



**List of Equipment Selected for Purchase
Faculty of Pharmaceutical Science
ICMR *Ad-hoc* Project**

Assam down town University

Details of Equipment for inviting quotation

Sl. No.		Name of Equipment/Instruments	Detailed Specifications	Quantity Required
1		<p align="center">Automatic Rotary Microtome</p>	<ul style="list-style-type: none"> ➤ It should have a precise stepper motor and drives which ensure accurate specimen advance and maintenance free cross roller guide which provides greater stability during sectioning. ➤ It should have a powerful sectioning motor and sectioning speed should be adjustable. ➤ Trimming thickness, sectioning thickness, fast forward and fast backward movement should be controlled through touch keypad. The hand wheel should be lockable in any position. It should have an integrated safety alarm system and emergency stop button. ➤ Specimen retraction should be 5-100µm in 5µm increments and should have provision to turn off. ➤ It should have section thickness range from 0.5-200µm. ➤ It should have vertical specimen stroke around 45-65mm. ➤ Specimen orientation should be: horizontal 5°-10°, vertical 5°-10°, z 360° ➤ It should have section thickness setting (0.5-5µm, in 0.5µm increment; 5-20µm, in 1µm increment; 20-60µm in 5µm increment; 60-100µm in 10µm increment; 100-200µm in 20µm increment). ➤ It should have trimming thickness setting around 1-1000µm. ➤ Setting values should be in- (1-10µm in 1µm increment; 20-50µm in 5µm increments; 50-100µm in 10µm increment; 100-600µm in 50µm increment; 600-800µm in 100µm increment). ➤ It should have minimum 4 sectioning modes. 	1

			<ul style="list-style-type: none"> ➤ It should have horizontal feed of 20-25 mm. ➤ Sectioning speed should be adjustable at minimum 3 different speeds. ➤ Max specimen size should be 50x50 mm ➤ Nominal supply voltages should be around: 110/220 V AC \pm 10% ➤ Nominal frequency should be around 50/60 Hz \pm 10% ➤ Dimensions of basic instrument should be 500-600 x 300-400x200-300 mm (W x D x H) ➤ The product should have CE certification from European notified body and manufacturer should provide 4 digits notified no. The equipment should be USFDA registered. ➤ The manufacturer should be atleast ISO 9001 and WHO GMP certified. ➤ Should be supplied with atleast 100 disposable blades. ➤ Should be supplied with a removable waste tray <p>Note:</p> <ol style="list-style-type: none"> a. The vendor / supplier should submit the brand authorization certificate and documentary evidence of previous experience of successfully supplying and servicing the same kind of products to at least 5 nos. of reputed research organisations preferably within the same geographical region. b. There should be a minimum 3 years of warranty against all manufacturing defects from the date of installation. 	
2			<p>A. <u>Electrophoresis Unit</u></p> <ul style="list-style-type: none"> ➤ Should run precast gels, or hand cast polyacrylamide gels. ➤ Hand casting set for gels should be 1.0 mm thick. ➤ Tank, lid should be supplied with power cables, electrode assembly. 	1

