

# The Cyto-Mine<sup>®</sup> Single Cell Analysis and Monoclonality Assurance System



## Example Applications

### **Biopharmaceutical discovery:**

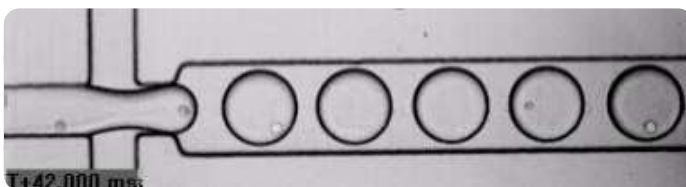
Specific antibody discovery from primary plasma cells, B-cells or hybridomas. Ability to measure secreted protein from individual cells.

### **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 5 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<sup>®</sup> 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.



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

The Cyto-Cartridge<sup>®</sup>.

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SYSTEM SPECIFICATIONS	
Weight (approx.)	100 kg (220 lbs)
Dimensions (approx.)	86 cm x 57 cm x 47 cm (width x height x depth)
Voltage [frequency]	100 V (min) to 240 V (max) [@ 50 Hz / 60 Hz]
Consumption	600 W (max)
Biochip compatibility	Cyto-Cartridge®
SAMPLE SPECIFICATIONS	
Sample input format	Loaded onto single-use disposable Cyto-Cartridge®
Sample input volume	500 µL – 1 mL
Workflows (operation modes)	Monoclonality; Assay; Stability
Detection system	Laser-induced fluorescence (e.g. fluorophores, FRET) and light scatter
Cell Sorting Throughput	300 picodroplets per second (picodroplet volume of 300 pL)
DETECTION	
Laser Excitation Wavelengths	488 nm
Detection Filters	FITC / Cy3 (other filter configurations available) *
Detection Wavelengths	Filter-dependent
Cameras (multiple)	High-speed CMOS
PC	
Computer	Embedded internally as part of Cyto-Mine®
PC Operating System	Microsoft Windows 7 Professional or later version
Monitor	Colour LCD (21")
External connections	4 USB; 1 Ethernet
System Control Software	Cyto-Mine® Software Suite
Example Cyto-Mine® Data Formats	.XLS; .BMP; .PDF; .XML
WORK ENVIRONMENT	
Clearance	55 cm on each side, 10 cm to the back and front
Relative Humidity	25 - 50%
Operating Temperature	21°C ± 5°C
Site preparation	See the Cyto-Mine® System Site Requirements Guide
CONSUMABLES	
Microfluidic biochips	Cyto-Cartridge®
Specialist chemicals	Cyto-Surf® Solutions

Ordering Information		
Description	Part number	
Cyto-Mine® System	S003	For pricing and other information please contact us at: <b><a href="mailto:Sales@spherefluidics.com">Sales@spherefluidics.com</a></b>
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.

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