users can switch fluorescence optics modules to detect a wide range of fluorophores with excitation wavelengths from UV to red.

www.nexcelom.com
Cellometer Vision is the clear choice for accelerating and simplifying assays such as:

- Quantifying GFP transfection
- Counting nucleated cells in whole blood samples without lysing
- Detection of apoptosis using Annexin-V conjugated to FITC or PE
- Determination of cell concentration and viability using dual fluorescence probes
- Determination of cell viability with propidium iodide
- Counting and sizing adipocytes
- Counting and calculating viability of hepatocytes
- Determining yeast viability

**Cell concentration and PI viability data output**
Automatically generate data, typically in less than 60 seconds

**Live cell concentration and viability by dual fluorescence probes**
Measure live and dead PBMC concentrations using acridine orange and ethidium bromide
Cellometer Vision
Automated whole cell imaging cytometry for cell population analysis

The Cellometer Vision combines bright field microscopy and dual fluorescence (two colors from the same sample) to deliver unique and advanced fluorescence assays.

Cellometer Vision directly measures cell concentrations without using reference beads and provides quantitative fluorescence data.

A drop-down menu allows users to save assay parameters for standardization and consistency, and to switch easily between different assays.

Brightfield Image of hepatocyte
Fluorescent images indicating live (green) and dead (red) PI stained hepatocyte

Adipocytes
Easily handle large, fragile, freshly digested primary cells

Apoptosis
Measure apoptosis using FITC-conjugated Annexin-V

Calcein AM / PI
Dual-stain assay for live/dead cell analysis
# Cellometer Product

## Features and Applications Overview

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* Also used are fluorescent nucleic acid staining dyes, such as EB, 7-AAD, Fluorogenic intracellular esterase substrates, such as fluorescein diacetate (FDA), CalceinAM
** Including other fluorescent proteins, such as DsRed (RFP), YFP, CFP
*** Primary cell examples include spleenocyte, bone marrow, cord blood, BAL (bronchoalveolar lavage)

† Cellometer cell counters are used for many different fluorescent assays. The list is rapidly expanding; the table above represents only a partial list of commonly used assays. If you have new assays not listed here, please contact our applications specialists for the most current information.