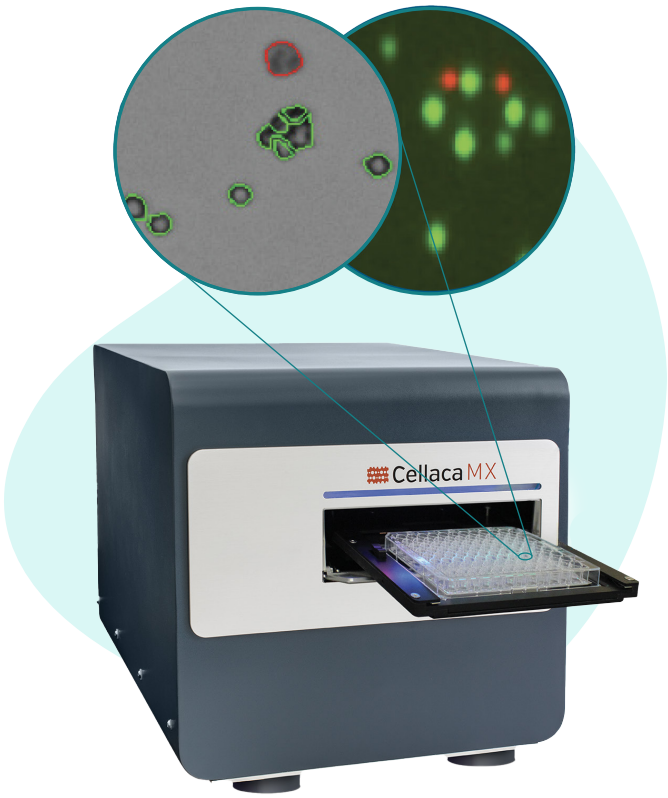
Cellaca MX high-throughput cell counter for bioprocessing.

From cell line development to cell expansion to protein production within a bioreactor, fast and accurate cell viability and concentration measurements are critical throughout the entire process. Automation with exceptional reproducibility, and fast results with a small sample size, is a high priority for these demanding workflows.

With the Cellaca® MX high-throughput cell counter you can count up to 24 samples in 48 seconds using Trypan blue exclusion.

Your workflow will be streamlined and more efficient when you integrate the Cellaca MX.

- Batch samples in 24 well microplates with results in 48 seconds
- Maintain cell integrity and minimize sample depletion during processing
- Incorporate robotics with API compatible instrument
- Small footprint to save precious bench space



Extreme consistency for every cell throughout various samples

The Cellaca MX system's ability to consistently image, decluster, and report cell viability and concentration make it a reliable instrument during every stage of cell line development.

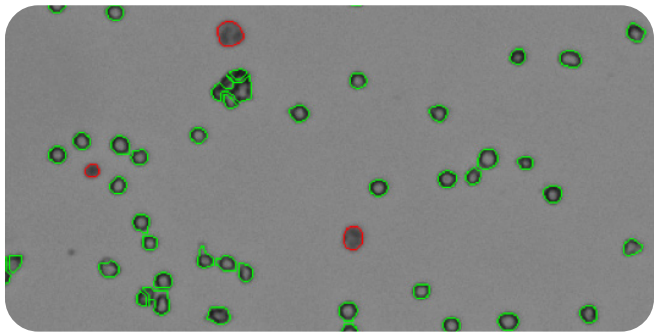


Figure 1: The above image shows cells counted with Trypan blue on the Cellaca MX. The software automatically declusters and counts individual live cells (in green outlines) and Trypan blue positive dead cells (in red).

