

XcytoMatic® 40

FAST AND ACCURATE HIGH-THROUGHPUT CELL COUNTER



XcytoMatic® 40

- ✓ High capacity: 24-sample carousel
- ✓ Fast: ~ 100 samples in 1 hour
- ✓ Low sample volume: 50 µL
- ✓ Wide cell counting range: 50 000 - 100 million cells/mL
- ✓ Auto-cleaning and sample handling



Cell Counter for High-Throughput Operations

When you work with samples from multiple bioreactors, run process development projects, or perform multisample validation studies, fast and reliable cell counting is a requirement. The XcytoMatic® 40 (XM40™) is built to handle these demanding workflows.

The XM40™ uses brightfield microscopy and fluorescence imaging to differentiate nucleated cells from debris. Combined with cell-specific staining, it delivers 99% counting accuracy across a wide range of mammalian cell types.

The XcytoMatic® 40 requires only 50 µL of your cell sample and can process up to 100 samples per hour. It requires no calibration and automatically handles samples and waste.

Additionally, the instrument reduces downtime during operation. With multiple replaceable carousels, users can load one carousel while another is being analyzed.

Why Is The XcytoMatic® 40 Perfect For Bioprocessing?

Handles High-Density Samples

The XcytoMatic® 40 handles a wide range of cell densities, allowing you to monitor bio-reactor cultures throughout the entire process without dilution steps or speed compromises.

From 50 000 to 100 million cells/mL

Ensures Smooth Scale Up and Out

The XcytoMatic® 40 delivers precise results across samples and instruments. This is achieved through rigorous pre-calibration during manufacturing, a fixed-focus design, and a high sample analysis volume.

INTRA-SAMPLE
VARIATION
< 3 %

INTER-INSTRUMENT
VARIATION
< 5 %

Counts Aggregated Cells

The XcytoMatic® 40 incorporates specific protocols for calculating viability in highly aggregated cell types.

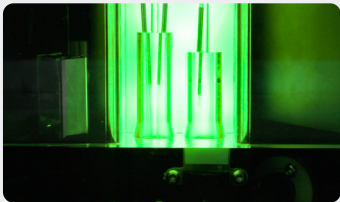


Monitors Debris Level

The XM40™ provides debris data as a quality parameter so you can track debris buildup in cell culture or be alerted to potential contamination.

