

Technical Specifications:-

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Quantitative Buffy Coat (QBC) System

1. QBC System to convert normal bright light microscope into epi fluorescence microscope. It should come with all accessories like capillary centrifuge (Parafuge), tube holder (Paraviewer), etc.
2. System should have long life rheostat controlled single LED based light source without fibre optic cable.
3. System should necessarily have built in single excitation filter with broad wavelength range between 285-490 nm.
4. Emission filter should be in the range of 510-520 nm.
5. System should come with imported high quality 60x, 40x, 100x oil immersion objective. Attachment should also have an option of future addition of 40x & 100x objectives for doing autoimmunity parameters.
6. The attachment should have standard RMS threading to adapt standard light microscope.
7. The numerical aperture of 60x oil immersion objective should be 1.0 or more for better resolution.
8. Capillary centrifuge should meet following criteria:
 - i. Should have capacity to hold up to 20 capillaries minimum.
 - ii. The speed should be up to 12000 RPM or more.
 - iii. Electromechanical safety interlock.
 - iv. Shock absorbance mechanism for minimized vibration.
 - v. Automatic timer control.
 - vi. Protective metal cover.
 - vii. Should use brushless D.C. motor.
9. Attachment should necessarily be compatible with Flourochromes such as:
 - i. FITC
 - ii. Acridine orange
 - iii. Acridine yellow
 - iv. Auramine O
 - v. Phycoerythrine
10. System should be able to read Malaria capillary as well as other fluoro-chrome stained slides as mentioned above.
11. System should provide high Malaria Parasite sensitivity as high as 1-2 parasites per μl of blood. The supplier/ manufacturer of the system should necessarily provide an international study in support to the claim of sensitivity.
12. Analysis & processing time for each Malaria Parasite capillary should be less than 10 minutes.
13. Same system should also be able to read AFB slides stained with Auramine O without any change in hardware. The staining time for AFB slide with Auramine O should be as low as 2-3 minutes to increase the efficiency.
14. The Complete system (Fluorescence microscopic attachment, MHT centrifuge and consumables) should be US FDA Certified & Consumable like QBC Capillary Hematocrit Tube/ Malaria Hematocrit Tube should be compliant with internationally accepted in Vitro Diagnostic Norms of European standard.