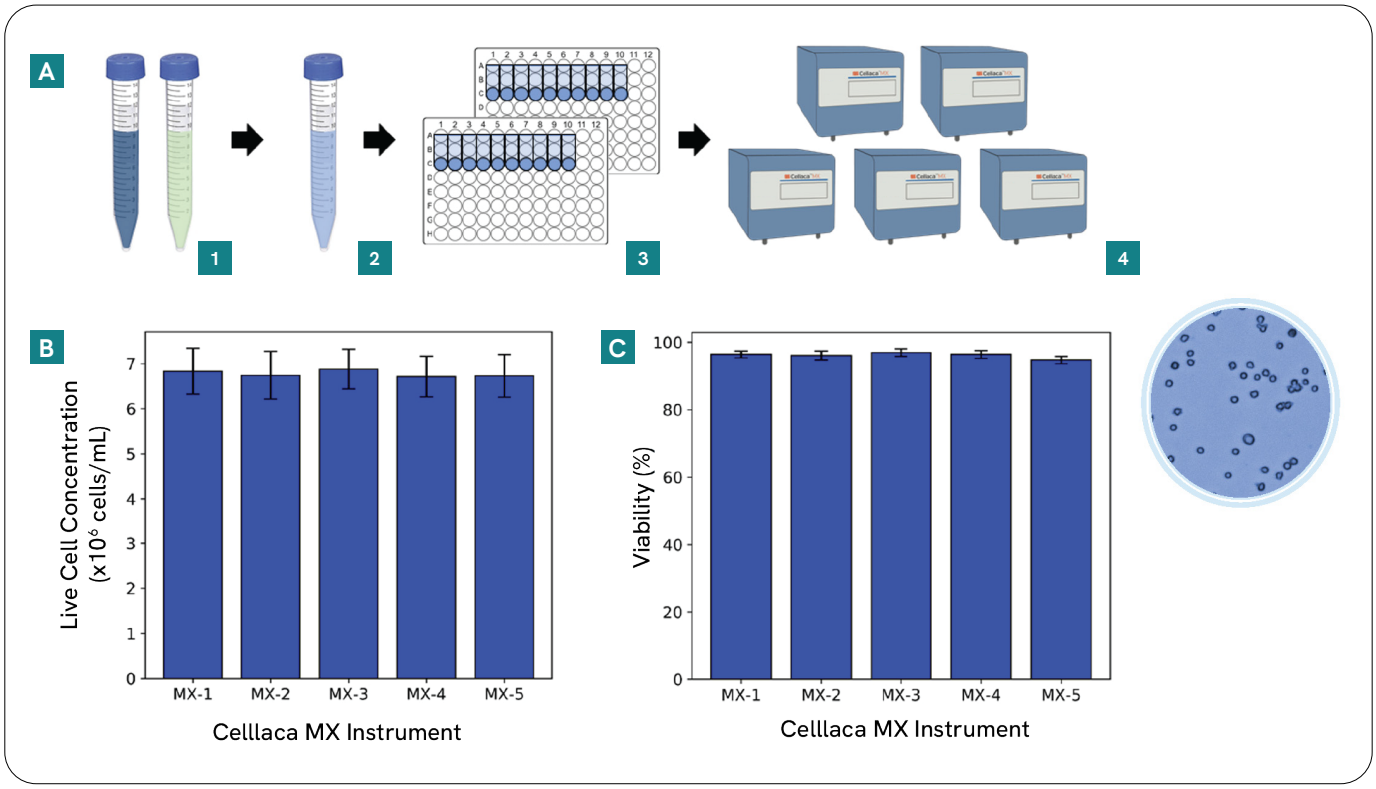


Figure 2: A) Experimental design comparing Cellaca MX instruments for Trypan blue counting of CHO cells. (1) Equal volumes (600 µL) of 0.2% Trypan blue solution and CHO cell suspension were prepared and (2) mixed thoroughly by pipetting up and down. (3) Two Cellaca plates were loaded with the mixture (10 counting chambers each). (4) Both plates were imaged on five Cellaca MX instruments and the cells in each chamber were counted. B) Live cell concentration results C) Viability measurement results.

Speed up workflow through automation

Cellaca MX cell counting significantly reduces processing time in high-throughput environments where efficiency is key. The ability to add additional automation with robotic integration can further increase productivity and improve experiment quality.

Consistency throughout testing while minimizing sample depletion

Obtaining multiple metrics with a low sample size of only 25 µL makes it possible to readily analyze precious bioprocessing or cell line development samples. This enables fewer variables as the same sample source can be used for additional downstream analysis. The Cellaca MX system provides consistent data across the board.

