

Technical Specifications of Automated cell viability analyzer**Bidder Eligibility Criteria-I**

Sl. No	Bidder Eligibility Criteria-I	Complied / Not Complied	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied at least 3 similar items to IITs, NITs, IISERs, CSIR Labs or other globally reputed R&D organizations in the last 5 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			
2	The bidder should provide local service engineer details to attend service related issues			

Technical Specifications II

Sl. NO	SPECIFICATIONS	Complied / Not Complied	Reference, Page. No.
1	The automated image acquisition and analysis system that must operate and capture images from within a standard tissue culture CO2 incubator so that precise control of temperature, humidity and other environmental factors such as CO2 and oxygen can be maintained		
2	The optics must move to the areas being imaged. The cell culture vessels must remain stationary during this imaging process. Stationary optics and stage driven vessel movement are not acceptable		
3	The objectives do not need to be adjusted for any reason		
4	The system must be capable of simultaneously imaging and analyzing any mixture of 6 assay plates that conform to the ANSI/SLAS standard for assay plates. These include 384-well microplates, 96-well microplates, 48-well plates, 24-well plates, 12-well plates, and 6-well plates. Each assay plate must be able to run a different application, accommodating six different assay applications in parallel.		
5	The system must accommodate the following but must not be limited to the following plastic tissue culture vessels: 92.6 cm ² Roboflask, 500 cm ² Tripleflask, 84 cm ² Autoflask, 225 cm ² flasks, 185 cm ² flasks, 182 cm ² flasks, 175 cm ² flasks, 162 cm ² flasks, 150 cm ² flasks, 75 cm ² flasks, 25 cm ² flasks, 35mm dishes, 60 mm dishes, 100mm dishes, 150mm dishes, chambered slides and microslides.		
6	The system must possess fully automated, hands-free operation for periods exceeding 25 days and must be designed to autofocus and auto expose without intervention during this time period. The automated imaging system must return to the same location in a repeated fashion without error over this same time period.		
7	The basic software of system can accommodates the entire user workflow with single, networked package with single Guided User Interface (GUI).		

8	The software must be able to mask, quantify and generate time-based curves based on confluence and fluorescence metrics including but not limited to: Fluorescent Count, Fluorescent Average Area, Fluorescent Total Area, Fluorescent Confluence, Fluorescent Mean Intensity, Fluorescent Average Integrated Intensity, Fluorescent Total Integrated Intensity, and Fluorescent Eccentricity.		
9	System should be capable of imaging 3D organoids and Spheroids.		
10	Set of Software's must be capable of performing Cell migration, Invasion & as well as capable to perform Organoid assays. Separate software's and required accessories should be supplied along with the system.		
11	Control of the system must be distributed over a network and the client software must be able to elicit control of the automated image acquisition and analysis system from any networked computer. Unlimited licensees of the client software must be available. The client software must not operate using a client computer license key or dongle		
12	The system must perform whole-well imaging for selected vessels and include software for image navigation and panning.		
13	The system must have high-definition phase contrast optics and Three fluorescent wavelengths of Green/Orange/ Near IR (Green : ex 453-485nm, em503-544 nm; Orange ex 546-568 nm, em 576-639; NIR ex 648-674nm , em 685-756 nm).		
14	System should be able to handle two separate optical modules along with system are having fluorescence wavelengths as below Metabolism Optical Module -Ch1: X 473-498 nm/ M 565-591 nm -Orange: X 524-550 nm/ M 565-591 nm -NIR: X 648-674 nm/ M 685-756 nm -HD phase lamp house for Metabolism Optical Module -Metabolism calibration kit Green/Red Optical Module: -Green: X 441-481 nm/ M 503-544 nm -Red: X 567-607 nm/ M 622-704 nm -HD phase lamp house for Green/Red Optical Module		
15	The system must have user swappable and interchangeable optical modules as per need of application		
16	System must be capable of direct ATP measurements and analysis in Monoculture and Co-culture with separate set of software and optical module.		
17	The high-definition optics of the system must image standard 384 well tissue culture plates without any sidewall or meniscus effects.		
18	The system must have the following objectives on an automated turret: 4x PLAN, 10x PLAN FLUOR, and 20x PLAN FLUOR		
19	The system must have a CMOS detector with low read noise and detector with linear response to changes in fluorescence.		
20	System should have Data storage capacity of at least 27 terabytes (TB) in the form of a RAID Array and is expandable to 60 TB with an additional storage module		
21	The instrument must have a fluorescence calibration system and it should be supplied along with calibration accessories like calibration trays, calibration slides and calibration fluorescence fluid.		

22	The calibration system also must allow for comparison of intensity values for images that are captured with different objectives and at different acquisition times.		
23	Basic acquisition and image processing software must be supplied along with system should have unlimited free licenses.		
24	A suitable computer workstation should be supplied along with system		
25	A suitable CO2 incubator should be supplied along with the system		
26	A suitable scratch wound assay kit (wound maker) should be supplied along with the system.		
	Terms and Conditions		
1	The equipment must have one year warranty. Quote must include 2 years optional warranty and AMC for the 4 th and 5 th year.		
2	Necessary training and installation to be provided.		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)