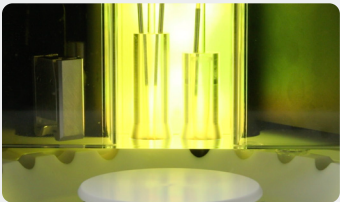


Advanced Design



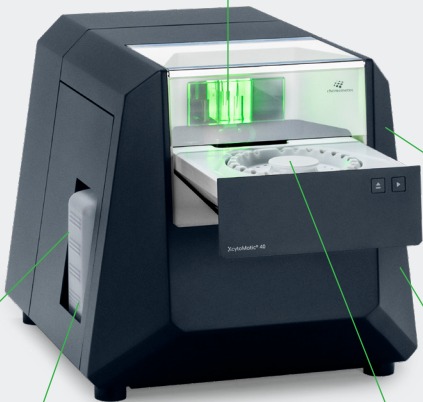
SAMPLE ANALYSIS

A sample is drawn for brightfield and fluorescence imaging



SAMPLE MIXING

50 µL of the sample is automatically mixed with the staining solution



LIQUID WASTE

Trypan blue-free liquid waste in an easy-to-replace bottle

XM RINSE

Minimizes the risk of sample carryover, even with the stickiest samples

XM CELL STAIN

Mix of AO and DAPI fluorescent dyes

TUBE WASTE

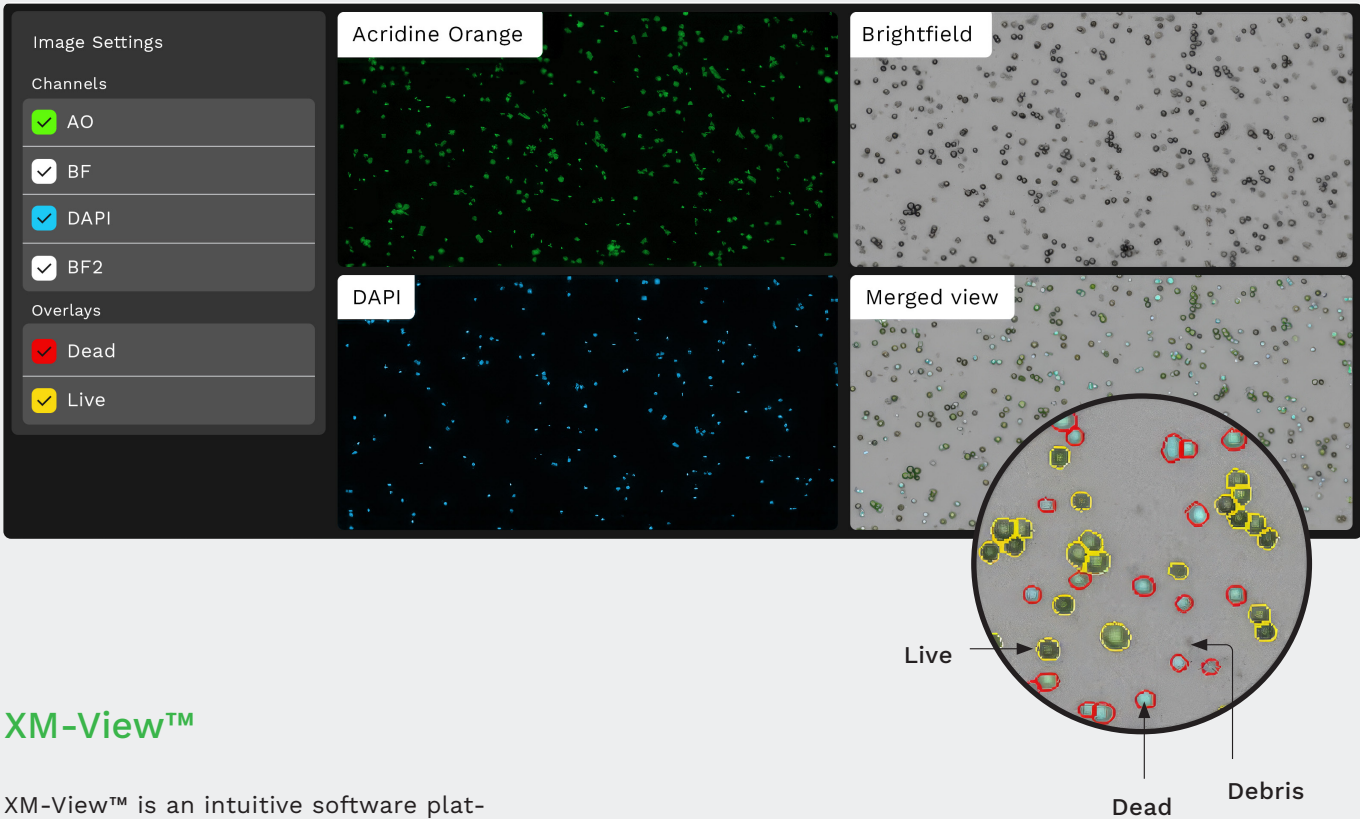
Collects all empty tubes in one container



CAROUSEL

Replaceable carousel, which takes up to 24 samples

XM-View™ Facilitates Fast and Robust Operations



XM-View™

XM-View™ is an intuitive software platform that pairs ease of use with advanced image analysis for robust and reliable performance. The software delivers a range of analysis parameters and allows data export in multiple formats.

PARAMETERS MEASURED

- ✓ Total Cell Count (cells/mL)
- ✓ Live Cell Count (cells/mL)
- ✓ Dead Cell Count (cells/mL)
- ✓ Viability (%)
- ✓ Single Cell (%)
- ✓ Diameter (µm)
- ✓ Debris (count/mL)
- ✓ Red Blood Cells (RBC)

Simple Protocol Selection

All our protocols are validated across multiple cell lines. As a result, we achieve high analytical accuracy across mammalian cell samples using only a few standardized protocols. They do not require calibration, parameters, or focus adjustment.

