

Countstar
智能计数

Countstar
Smart Cell Analysis



Countstar

Mira FL Pro

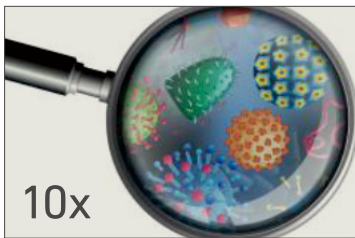
Microbial Cell Counter

MIRA FL PRO - MICROBIAL CELL COUNTER

The Countstar Mira FL Pro cell counter integrates advanced optical technology and Artificial Intelligence (AI) learning algorithms to revolutionize the characterization of small yeast and bacterial cells. The Mira FL Pro accurately identifies small cells in high density, provides accurate results in cell concentration, cell viability, or transfection efficiency within seconds, rather than hours or days with traditional methods.

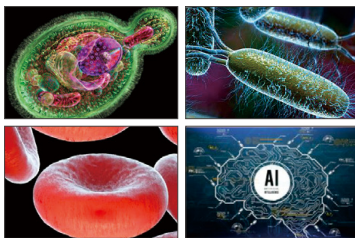


PRODUCT HIGHLIGHTS



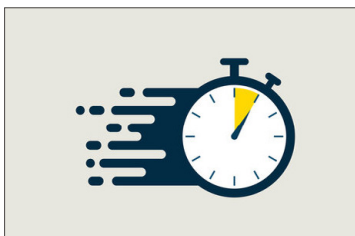
Clear, high-resolution images of small microbial cells

- 10x optical magnification
- 8.3-MP CMOS camera with high fluorescence sensitivity



Accurate concentration and viability measurement of various cell types using AI-trained algorithms

- Bacteria
- Yeasts
- Platelet



Fast analysis for real-time decision making

- < 1 min
- 6 μ L
- 5 samples/batch



FDA 21 CFR Part 11 Compliant-ready

- Password-protected access with multi-level user management
- Full audit trail
- Automatic data backup

RAPID & ACCURATE ANALYSIS

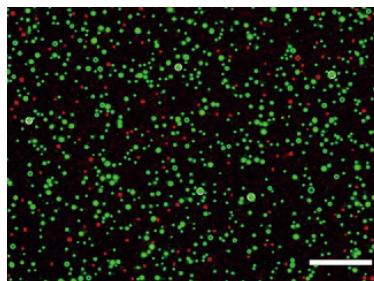
The Mira FL Pro provides accurate cell concentration and cell viability measurement in **less than 60 seconds**, overcoming major bottlenecks in microbial analysis using traditional methods to enable real-time monitoring of biological processes for fast decision making.

A time saving of **>1,000** folds is achieved for viability measurement on the Mira FL Pro, when compared to the colony forming unit (CFU) method, the industry gold standard.



Mira FL Pro

E coli was stained with **Syto9/PI**



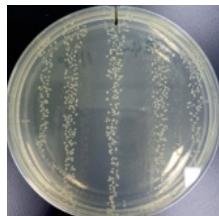
Scale bar:100µm

Cell Density: 1.14×10^8

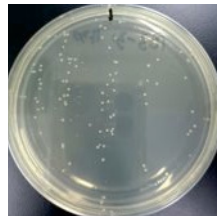


<1 min

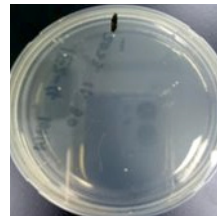
CFU



1:100



1:1,000
Dilution



1:10,000

Cell Density: 1.10×10^8

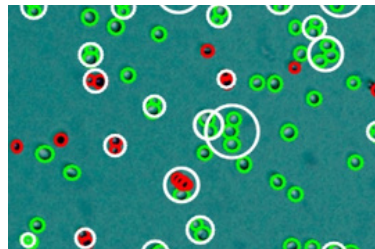


24-48 hrs

High-resolution image with sufficient details enables accurate and comprehensive characterization of yeast samples, allowing accurate identification of individual cells in clusters and more advanced budding-rate analysis.