		<p style="text-align: center;">Western Blotting Setup</p>	<ul style="list-style-type: none"> ➤ Mini cell buffer dam should be supplied along. ➤ Electrode wire should be made of platinum ➤ Minimum 10 Precast gels should be provided ➤ Should be supplied with 1 casting stand with 2 casting frames; 5 short plates and 5 spacer plates with integrated 1.0 mm spacers; 1 roller; 5 or more 10-well combs and 5 or more gel releasers. ➤ Should be able to run SDS-PAGE at a typical voltage between (100-300V) ➤ Should have unique convenient side-by-side gel loading and separate chambers for each gel and the unit should have the capacity to run minimum 2 numbers of gels at a time ➤ Minimum 1 buffer dam should be provided <p>Note:</p> <ol style="list-style-type: none"> a. The vendor / supplier should submit the brand authorization certificate and documentary evidence of previous experience of successfully supplying and servicing the same kind of products to at least 5 nos. of reputed Research Organisations preferably within the same geographical region. b. There should be a minimum 3 years of warranty against all manufacturing defects from the date of installation. <p>B. <u>Power Supply</u></p> <ul style="list-style-type: none"> ➤ Output should be minimum: 250 V, 3.0 A, 300 W ➤ Output range should be programmable: 5–250 V, 0.01-3.0 A, and 1-300W ➤ Type of output should have constant voltage current, or power with automatic crossover ➤ Minimum 4 pairs of output terminals of recessed banana jack type should be present ➤ The facility of auto-switching input power should be there 	<p>1</p>
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			<ul style="list-style-type: none"> ➤ Safety should be as per EN61010 ➤ Fully adjustable timer of minimum 1 min–99 hr 59 min should be present ➤ Pause/resume function should be present ➤ Minimum 2-line, 16-character backlit LCD should be present ➤ Should be operated in conditions like: 0–40°C; 0–95% humidity in absence of condensation ➤ Device should meet EMI EMC standards like CE and TUV EMC certifications ➤ Should have input protection like fuse on hot and neutral ➤ Dimensions should be around 20-30 x 20-30x 5-10 (cm) ➤ Weight should be around 1.5-3 kg <p>Note:</p> <ul style="list-style-type: none"> a. The vendor / supplier should submit the brand authorization certificate and documentary evidence of previous experience of successfully supplying and servicing the same kind of products to at least 5 nos. of reputed research organisations preferably within the same geographical region. b. There should be a minimum 3 years of warranty against all manufacturing defects from the date of installation. <p>C. <u>Tank Blotting Transfer System</u></p> <ul style="list-style-type: none"> ➤ The Maximum gel size (W x L) should be 10 x 7.5 (cm) ➤ Should have the capacity to transfer maximum 2 gels (of minimum gel size 7x8.5 cm) at a time ➤ Weight should be below 1 kg ➤ To ensure proper alignment of the gel during transfer, the system should be equipped with color-coded cassettes and electrodes 	1
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			<ul style="list-style-type: none"> ➤ The system should be supplied with a cooling unit that may fit inside the tank during transfer to absorb heat. ➤ Minimum dimensions should be around (W x L x H), cm: 10-20 x 10-20 x 10-20 <p>Note:</p> <ul style="list-style-type: none"> a. The vendor / supplier should submit the brand authorization certificate and documentary evidence of previous experience of successfully supplying and servicing the same kind of products to at least 5 nos. of reputed research organisations preferably within the same geographical region. b. There should be a minimum 3 years of warranty against all manufacturing defects from the date of installation. <p>D. <u>Protein Estimation Equipment</u></p> <ul style="list-style-type: none"> ➤ Should be open system type ➤ 96 well plate support system should be there of round and flat bottom type ➤ A standard display of around 10-inch, touch screen with high resolution graphics should be there ➤ The instrument should be equipped with microprocessor-based system ➤ Measurement should be more accurate and stable ➤ Power supply should be around AC 110/230V, 50/60Hz ➤ Dimensions should be around 50 x 40 x 45 cm (approx.) ➤ Weight should be below 15kg ➤ Measurement time should be below 10 seconds ➤ Should have an option to connect to external PCs through RS-232 or USB ports ➤ A built-in printer should be there having high resolution with full graphics facility and should also have option to connect to an external parallel printer 	<p>1</p>
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			<ul style="list-style-type: none"> ➤ Measuring system should be 8-channel optical system ➤ Reading range should be around 0.00~4.000 Abs and linear range should be around 0.000~3.000 Abs ➤ Range of wavelength should be 400-900 nm ➤ Minimum 6 standard filters viz., 405 nm, 450 nm, 492 nm, 562 nm, 595 nm, and 660 nm should be pre-installed in the equipment. There should be option for installing minimum 10 filters ➤ Repeatability should be around CV< 1.5% and stability should be around $< \pm 0.003$ Abs ➤ The system should be compatible with 3 types of vibrational plate function which should be adjustable in the range 0-255 seconds <p>Note:</p> <ol style="list-style-type: none"> a. The vendor / supplier should submit the brand authorization certificate and documentary evidence of previous experience of successfully supplying and servicing the same kind of products to at least 5 nos. of reputed research organisations preferably within the same geographical region. b. There should be a minimum 3 years of warranty against all manufacturing defects from the date of installation. 	
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**List of Instruments selected for purchase A-
Faculty of Science (Forensic Sciences) Assam
down town University**