Continuous Workflow

As your analysis progresses, you can continue using the cannot be slitted to explore previously acquired results, export the data, and set up the next analysis.

Easy Naming Template

In high-throughput operations, naming samples is a time-consuming task. The XM-View™ allows uploading an Excel file as a pre-named template to avoid manual copy-pasting.



Advanced Features

API Integration

The XM-View™ uses APIs to integrate with local data management systems. It enables automated results export, data traceability, and result sharing across teams.

Unified Cell Counting Platform

The XcytoMatic® 40 is part of the XcytoMatic® platform, which aligns counting results across all instruments and makes it easy to transfer processes between development stages.



21 CFR Part 11

The XcytoMatic® 40 can be integrated into regulated environments:

- ✓ Role-restricted access
- ✓ E-signatures
- ✓ Audit trail

Service Plan

With our Service Plan you can have peace of mind that all instruments provide the best quality results at any location.

This comprehensive package gives priority access to ChemoMetec specialists for troubleshooting, yearly on-site qualifications, and valuable training sessions for operators.

Specifications

MODEL		
Instrument	XcytoMatic® 40	
Product Number	900-0040	
DIMENSIONS		
Width	425 mm	16.73 in
Height	445 mm	17.52 in
Depth	525 mm	20.67 in
WEIGHT		
~ 45 kg (~ 99 lb)		
SOFTWARE		
XM-View™		
CONSUMABLES		
XM Cell Stain 2, XM Rinse 1, XM Liquid Waste Container 1, Tube Waste Container		
STAINING DYES		
Acridine orange (AO) and DAPI		
APPLICATIONS		
Count and Viability analysis of primary cells types (e.g PBMCs, MSCs) and established cell lines (e.g. CHO, HEK, A3)		

PERFORMANCE	
Counting range	5 x 10 ⁴ – 1 x 10 ⁸ cells/mL
Measurement time	35 seconds/sample
Sample volume	50µL
Max. sample capacity	24 samples/run
Variations	Sample-to-Sample: <3%
	Instrument-to-instrument: <5%
API INTEGRATION	
Available	
DATA EXPORT	
PDF, Excel, CSV, and clipboard	
OPTICAL & FLUORESCENCE	
Optics	Lens with ×2.1 magnification, 2/3” CMOS
Excitation	3 LED light sources with peak wavelengths at 365 nm, 430 nm, 505 nm
Emission	A single dual-band emission filter: 410–460 nm and 540–650 nm

About us

Founded in Denmark in 1997, ChemoMetec is a global supplier of automated cell counting and analysis equipment. We develop precise instruments like the XcytoMatic® and NucleoCounter® series, ideal for applications in process development, R&D, clinical and commercial manufacturing of cell and gene therapies, upstream bioprocessing, and academic research.

Headquartered in Allerød, Denmark, with multiple US offices, we provide dedicated support through our field application scientists and engineers, ensuring seamless adaptation, installation, and service.

Contact

www.chemometec.com

contact@chemometec.com

ChemoMetec A/S

Gydevang 43

3450 Allerød

Denmark

Phone: +45 48 13 10 20

CVR-nr. 19 82 81 31

ChemoMetec Inc.

3920 Veterans Hwy - Suite 3

Bohemia, NY 11716

United States

Phone: +1 631-676-4237

Corporation No: 3317355

Disclaimer

The material in this document is for information only and is subject to change without notice. While reasonable efforts have been made in preparing these documents to assure their accuracy, ChemoMetec A/S assumes no liability resulting from errors or omissions in these documents or the information contained herein.

ChemoMetec A/S reserves the right to print errors in this brochure without prior notice and change the defined specifications. ChemoMetec A/S reserve the right for supplier delays and unforeseen events and to make changes in the product design without reservation and notification to its users. The instrument and the specifications shown may differ from the final version.



Beyond providing state-of-the-art cell counters, ChemoMetec partners with biopharmaceutical research and development.

We collaborate with innovation hubs and biotech companies to understand their unique needs and challenges, driving continuous innovation in cellular analysis.

Our commitment to reproducible scientific methods ensures our products deliver consistent and reliable results for any cell type, sample, or user.