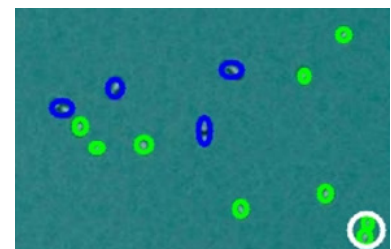
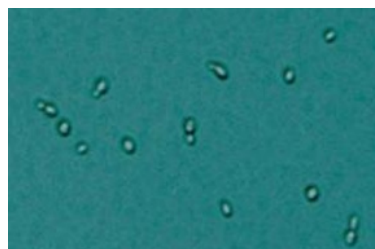
Viability Analysis using Methylene Blue

- Green circles – live cells
- Red circles – dead cells
- White circles – cell clusters



Yeast Budding Population Analysis

- Blue circles – budding cells

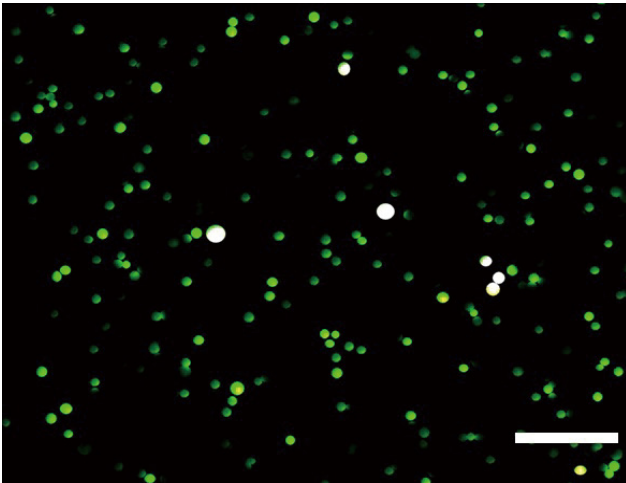


MIRA FL PRO – ADDITIONAL APPLICATIONS (Platelets)

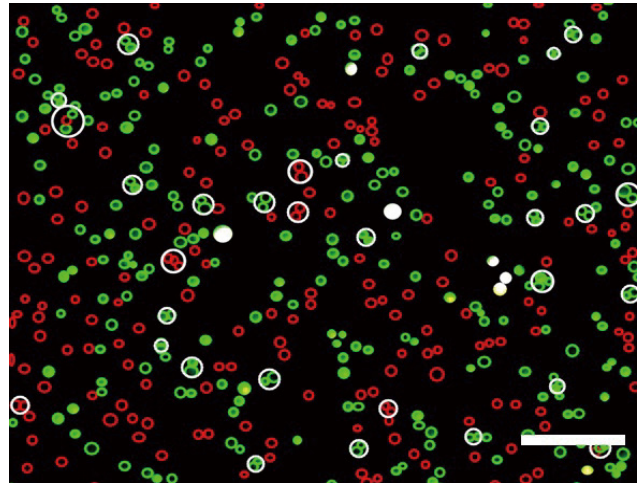
Robust Assessment of Platelet Count and Quality

The Countstar Mira FL Pro Microbial cell counter provides high-definition imaging and accurate algorithmic identification to help you achieve accurate platelet counts and viability analyses, enabling the rapid development of platelet-related therapies and quality control.

Fluorescent image of viable Platelets with Calcein-AM stain



Algorithmic identification of viable vs non-viable platelets



Scale bar: 100µm

Result interface provides wealth of information on platelet characteristics and vitality assessments with Calcein-AM staining along with total counts

Test results [Print] [Backup] [Calculator] [Reanalysis]

Cell Labeling:

| | |
|-----------------------------|------------------------------|
| Vitality 97.53% | Total Cell Conc. 1.56E+07/ml |
| Live Cell Conc. 1.52E+07/ml | Dead Cell Conc. 3.84E+05/ml |
| Total Cell Counts 325 | Live Cell Counts 317 |
| Dead Cell Counts 8 | Avg Diameter 5.86µm |
| Avg compactness 0.94 | |

Total results [RFI Graph] [Dia Graph]

| | |
|-----------------------------|------------------------------|
| Vitality 77.85% | Total Cell Conc. 1.71E+07/ml |
| Live Cell Conc. 1.32E+07/ml | Dead Cell Conc. 3.89E+06/ml |
| Total Cell Counts 1066 | Live Cell Counts 823 |
| Dead Cell Counts 243 | Avg Diameter 5.74µm |
| Avg compactness 0.94 | |

State: Test time: 202312011320_2

Assay: Calcein AM-Platelet Vitality A Sample ID: Sample3

Dilution: 1:1 Backup state: To be backup

COMPLIANCE READY

Powerful data management and control capabilities make the Countstar Mira FL Pro fully compliant with FDA 21 CFR Part 11 regulations.



