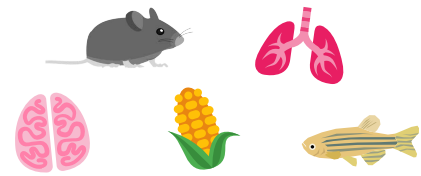


Counting and Quality Control of Isolated Nuclei

1. Tissue Prep

Prepare fresh, frozen, or fixed tissue.



2. Extraction

Isolate nuclei from tissue using an extraction buffer.

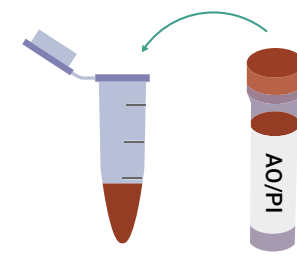


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3. Sample Prep

1. Equilibrate AO/PI to room temperature.
2. Add AO/PI fluorescent label to nuclei suspension in a 1:1 ratio and mix.
3. Mix sample thoroughly immediately prior to loading. No incubation time required.



Note: Trypan Blue can be used, but the combination of AO/PI and fluorescence removes subjectivity and offers superior accuracy.

4. Counting Protocol

Add New Protocol

Protocol:

Cell Line/Note:

Cell Outline Option

Enhanced Outline

Circle Outline

Sample Mode

Direct Pipette

Slide

Chamber Height

400 µm (low density)

100 µm (standard)

50 µm (high density)

Irregular Cell Mode

Dilution Factor:

Diameter (minimum): microns

Diameter (maximum): microns

Intact Roundness: (1-20)

Nuclei Roundness: (1-20)

Green Fluorescence Threshold: (1-100)

Red Fluorescence Threshold: (1-100)

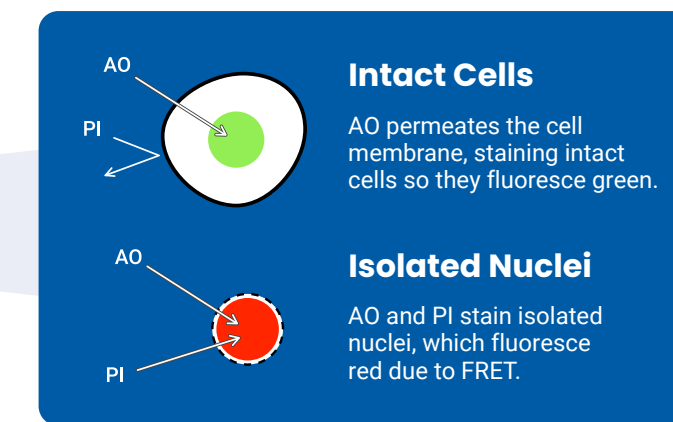
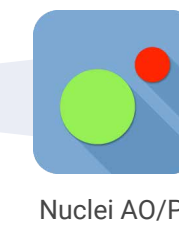
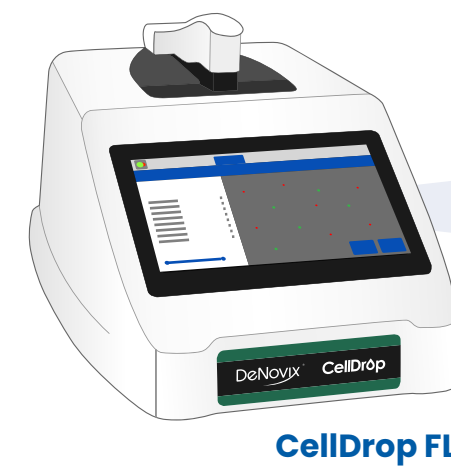
Cancel Save

The **CellDrop™ Automated Cell Counter** features an AO/PI Nuclei application with protocol customization capability.

The 50 µm chamber height preserves sample with as little as 2.5 µL of sample required in addition to AO/PI.

Set, save, and easily select protocols to streamline your nuclei quantification.

