

# The Cyto-Mine® Single Cell Analysis and Monoclonality Assurance System



## Example Applications

### **Biopharmaceutical discovery:**

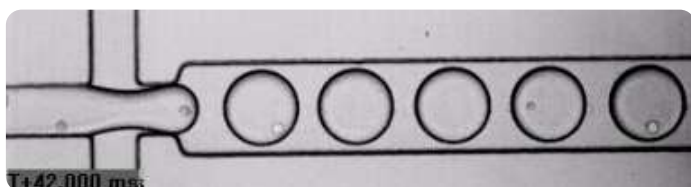
Specific antibody discovery from primary plasma cells, B-cells or hybridomas. Ability to measure secreted protein from individual cells.

### **Biopharmaceutical development:**

Rapid identification and isolation of high expressing clones in cell line development. Fully automated monoclonality assurance.

## **Key Features**

- Dramatic time- and cost-savings due to high speed processing in a miniaturised format.
- Processes between 200,000 single cells or up to 10 million cells (in pools) in a few hours.
- Measures each individual cell for secreted proteins such as antibodies, enzymes or biomarkers.
- Dispenses up to 10,000 individual cells into separate 96- or 384-well microtiter plate wells.
- Benchtop format designed for use in a standard Class II biosafety cabinet.
- Single-use, sterile, Animal-Origin-Free Cyto-Cartridge® ensures reproducible cell processing.
- Simple “load-and-go” functionality for easy use by R&D staff.
- Fully automated and easily interfaced to external standard laboratory robotics.
- All components and accessory reagents are GLP-compliant.



Each individual cell is encapsulated for gentle and rapid cell incubation, assaying, sorting, and dispensing.

The Cyto-Cartridge®.

**SPHERE FLUIDICS LIMITED:** The Jonas Webb Building, Babraham Research Campus, Cambridge, CB22 3AT, UK.

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SYSTEM SPECIFICATIONS	
Weight	85 kg (187 lbs) - Boxed 110 kg (242 lbs)
Dimensions	860 mm x 566 mm x 463 mm (width x height x depth)
Voltage and power supply requirements	100 V (min) to 240 V (max) [ @ 50 Hz / 60 Hz ] / 500W (max)
RUN SPECIFICATIONS	
Sample input method	Loaded into single-use disposable Cyto-Cartridge®
Sample input format	Mammalian cells in cell culture medium
Workflows (operation modes)	Monoclonality Assurance; Direct Assay; Cell Line Stability
Destination plate capacity	Plate-by-plate or stacker option (available upon enquiry)
Run time	2-7 hours (protocol dependent)
DETECTION	
Detection system	Laser-Induced Fluorescence (e.g. fluorophores, FRET)
Excitation wavelength	488 nm
Detection wavelengths*	520 nm and 620 nm (peak detection wavelengths)
Camera	High-speed CMOS
PC	
Computer	Embedded internally as part of Cyto-Mine®
PC operating system	Microsoft Windows 7 Professional
Monitor	Colour LCD (21")
External connections	4 USB; 1 Ethernet
Cyto-Mine® data formats	.XLS; .BMP; .PDF; .XML (database integration, upon enquiry)
SOFTWARE SPECIFICATIONS	
System control software	Cyto-Mine® software suite
Monoclonality verification	High-speed CMOS image capture and processing
WORK ENVIRONMENT	
Operating temperature / humidity	21°C ± 5°C / 30 - 80%
Site preparation / instrument positioning	See the Cyto-Mine® System Site Requirements Guide
CONSUMABLES	
Microfluidic biochips	Cyto-Cartridge®
Specialist chemicals	Cyto-Surf® Solutions (250 ml bottles)
Microplate compatibility	96 and 384 well. All major SBS format plates.

Ordering Information		
Description	Part number	For pricing and other information please contact us at:  <b><a href="mailto:Sales@spherefluidics.com">Sales@spherefluidics.com</a></b>
Cyto-Mine® System	S003	
Cyto-Mine® System Installation and User Training	S003N001	
Cyto-Mine® System (1 year) Additional Warranty	S003W001	
Cyto-Mine® Consumables Suite	S003C001	

\* Custom filter configurations are available; please note these must be specified at the point of purchase. Contact us at [Sales@spherefluidics.com](mailto:Sales@spherefluidics.com) for further information.

All Cyto-Mine® components, the Cyto-Cartridge® and Sphere Fluidics' supplied chemicals and bioreagents are Animal Origin Free and GLP-compliant.

Product specifications subject to change without notice.

**Note: This system is for research applications only**

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