Sl. No.	Name of Equipment/Instruments	Detailed Specifications	Quantity Required
1.	Fluorescence microscope	<ul style="list-style-type: none"> ➤ The system should include independent adjustable-intensity LED illuminators of with a minimum lifetime of 40,000 h. ➤ The system should have a condenser with working distance of 60 mm or better. Condenser with a minimum 4-position turret will be preferred. ➤ The system should simultaneously accommodate at least three fluorescence LED light cubes with filters (Ex/Em): DAPI (360/447 nm), GFP (470/525 nm), and RFP (531/593 nm) along with one for bright-field. ➤ The system should have a minimum of 4 objectives viz., 10x, 20x, 40x and 60x fluorite objectives, with optional 5 position objective turret to accommodate upto 100x objectives. ➤ The system enables the capture of images in epifluorescence, transmitted light (bright field and phase contrast) and color. ➤ The system should have an integrated high-sensitivity monochrome CMOS camera with a minimum of 3 MP with 3.40 µm or better pixel resolution. ➤ It should come up with a minimum of 10 inch HD or color monitor or equivalent data handling system. ➤ The system should have in built software with confluency measurement, Time lapse Imaging/movie captured, along with optional Automated and manual cell counting, Z-stack capability, histogram, annotation etc. ➤ The system with optional feature of automated focus with Z-plane single-step accuracy at least 0.15 µm or better. ➤ The system should include a larger display for direct focusing sample, a dedicated CMOS imaging interface with monitor controlled though an advanced processor with sufficient internal memory of at least 100 GB for documentation purpose and cloud storage. ➤ The system should be able to sequentially acquire a transmitted light or phase contrast image and at 	01 Set

least two/three fluorescence images with a single mouse click and automatic overlay.

- Warranty: A minimum of 1 year onsite warranty (Preferable will give those, who will provide maximum warranty).

2.	Upright Trinocular-microscope with camera	<ul style="list-style-type: none"> ➤ Microscope Stand: Upright Microscope with 4 position Nosepiece, Trinocular Head and camera attachment 6 ➤ Contrasting Method: Brightfield ➤ Illumination: LED illumination ~3W white-light, ~3200K, lifetime ~25000 hours <ul style="list-style-type: none"> ▪ Homogeneous field illumination 20mm or better ▪ Microscope can perform plug-on swiveling mirror ➤ Optical system: Color corrected Infinity optics ➤ Trinocular Tube: Binocular Phototube with Viewing with 25-30° angle and field of view 18-20mm with 50:50 light distribution (Eyepiece : camera) or better. Siedentopf "up and down" position for 2 different viewing heights, With Interpupillary Distance continuously variable from 45 to 75 mm by asymmetric folding of the binocular part or better. Tube is secured against dropping by special dovetail. ➤ Eyepiece: A pair of eyepieces with 10x magnification suitable for spectacle wearers with adjustable diopters and retrofittable eyepiece pointer is preferable. Eyepieces secured with setscrews against unauthorized removal ➤ Control Display: 5-element display on either side of the stand and long-life blue LEDs. This intensity display is well readable from several meters distance. ➤ Condenser: With Abbe condenser 0.9/1.25 or better ➤ Stage: Mechanical reckless stage with Long-lived stage surface with well-readable vernier and robust controls. Extremely stable stand to broad base and low center of gravity ➤ Nosepiece and objectives: 4-position nosepiece tilted back and objectives secured against unauthorized removal, supplied with high quality objectives of the Plan-Achromat or better class 4x/0.10 10x/0.25 40x/0.65 100x/1.25 ➤ Power: With power unit integrated into stand by way of a parking position with cable storage in the stand rear wall. Ergonomic shape for convenient, safe carrying. With Wide-range power pack with 	06 Set
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		<p>country-specific power cable With IEC adapter for conversion into a bench-top power pack With external unit that is easy to change in case of defect With Power of 100-240V and 50-60Hz</p> <ul style="list-style-type: none"> ➤ Carrying Handle: With carrying handle that is completely integrated into stand With ergonomic shape for convenient and safe carrying ➤ Anti-fungus treated optics: Must provide anti-fungus certification from manufacturer. ➤ Camera: Color CMOS sensor 5.04 Megapixels: 2592 (H) x 1944 (V) Pixel size 2.0 μm \times 2.0 μm Sensor Size : 5.2 mm \times 3.9 mm, equivalent to 1 / 2.8" (6.5 mm diagonal) USB 3.0 Type-A for Wi-Fi adapter or flash drive Ethernet (RJ45) for router connection to be connected with wifi via USB wifi adapter ➤ Software: Software to control and acquire images through connected and compatible microscopes. It should be able to capture, white balance, select resolution and do the annotations. The software should have options to capture JPEG+ OEM or tiff+OEM format simultaneously. It should be able to adjust the display. ➤ Computer: Branded Computer: Windows 10 Professional OS, with processor i-5, 4 GB RAM, 1 TB HDD, 1GB Graphics card, screen color 21", keyboard, mouse, UPS. Warranty A minimum of 3 years warranty For seamless functionality all the hardware and software should be from single OEM Only. System should be ISO and/or European CE Certified. ➤ After Sales Support: After Sales & Service Support available from Guwahati is preferable. ➤ Warranty: A minimum of 1 year onsite warranty (Preferable will give those, who will provide maximum warranty). 	
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<p>3.</p>	<p>STEREOZOOM MICROSCOPE</p>	<ul style="list-style-type: none"> ➤ Scope: Stereo Microscope with Camera for routine Screening Purpose of Documents / Physics Samples in forensics ➤ Optics: Apochromatic corrected zoom and front optics with parfocal corrected optics including camera attachment with 100:0/0:100 or 50:50 split for eyepiece and camera. ➤ Zoom range: Manually operable coded zoom 9:1 or better ➤ Magnification: 3x-110x or better with various objectives and 10X eyepiece combination ➤ Eyepiece: Eyepiece pair with 10x magnification and 23mm field of view with reticule 10mm/ 0.1 mm; ergonomic viewing angle 35 degree; Inter pupillary distance: 55 – 75 mm. ➤ Apochromatic Supplementary Objective lens: <ul style="list-style-type: none"> - 1x Magnification with working distance 120 mm or more - 2X objective with working distance 30 mm or more ➤ Resolution: Maximum resolution (with 10x eyepiece) : 250 lp/mm with 1x front optics and 500 lp/mm with interchangeable front optics of 2X objective. ➤ Light Base: LED Light Base for incident and transmitted light and 3-point Oblique illumination. Minimum 5500 K colour temperature 4- point ring light for high brightness, Transmitted light with centered LED for contrast enhancing integrated power supply: 100 - 240V, Dimension of Base: 300x250 mm or more ➤ Ring light: 4-point ring light for high brightness, for bright and uniform illumination, 5500 K or more colour temperature ➤ Spotlight: Spotlight illumination, 2-arm Gooseneck with 300 mm or more length, with Hi-Power LEDs, 5500K color temperature or more. ➤ Polarization: Polarization set for Ring light reflection should be added ➤ Dust cover: Microscope should be supplied with a dust cover. ➤ Integrated/ CMount Camera: • 12 megapixel or more CMOS color camera with USB Type C • Colour 12 bit or 8-bit with a frame rate of 50 fps or more • Camera should be provided with a suitable c 	<p>01 Set</p>
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		<p>mount/ integrated camera is also preferred. • Suitable Display system of minimum 27-inch LED / 4K HDMI • Separate PC with storage 2 TB and i7 processor and 32 MB RAM for data processing.</p> <ul style="list-style-type: none"> ➤ Software: •Software for basic measurement, calibrated measurement parameters such as length (Point to Point), Basic image processing tools (crop, resize, sharpening, colour adjustment, background filter, median, blur). Visual Comparison view. •Microscope, Camera, and software shall be from the same / single manufacturer for better synchronization. ➤ References and verifications: The bidder should produce at least 5 nos. of previously executed service contracts with copies of these reports enclosed (not the installation reports) and minimum 5 nos. of user satisfactory certificates for similar systems from reputed Govt. users preferably from the NE region should be submitted. ➤ After Sales Support: The bidder should have OEM Certified trained engineer and service centre in Guwahati/Assam for an immediate after sales support to be provided within 72 hours of the service call and should provide the documentary evidence of the same. ➤ Warranty: A minimum of 1 year onsite warranty (Preferable will give those, who will provide maximum warranty). 	
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Terms and conditions

