

SPECIFICATIONS OF FLOW CYTOMETER

- 1) Bench Top Flow Cytometer should have 3 Lasers (red, blue, & Violet) equipped with latest technology to perform multi color clinical applications
- 2) Should be capable of 12 parameters analysis (10 fluorescent plus forward & side scatter) or more with an option of adding additional filters for new dyes
- 3) Auto-calibration should be there. Equipment should have a clinical protocol and should be for IVD/Clinical usage approved.
- 4) The fluorescence detectors should be Photomultiplier tube.
- 5) Should have sample acquisition rate of at least 30,000 events per second.
- 6) Carry-over of the fluidics of the system should be less than 0.1% with cells.
- 7) Should include at least 10,000 sample tubes, 200 Litres of sheath fluid apart from the regular startup reagents like QC reagents, calibration reagents, cleaning and rinsing solution.
- 8) Should have automated controlled fluidics start up and shut down procedures, with capability of mixing samples before being delivered to the system
- 9) The system should come with various size of nozzles (from 70 to 130 microns & more) and their removal and insertion should be possible without realigning of optics, all the lasers & fluidic system and without compromising on the reproducible drop profile.
- 10) Software should be capable of online/real time compensation & post acquisition compensation of data. All acquisition and analysis software should be quoted. It should be compatible with external analysis software.
- 11) Compensation once done should remain valid preferably for at least one month. Compensation matrix should be recalculated after adjusting PMT Voltages for a tube.
- 12) The company should provide standard software for complete plot and graphical analysis of flow files with facilities such as back gating and post analysis compensation.
- 13) The system software should be capable of establishing baseline settings of system performance and be able to adjust for instrument variability thereby automating instruments set up leading to consistent and reliable result.
- 14) The instrument should be capable of performing automated daily QC check control and of maintaining monthly quality assurance data monitoring performance of the instrument.

15) The equipment should have analogue/digital signal processing with high sensitivity and resolution and dynamic range of at least 18bit data acquisition or more in order to get the clear resolution of leucocyte population.

16) The instrument should support Laboratory Information System (LIS) connectivity for data management to share reports online.

17) Should have auto loading carousel with a capacity of at least 30 tubes or more and should be included in the quote if it is an accessory item.

18) Must have provision for integrated bar code reading to identify carousel number & tube location.

19) The data management system should have latest and compatible computer workstation with at least 1TB Hard drive with latest processor, DVD/CD writer (combo drive), at least 22inch monitor (02) connected in series to each other and color laser jet printer.

20) On-line UPS 3KVA with at least 30 Minutes back up should be quoted with the system and should be supplied with the equipment.

21) The company should provide multiple time-to-time free trainings to the users as per their requirement during setting up of Flow lab and later for upgradation without extra charges.

22) Participating company should have direct presence in India with relevant application and service specialist for anytime support.

23) Instrument should be CDSCO/BIS approved. Manufacturer should be ISO Certified. Proper proof of certification should be provided.

24) The company should have proven capability demonstrated after sale service and application support in the field of flow cytometry instrumentation in India with installation in Government Organizations / Institutions in the past five years.

25) Two extended analysis software should be a part of equipment supplied to carry out offline analysis of flow data (eg. Kaluza/FlowJo/FCS Express) with automated upgradation.

26) Five years comprehensive warranty followed by five years comprehensive AMC/CMC to be included.

27) Preventive maintenance kit should be provided during the warranty period of five years.

28) Configured table for placing the equipment should be fixed.

29) It should have biohazard containment system.

30) Equipment will be selected only after proper demonstration.

31) The company should provide Vortex mixer, Centrifuge with swing bucket rotator (from reputed company), Pipettes (100-1000ul ; 20-200ul ; 2-20ul) and refrigerator (branded 200L capacity).

32) Start-up kit should consist of following & should be part of the order

- a. Start-up kits, reagents, controls and calibrators for 100 tests
- b. Immunophenotype for acute leukemia for 100 cases or tests (with minimum 16 Antibody panel)
- c. Immunophenotype for lymphoma/Chronic lymphoproliferative disorder panel for 100 cases or tests (with minimum 16 Antibody panel)
- d. PNH 100 test panel (comprising FLAER, CD45, CD55, CD59, CD22& CD66b)
- e. CD34 enumeration kit/antibodies for CD34 enumeration for 100 samples by standardized protocols.
- f. Ploidy (DNA Content) analysis for 100 tests.
- g. CD4, CD8, TH1 &TH2 markers for immunological characterization for 100 cases.