

Pu·MA[®] SYSTEM 3D

Automated 3D Cell-Based Assays

The Pu·MA System 3D has been designed to automate assays for your 3D cell models, organoids or spheroids. The Pu·MA System 3D maintains the cells in our specially designed flowchips to allow automated media or reagent exchanges for oncology, toxicity, metabolomics or neuroscience research.



Pu·MA System 3D Benefits

- Automated “hands-off” workflow for complex assay protocol
- Protected sample chamber to prevent cell damage
- Perform *in situ* media exchanges, compound additions and supernatant sampling
- Compatible with high content imaging and plate reader systems



Automated Assay Workflow

The Protein Fluidics' Pu·MA System 3D streamlines your workflow to automate assays with minimal user handling. Transfer organoids to the flowchips, add media and reagents, place the flowchips plate into the system, select the assay protocol and press play. The system is touchscreen driven with an intuitive interface. Protein Fluidics Support is always available to answer questions.





Pu·MA System 3D

- Compact system fits in incubator
- Easy top-loading of flowchips
- Precision pneumatic control



Software

- Touchscreen-driven interface
- Preloaded assay protocols
- Simple "Select and Run" operations



3D Flowchips

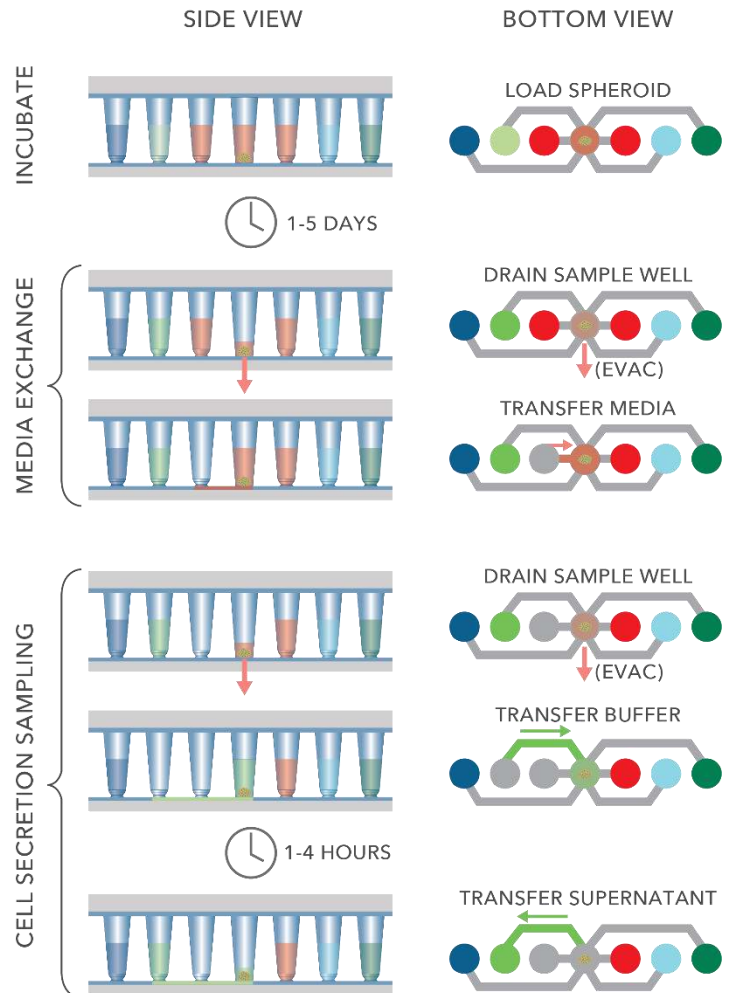
- Open platform for any 3D cell type
- Works with standard pipettors & tips
- Compatible with high content imaging

How it works

The Pu·MA System and Flowchips use valve-less fluidic switching (VLFS) to precisely control fluid movement in a flowchip. The assay takes place in a protected chamber with microfluidic reagent / media exchanges that eliminates temperature and mechanical perturbations of the 3D cell models. Preloaded protocols execute all fluid transfers and incubation steps.

Pu·MA System Specifications

Performance	8–32 Samples per run
	1–5 days processing time
	10–20 μ l reagent volume
Size and Weight	12 x 14 x 8 in (30 x 35 x 20 cm) size
	25 lbs (11.4 kg) weight
Environmental	20–40°C temperature
	15–75% (non-condensing) relative humidity
Electrical	12 VDC input voltage
	3.3 A current
	40 W
Connections	Two USB 2.0 ports (Front) One RS-232 9-pin serial port (Rear)



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