CLAIRITY™

ImageProVision™
IMAGE ANALYTICS. REIMAGINED.



CLAIRITY™ XCell

AI-Guided Platform for Cell Counting & Viability Assessment

CLAIRITY™ XCell is an advanced AI-powered imaging solution that replicates the classical hemocytometer technique with automation, speed, and regulatory compliance. Designed to support accurate quantification and classification of live/dead cells, the platform enables consistent and unbiased cell analysis across applications in pharmaceutical R&D, biotechnology, vaccine production, stem cell research, and quality control laboratories.

With deep learning models trained on morphological and optical cues, CLAIRITY™ XCell provides high-throughput cell counting, viability calculations, and real-time image validation - making manual counting errors a thing of the past.

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Features & Technical Capabilities

Hemocytometer-Based AI Algorithm

Built upon the traditional cell counting grid (Neubauer chamber), CLAIRITY™ XCell mimics the quadrant system (Boxes 1 - 4) and integrates dilution factor corrections to compute accurate cells/mL and total counts.

High-Resolution Imaging & Auto-Focus

Captures precise and well-focused fields with adjustable magnification to ensure clear visibility of cell morphology - even in dense or overlapping samples.

AI-Powered Cell Classification

Differentiates live vs. dead cells using advanced staining analysis (e.g., trypan blue), morphological integrity.

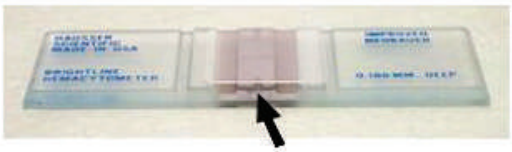
Real-Time Calculations

- Cells/mL
- Total cells per sample volume
- Live cell % and viability ratio

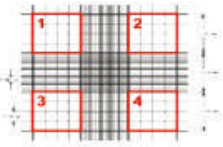
Audit-Ready Outputs

- PDF/CSV reports with sample metadata
- Overlay annotations with quadrant demarcations
- Image storage (before/after) with timestamp
- 21 CFR Part 11 compliance with full traceability

A



B



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Applications In Life Sciences & Industry



01 Viable & Non-Viable Cell Counting

Automated identification and quantification of viable and non-viable cells using hemocytometer-based analysis.

02 Infected Cell Identification in Multiwell Plates

Automated detection and identification of infected cells in well-based assays.

03 Rosette Analysis in Multiwell Plates

Automated identification and analysis of rosette formation in well-based assays.

04 Vaccine Production

Accurate cell counts during upstream and downstream processing

Value To Users

- Eliminate manual errors in cell counting
- Digitize QC workflows and ensure reproducibility
- Reduce inter-operator variability
- Standardize global QA/QC cell assessment
- Integrate with LIMS and data traceability systems

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Installation Options

CLAIRITY™ XCell is available as:

- **Standalone Workstation**
- **Client-Server Architecture** (for enterprise-wide deployments)
- **Cloud-based Setup with real-time collaborative inspection** (C-Sync enabled)



Compliance & Data Security

- 21 CFR Part 11 and EU Annex 11 compliance
- Role-based access controls
- E-signatures and audit trail logs
- Auto backup, encryption, and secure archiving

Summary

CLAIRITY™ XCell bridges classical methodology with modern automation to offer a seamless, intelligent, and regulatory-aligned platform for cell counting and viability analysis. Whether in research, production, or QA/QC, CLAIRITY™ XCell sets a new benchmark in cell analysis.

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