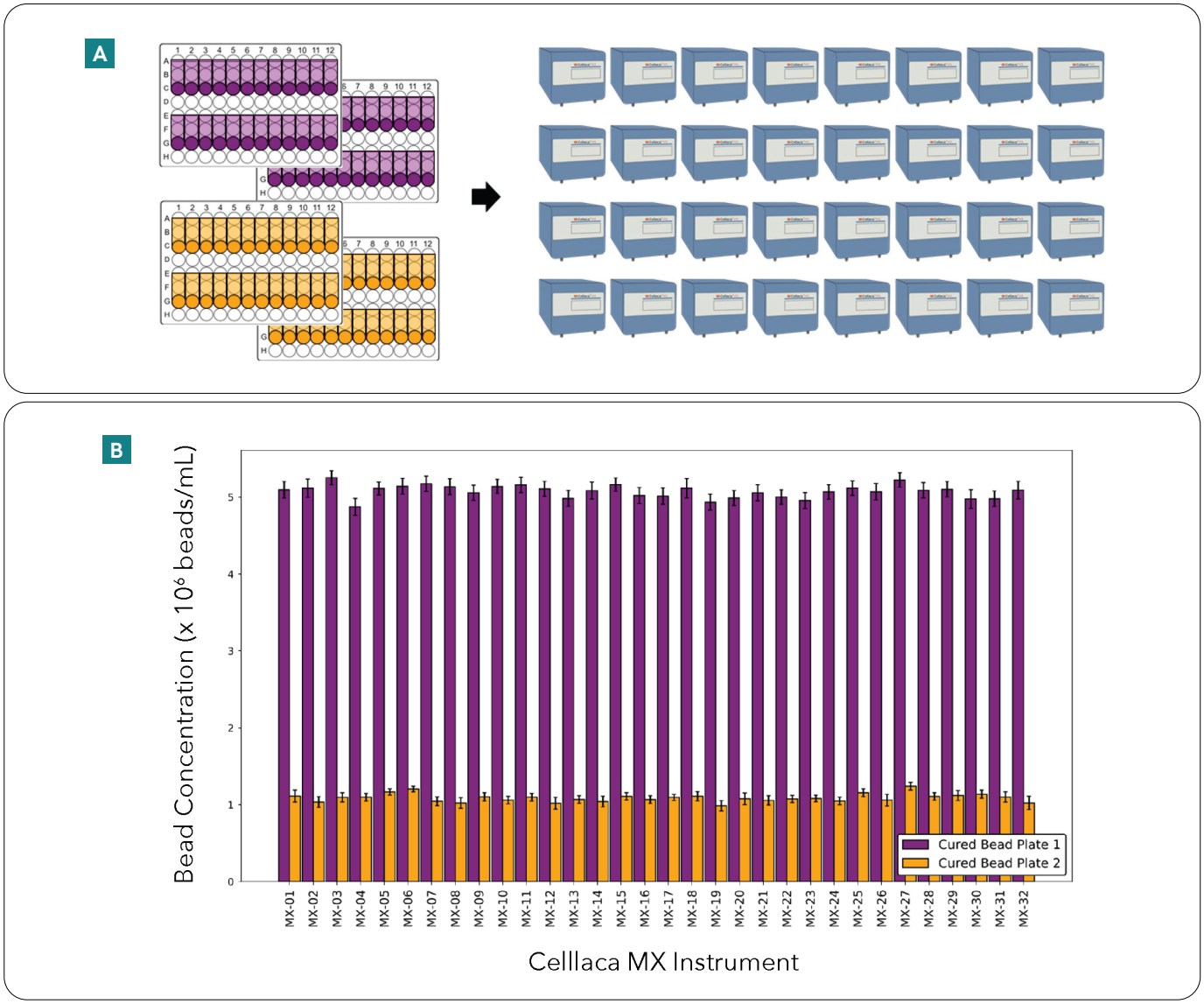


Figure 5: A) Experiment design workflow diagram comparing 32 Cellaca MX instruments for brightfield counting of 5-µm microbeads. (1) Two concentrations of microbeads are suspended in a UV-curable transparent polymer. Each concentration was loaded into all 48 counting chambers of 2 Cellaca Plates. The plates were then exposed to UV light to lock the beads into place. (2) The plates were then imaged on 32 Cellaca MX instruments, and the beads in each chamber were counted. B) Comparison of the bead concentration measured for one plate of each concentration by the 32 Cellaca MX instruments (n = 24 each). Error bars are 1 SD.

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