

BLOOD CELL COUNTER / HEMATOLOGY ANALYZER – 1No.
Doc. No: ST/12/Hematology Analyzer/2016-17/31

Specifications

1. It should be fully automated 5 Part differential hematology analyzer based on flow cytometry, light scattering and peroxidase staining technology. Instrument should offer automatic start-up, shut down and sample analysis.
2. It should have five discrete analysis modes CBC, CBC+Diff, CBC+Retic, CBC+Retic+Diff & Retic only.
3. Should give 33 or more parameters i.e. WBC, RBC, HGB, HCT, MCV, MCH, MCHC, CHCM, RDW, HDW, CH, CHDW, PLT, MPV, PDW, PCT, % RETIC, #RETIC, MCVr, CHCMr, RDWr, HDWr, CHr, CHDWr, A solute & % values for NEUT, LYMPH, MONO, EOS, BASO, LUC, morphology results (user definable) like WBC: Left Shift, Atypical Lymph, Immature Granulocytes, RBC: NRBC, ANISO, MICRO, MACRO, RBC Ghosts.
4. Should have the capability to perform veterinary application with minimum of 20 pre programmed species & 30 programmable slots.
5. The veterinary multispecies software should be user friendly.
6. Should have an Auto Sampler with capacity of 150 sample tubes at a given time. A single sample rack should be able to cater different tube sizes.
7. Should have high throughput of 120 samples per hour or more in CBC and CBC/Diff. mode & 74 samples per hour or more in Retics mode.
8. Should have multi-Channel analysis for better resolution & reproducibility's like Dual differential count for WBC.
 - Platelets – Should have Dual angle Light Scatter
 - RBC – Should have light Scatter.
 - Should have photometric and direct cellular measurement.
 - Retics – Should have on board, light scatter (fluorescent dye) for Reticulocytes.
9. Should have clot detection facility.
10. Should have on-board reagents facility with maximum of up to 7 reagents on board and automatic reagent inventory management.
11. Should had have extensive linearity as
 - WBC - 0.02-400 X 10³ /ul
 - RBC – 0-7.0 X 10⁶ /ul
 - PLT – 5-3500 X 10³ / ul
 - HGB – 0-22.5 g/dl
 - RETIC – 0.2-24.5%
12. Should be free of tubing's & pinch valves ensuring low maintenance requirement.
13. Should have FDA approved capability of running CSF fluids.
14. Sample volume required in all modes not to exceed 175 ul. Dead volume required < 300 ul.
15. Should be capable of reporting unique additional parameters such as CHrreticulocytes HGB measurement to aid in anemia treatment.
16. Should have extensive QC features.
17. Should have comprehensive Data management such as User friendly Windows based software Network integration possible with lab information system Database storage capacity of 10,000 records including graphics.
18. A suitable branded computer with color laser printer should be supplied with the instrument.
19. Operating Voltage : 230 volts -50 Hz

Training

Free training should be given to the identified regular staff, Technical officer and research fellows of the division at NIN, Hyderabad. The training should include running the blood samples of different laboratory animal species, human blood samples and trouble shooting. It should also cover the analysis and use of the multispecies software and interpretation.

- ❖ During the warranty period free upgrades of the softwares, if any, should be provided.

Acceptance Test

1. The acceptance tests at the final destination include the following:
 - a) Demonstration of the performance of the instrument by running blood samples of different laboratory animal species.
 - b) Validation of the instrument with respect to accuracy and performance and documentation.
- ❖ **Branded suitable UPS with 1hr backup**
 - ❖ **Warranty: 3 years comprehensive warranty and 2 years non-comprehensive warranty should provide at free of cost.**
 - ❖ **Any other items required to make it a complete system to be quoted**