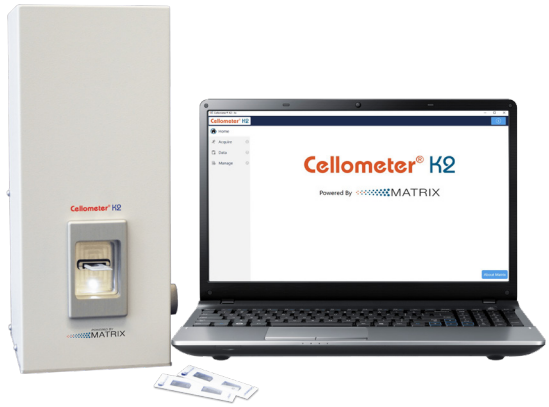
Designed for precise cell counting and fluorescent analysis.

Cellometer K2 fluorescent cell counter for analysis of complex primary samples

The Cellometer® K2 utilizes brightfield imaging and dual-fluorescence imaging to quickly and accurately identify and count individual cells. Cell count, concentration, diameter, and % viability are automatically calculated and reported.

The Cellometer K2 has the following advantages:

- **Dual fluorescence and brightfield imaging** – stain only nucleated cells for the most accurate count and viability information
- **Fast results –** count, size, concentration, and viability calculations in <60 seconds
- **Analyze complex samples –** designed for analysis of complex and messy samples including whole blood, peripheral blood, cord blood, and bone marrow
- **Multiple fields of view –** increased accuracy with the ability to capture one, four, or eight images per sample
- **Built-in predefined assays –** quickly analyze viability, apoptosis, and transfection efficiency



- **Built-in cell types –** includes saved parameters for over 400 cell types
- **Small sample volume –** only 20 µL of cell sample required
- **Customizable reports** – includes predefined reports with the ability to create new ones with graphs, images, charts, and tables
- **Multi-language support** – over 7,000 languages available
- **21 CFR Part 11 ready** – optional add-on that includes audit trail, user access control, and digital signature

Live/dead nucleated cell counts using dual-fluorescence

Why dual-fluorescence?

Because brightfield cell counting does not differentiate nucleated from non-nucleated cells and trypan blue staining is not as easy to detect as fluorescent staining, dual-color fluorescence is strongly recommended for accurate viability analysis for primary cells. The K2 is equipped with standard assays for dual-fluorescence analysis of a variety of cells stained with Acridine Orange and Propidium Iodide (AO/PI).

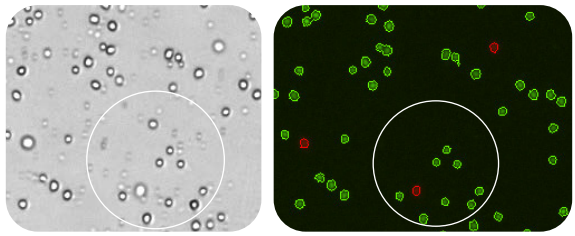
The AO/PI method

Acridine Orange (AO) is a nuclear staining (nucleic acid binding) dye permeable to both live and dead cells. It stains all nucleated cells to generate green fluorescence. Propidium Iodide (PI) can only enter dead cells with compromised membranes. It stains all dead nucleated cells to generate red fluorescence. Cells stained with both AO and PI fluoresce red due to quenching, so all live nucleated cells fluoresce green and all dead nucleated cells fluoresce red.

Proven performance in many research areas

- Clinical immunology: PBMCs
- DMPK: primary hepatocytes
- Regenerative medicine: stem cells
- Transplantation: nucleated cells
- Vaccine development: splenocytes
- Oncology: cell lines, cell cycle, apoptosis
- Basic research: primary cells, cell lines, GFP

For research use only. Not approved for diagnostic or therapeutic use.



Brightfield AO/PI

The brightfield image on the left shows the combination of nucleated cells, red blood cells, and platelets present in the sample. The red blood cells are not visible in the fluorescent image on the right, only the live (green) and dead (red) nucleated cells are counted.

No interference from red blood cells, platelets, or debris

The dual-fluorescence AO/PI method utilizes nuclear staining dyes that bind to nucleic acids in the cell nucleus. Because most mature mammalian red blood cells do not contain nuclei, only live and dead mononuclear cells produce a fluorescent signal. There is no need to lyse red blood cells, saving time and eliminating an extra sample preparation step. Red blood cells, platelets, and debris are not counted in the fluorescent channels.

"We love our Cellometer K2 and every lab should have one! Gone are the days of manual cell counting and we can now reliably and quickly count thousands of cells in a few seconds."

– Nav Masani, AstraZeneca

"The Cellometer K2 has drastically changed our work flow in the lab. We are able to gather cell counts in minutes rather than waiting overnight for colonies to grow on plates. It also cuts down time in the prep of plating and error in plating/counting. The amount of time that the machine has saved us is incalculable - it has allowed us to move projects along much more quickly and with confidence."

- Synlogic

Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA

(800) 762-4000
www.revvity.com