Data Integrity

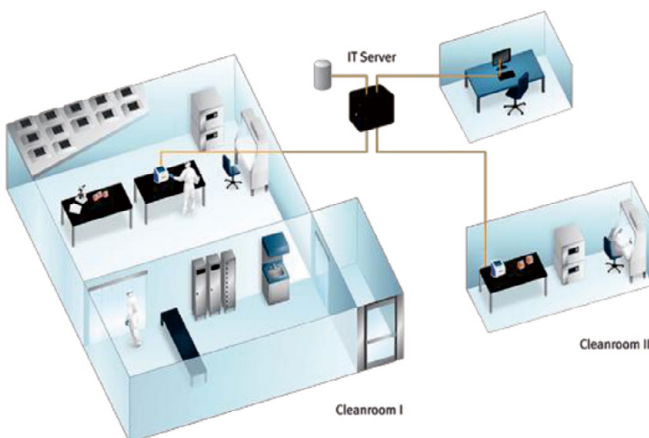
Electronic signature is required for any data editing or deletion. An electronic record is maintained for all activities. Only authorized individuals can carry out these operations, with administrators able to set user permissions.

| Time | Operator | Operation | Detail |
|------------------|----------------------|-----------------|---|
| 2024-03-23 17:03 | Administrator(admin) | Data-CSV export | CSV(USB): Export to:/PN-6789DA/Trypan blue-A549/2024-03-23/Excel/2024-03-23_17-03-13 |
| 2024-03-23 17:03 | Administrator(admin) | Data-PDF export | PDF Report(USB): Export to:/PN-6789DA/Trypan blue-A549/2024-03-23/PDF/2024-03-23_17-03-09 |
| 2024-03-23 17:02 | Administrator(admin) | Start Test | Sample ID: Sample1;Assay: Cell counting;Slot: Chamber_1;Dilution: 1:0 |
| 2024-03-23 17:01 | Administrator(admin) | Start Test | Sample ID: Sample20;Assay: Trypan blue-A549;Slot: Chamber_5;Dilution: 1:1 |

- Secure log in
- Multiple user privilege levels
- E-signature and full audit log

Data Security

Intelligent, flexible and user-friendly database management creates a better experience while ensuring the reliability and traceability of the experimental results.



Network data transfer and local backup settings

Test data can be backed up in real time via a network connection to a server, and printed via a connected printer, making your data "foolproof". In addition to manual backups, the Mira FL Pro also supports automatic database backups at a scheduled frequency and during normal shutdowns.

Validation Services

A comprehensive IQ/OQ/PQ validation package, including calibration standards and detailed documents, is available to meet the needs of all companies working under GMP standards.



TECHNICAL SPECIFICATIONS

| Features | Specifications |
|---------------------------------------|--|
| Diameter range of detectable object | 1-10 μm |
| Cell Conc. Range [optimal] (cells/mL) | $5 \times 10^5 - 2 \times 10^8$ [$2 \times 10^6 - 1 \times 10^8$] |
| Throughput | 5 |
| Sample volume | 6 μL |
| Optical Objective | 10.0x (BF/FL) |
| Camera Sensor | 8.3 MP CMOS |
| Image Resolution | 1920 \times 1080 |
| Fluorescence Channel | Ex: 465-485 nm; Em: 535/40nm, 600LP |
| Consumables | Counstar Slides |
| Storage Capacity | 1 TB |
| USB | 1 \times USB 2.0 |
| Power input | 110-230V/AC, 50/60 Hz |
| Screen size | 8 inches HD resolution |
| Weight | 4 kg (9 lbs) |
| Dimension (W \times D \times H) | 24 \times 22 \times 28.5 cm (9.45 \times 8.66 \times 11.22 inches) |



PRODUCT ORDERING INFORMATION

| Product Name | Product Number |
|---|------------------------------------|
| Countstar Mira FL Pro | IN050301-A (USA); IN050301-E (EUR) |
| Countstar Slides - 60um (50 pcs. / box) | C0010301-0 |
| Viability SYTO9/PI staining reagent, 1mL | P110700003 |
| Viability AO/PI staining Solution, (5mL/25mL) | RE010212/RE010213 |
| Yeast dilution buffer, 20mL | RE010711/RE010712 |
| Viability Calcein AM staining reagent, 1mL | P110700001 |
| 0.01% Methylene Blue staining reagent, 25mL | P110700006 |

Contact: marketing@countstar.com

Disclaimer: Countstar® series products are designed for their intended use in research, process development, and cGMP regulated environments. Up to now, we haven't applied for an approval as medical device or for use in clinical diagnostics (IVD) All information in this brochure is not guaranteed to be accurate. Copyright 2024@