5. Imaging and Nuclei Counting

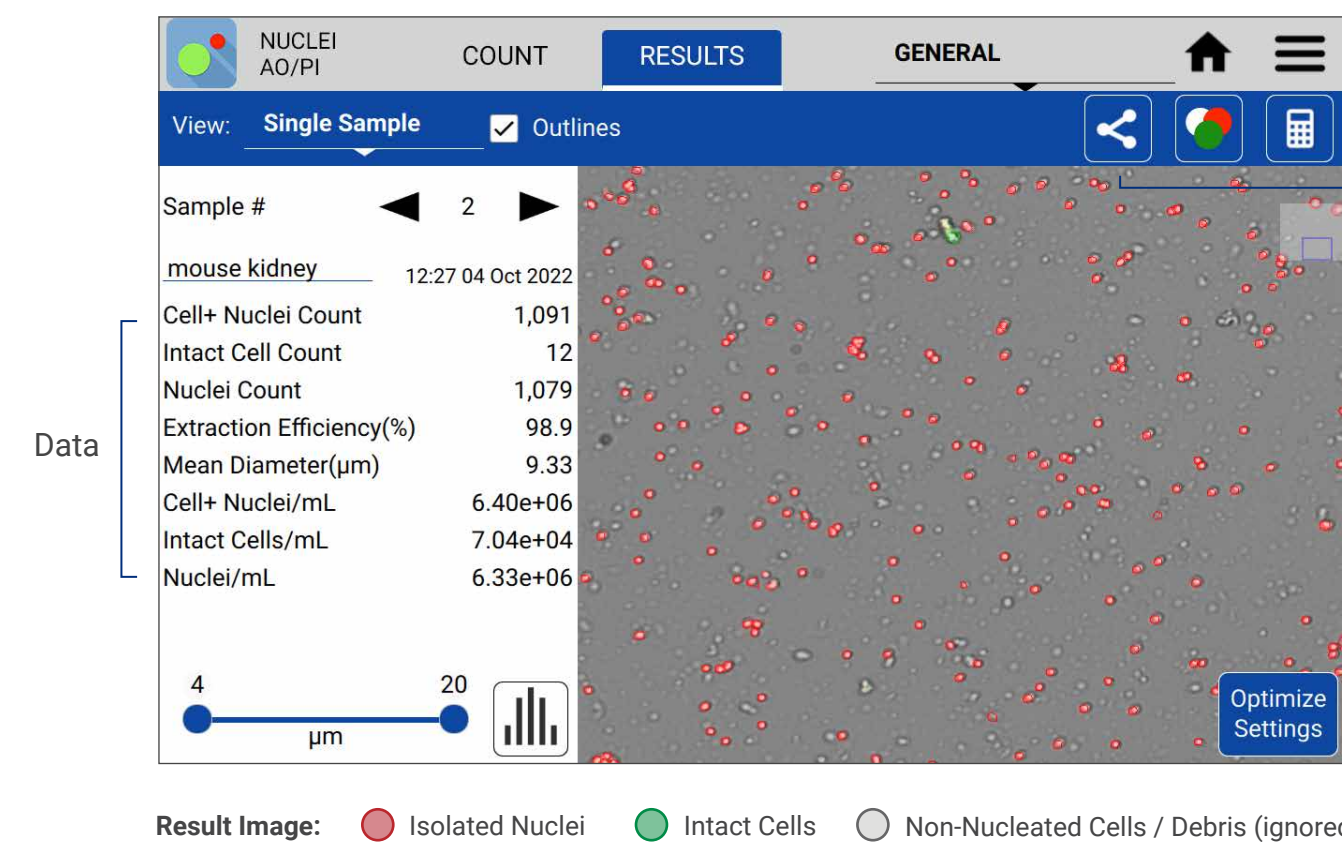


AO/PI Fluorescence

Acridine Orange (AO) is a cell membrane-permeable nucleic acid-binding fluorophore that stains the nuclei of all cells in a sample.

Propidium Iodide (PI) is a nucleic acid-binding dye that cannot permeate intact cells but is suitable for staining isolated nuclei.

6. Analysis

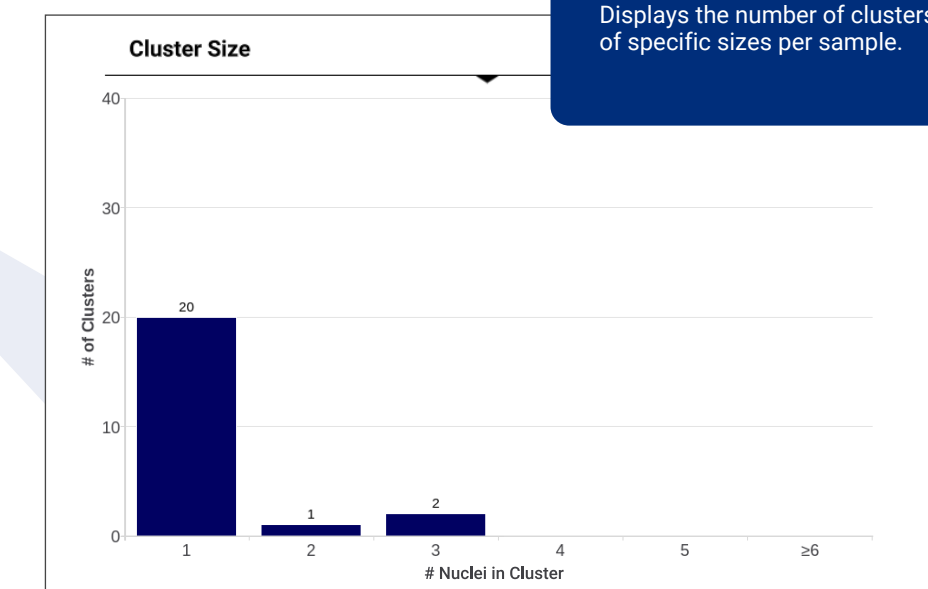


Dilution Calculator

Export / Share Results
Counts are automatically saved and can be accessed at any time

Nuclei Cluster Graph

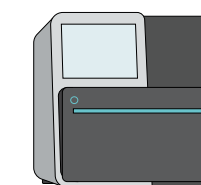
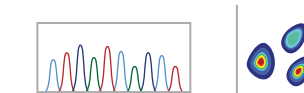
Displays the number of clusters of specific sizes per sample.



7. Downstream Applications

With sample quality checked, users can move on to downstream applications such as:

- RNA-seq
- ATAC-seq
- Flow Cytometry



The CellDrop Automated Cell Counter excels in accurate, rapid analysis of isolated nuclei samples—even those with debris present.

Count nuclei without slides! Earning the Sustainable Laboratory Product of the Year award in 2022, CellDrop DirectPipette™ technology eliminates the need for consumable plastic slides. Simply load, measure, and wipe the permanent sample surface clean.

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