- 1. Price:** Price includes import duties, taxes, and fees if any (a) with transportation charges and (b) insurance. Prices quoted should be up to FOR Assam down town University (AdtU). Customs clearance and delivery should be free of charge at AdtU.
- 2. Quotation Instruction:** Please raise the quotation in duplicate in favor of the Registrar, Assam down town University (AdtU) and submit it to the Registrar, AdtU with the indent reference number. For each equipment give a separate sealed quotation specifying the advertisement no. and instrument name in the cover. Quotation submission last date is specified in the published advertisement. The hard copy of the quotations should be submitted to the specified tender drop-box of the University (near A block of AdtU).
- 3. Delivery Schedule:** Within 4 weeks of receiving the purchase order and/or any advance payment (if applicable). Goods and supplies must be delivered to the AdtU campus and installed.
- 4. Part shipment:** Not allowed.
- 5. Warranty:** A minimum of one-year onsite warranty from the date of installation should be provided. If the warranty period is longer (i.e. more than one year) after matching all other details, preference should be provided.
- 6.** Prospective vendor/supplier are required to furnish their comprehensive profile, inclusive of authorization certificates, service track record, tax filing documentation, service feedback, and related credentials, in conjunction with their quotation submission.
- 7.** The vendor / supplier should submit documentary evidence of at least 5 nos. of previous successful installation of similar equipment in the reputed Research Organizations of North East India and details of service person based in North East (details with Name, mobile no and location) need to be provided.
- 8.** AdtU has the right to choose the instrument based on specification even if it is not L1.