

S.No	Technical specification for flow cytometer	Complied (yes or No)	If compliance given, mention the page no. of your technical document where the details are provided.
1	Excitation Optics:Instrument layout accommodates 3 lasers 16 colors 18 parameters can upgrade up to 5 lasers simultaneously. It should have approximately 28 different laser choices of varying power levels, ranging from 20mW to 1000mW, are available for selection.		
2	Flow Cell Design: Instrument should have rectangular quartz cuvette: Internal cross-section, 430 x 180 µm External quartz cuvette surfaces are anti-reflective coated for optimal transmission of laser light. Fixed optical assembly with spatially separated laser beam.		
3	Emission Optics should have following specification: Forward Scatter Detection: Photodiode detector with a 488/10 bandpass (BP) filter		
4	Side Scatter Detector:Photomultiplier tube (PMT) with a 488/10 BP filter		
5	Emission Optical Design :Emitted light from the gel-coupled cuvette is delivered by fiber optics to the detector arrays. Instrument optical pathways use signal reflection to maximize signal detection. Each detector array is equipped with appropriately matched optical filters for light collection		
6	Performance instrument should have the following specification:Fluorescence Sensitivity Fluorescence sensitivity should be in the current acceptable standards of flow cytometry research publishing journals		

7	Fluorescence Resolution Coefficient of variation: Area of <3%, full G0 /G1 peak for propidium iodide (PI)-stained chicken erythrocyte nuclei (CEN) Fluorescence linearity: Doublet/singlet ratio of 1.95-2.05 for CEN stained with PI and excited with the 488-nm blue laser		
8	Forward and Side Scatter Sensitivity Enables separation of fixed platelets from noise.		
9	Forward and Side Scatter Resolution :Scatter performance is optimized for resolving lymphocytes, monocytes, and granulocytes.		
10	Side Scatter Resolution :Enables separation of 0.3- $\mu$ m beads from noise		
11	Data Acquisition Rate 50,000 events/second with beads.		
12	Operating Modes :Front button panel provides three modes: RUN, STANDBY, and PRIME.		
13	Sample Flow rate: Continuously adjustable flow rate, plus three preset flow rates: LO: 12 $\mu$ L/min MED: 35 $\mu$ L/min HI: 60 $\mu$ L/min		
14	Standard Fluidic Reservoirs :One 10-L sheath container and one 10-L waste container		
15	It should be supplied with suitable workstation for acquiring and analyzing the sample. Operating System Microsoft® Windows® 7 Professional (32-bit) OS or more suitable for the instrument operation : Processor :Intel Xeon E3-1240v5 3.5 GHz CPU or more suitable for the instrument operation. RAM 4GB standard		
16	Instrument should be supplied with proprietary software: Capable of analyzing at least 30 logical gates.		
17	Monitor Options Two 19" LCDs, 2560 x 1024 resolution One 34" UltraWide LED, 2560 x 1080 resolution		

18	<p>The instrument should have High Throughput Sampler (HTS) option is available to increase lab productivity by acquiring samples from a 96- or 384-well microtiter plate.</p> <p>HTS Throughput Acquisition: Less than 15 minutes per microtiter plate in high throughput mode using a 2-second acquisition, less than 44 minutes in standard mode using a 10-second acquisition</p>		
19	Carryover : <0.5% high-throughput mode , <0.75% standard mode		
20	Instrument Flow supply system: automated fluidics system, which includes a rolling cart and two 20-L Cubitainer packages		
21	<b>Accessory instrument: Specification of high throughput single cell multi omics system for down stream analysis</b>		
22	The single cell capture system should use micro-well based technology that leads to minimal doublet occurrence. It should be easy to use, clog free and require minimal maintenance		
23	The system workflow should include mechanism for unique barcoding that enables digital quantification of expressed RNA and protein in individual cell for gene expression analysis.		
24	The manufacturer should be able to provide required consumables for single cell capture with barcoding and molecular indexing, cDNA synthesis and sequencing library preparation.		
25	The manufacturer must provide reagents for Whole Transcriptome Analysis (WTA) as well as targeted Transcriptome Analysis (TTA), Antibody-oligonucleotide (Ab-Oligo) conjugate and sample multiplexing. The same manufacturer must be able to supply customized targeted transcriptomic analysis (TTA) panels and Ab-Oligo conjugates.		
26	The system workflow must have the compatibility to perform multi-omic analysis with antibody-oligonucleotide (Ab-Oligo) conjugates enabling simultaneous detection of protein and mRNA expression in a single cell.		
27	The system workflow should support sample multiplexing of upto 12 different samples and enable high sample throughput (analysis of 100-10,000 cells in parallel) as per experimental need.		
28	The system should be able to capture variety of cells in the size range of 5-25 µm.		

29	The sequencing libraries generated by the platform should be compatible with Illumina massively parallel sequencers		
30	The manufacturer should be able to provide turn-key analysis pipeline and visualization tools.		
31	The manufacturer should be able to provide on-site training as well as post sales technical and service support.		
32	Equipment should be supplied with suitable UPS capable of providing 30 minutes backup for instrument as well as computer controlling the instrument.		
33	To maintain the dust free environment as well as temperature in the room, equipment should be supplied with 2 no's, 2 ton capacity AC's as well as de humidifier.		
34	Furniture to accommodate the instrument should be provided by the supplier		
35	One additional computer should be supplied for analysis of the data		
36	Training for the instrument operation for the users should be carried out by the supplier (consumables and other required items for training should be supplied by the vendor)		
37	Warranty & Service: The main equipment and accessory instrument should be supplied with 1 year warranty, 2 year comprehensive annual maintenance contract (include spares and service visit) and 2 year Annual maintenance contract (only service visit). Immediate response upon system failure should be guaranteed. Response to service calls should happen within 48 hours.		
38	In the price bid, the total price should cover the cost of the main instrument as well as all the accessory items cost, and it has to be quoted in single currency (INR or foreign currency).		
39	Voltage and plugs adopted to meet Indian conditions		
40	The manufacturer must have the management system certified by ISO9001		
41	Certificate should be provided that the instrument was calibrated at the factory		
42	All standard accessories and consumables and part require to operate to be included in the offer.		

43	The unit must be quoted by Original Equipment Manufacturer's with Sales and service support facilities in India through their branch office / Indian Agent (or) Indian agent with extensive sales (Minimum 5 years) and service support in India representing foreign principals / Original Equipment manufacturers. The Indian agency / dealership certificate with details of sales and service support should be enclosed with the technical bid.		
44	The firm should provide necessary original documentary evidence of the features of the offered model in the technical bid to facilitate proper technical evaluation.		
45	Purchase orders, contact details and user satisfactory reports of the quoted model from Nationalized or reputed laboratories all over the India must be shared with quotation.		
46	complete installation and testing the main system and the accessories to their specifications done at the site of installation free of cost. All utility requirements for installation and running the system should be mentioned in the offer.		
47	Please indicate the year in which the model offered was introduced into the market and confirm whether the spares for the system would be available for a minimum period of 10 years and shall not be obsolete within five years of procurement.		
48	Special discount on list price for all spare parts must be given up to 10 years.		
49	Availability of local service support and response time for a service call during and after warranty specified.		
50	Technical specification are intended to be descriptive only and not restrictive. The bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the purchaser's satisfaction that the substitutions ensure substantial equivalence or superior to those designated in the "Technical Specifications		