



भारतीय कृषि अनुसंधान परिषद
उत्तर पूर्वी पर्वतीय कृषि अनुसंधान संस्थान
उमरोई रोड, उमियम (बड़ा पानी)
मेघालय

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
ICAR Research Complex for NEH Region
Umroi Road, Umiam-793 103, Meghalaya



Tel.No. 2570572
FAX No. 2570355

No. RC(S) 123/2014

Dated Umiam, the 19th January'2015

OPEN TENDER

Sealed bids are invited for procurement of **Scientific Equipments/ Instruments** from the reputed registered firms/ manufacturers/ authorized dealers by ICAR Research Complex for N.E.H. Region, Umroi Road, Umiam, Meghalaya. The detailed specifications of the items & terms & conditions, etc are given below:-

- 1. Cost of Tender paper of Rs. 1,000/- (Rupees one thousand) only** (Non – refundable) to be deposited in the favour of the Director, ICAR Research Complex for NEH Region, Umiam – 793103 by means of Demand Draft/ Banker's Cheque, etc., payable at SBI, ICAR Complex Branch, Barapani. Non – submission of the cost of Tender paper shall lead to non – consideration of the Tender.
- 2. Separate quotations must be submitted for individual items.** Every quotation should consist of two Bids- The techno-commercial bid (Bid 'I') and the financial bid (Bid 'II'). Both must be submitted in two separate envelopes to be sealed and put in a single main cover. The outer main cover should be super scribed as **"TENDER NO. RC(S)123/2014 dated 19th January, 2015 for procurement of Scientific Equipments/ Instruments, under DBT – NER Centre for ADSAHD, Animal Health Division, I.C.A.R RESEARCH COMPLEX FOR NEH REGION, UMIAM"** and addressed to **"THE DIRECTOR, ICAR RESEARCH COMPLEX FOR NEH REGION UMIAM, MEGHALAYA-793103"**. The Bidding Firm should give their complete address on the bottom left corner of the Main Cover. **The Cost of the Tender as well as the Earnest Money along with all other Technical Details should be mandatory kept in the Technical Bid only. The Financial Bid should consist of the Rates, their detailed break –ups, etc. Non-compliance of this shall lead to non-consideration of the Bid.** All Tenders should be sent by Registered Post. Tenders to be handed delivered should be put in the Tender box, kept in the office chamber of CAO, ICAR Research Complex for NEH Region, Umiam, Meghalaya-793103 not later than **12:30 P.M. on 12th February, 2015**. Tenders received after the due date and time shall not be considered under any circumstances.
- 3. The rates quoted should be up to ICAR Research Complex for NEH Region, Umiam, Meghalaya, (as per the details) for the mentioned items.** The rates must be valid for at least for 1(one) year from the date of quotation.
- 4. Price quoted must be given per unit and must be all inclusive, including packing, forwarding, Delivery charges, Taxes, VAT etc., as may be applicable.**
5. Attested copy of the up to date sales tax and income tax clearance certificate (if any) from the authority concerned should be submitted with the quotation.
6. Furnishing of related documents like detailed specifications, technical literature, brand name, model and make, catalogue, authorization letter, Dealership Certificate, price list (if any) etc. is mandatory, failing which the quotation shall not be considered. Dealership certificate/Agency Certificate for the manufacturer/ manufacturing firm should be enclosed if the rates are quoted by the Dealers/Agents.
- 7. The supply is effected at DGS&D rate contract, wherever is applicable.** The rate should be quoted for list of items as per the tender document.
8. The Buyer shall not be responsible for payment of transit insurance charges.
9. Payment shall be made on actual delivery in good condition and successful installation and demonstration (which should be free of cost and must be completed before payment).
- 10. (a) In case of imported goods, the price may be quoted in foreign currency and import will be on FOB basis.** However, custom clearance, Inland freight etc. will be the responsibility of

the supplier and no separate charges will be paid for that, however, custom duty exemption certificate shall be provided. The supplier should inform well in advance for sending these papers. No demurrage charges will be paid. If the supplier desires, rate in corresponding Indian currency may be quoted. It will be at the discretion of the authority of ICAR Research Complex for NEH Region to accept Indian or Foreign currency prices.

- (b) In case of any custom duty charge, applicable as per Govt. of India's Notification, the same may be paid by the firm which will be reimbursed to the Indian Agent (who should be a registered firm and with DGS&D immediately, subject to the condition that the bill of entry in original along with all relevant papers are submitted immediately, after custom clearance and installation and demonstration of the items. Installation and demonstration should be free of cost.
 - (c) **The import & payment will be made by means of Foreign Bank Draft/ Site Draft in case of foreign imported goods.** Performance Bank guarantee of 10% FOB value valid till the end of warranty period should be submitted before the release of the security deposit. All bank charges outside and inside India shall go to the beneficiary's account. Performance bank guarantee of 10% FOB value, valid till the end of warranty period, should be submitted before the release of the security deposit. All bank charges outside and inside India shall go to the beneficiary's account. Draft making charges would go to the beneficiary's account and a scanned copy of the draft, if required, can be sent to the Indian agent by post. Draft would be handed over after successful installation and demonstration which should be completed within 45 days from the date of draft and submission of all documents like bill of entry etc.
 - (d) All imported items should be delivered up to destination i.e. all the import should be free of inland freight charges, insurance etc.
 - (e) **Indian Agency Commission rate and amount should be clearly specified as per rules. IAC, wherever applicable, will be paid in Indian Currency only.**
 - (f) In case of delay in supply, penalty will be imposed @2% per week, subject to a maximum of 10% of the FOB value
 - (g) Indian Agents quoting on behalf of their principal must be registered firms with DGS&D .They are also requested to provide necessary authorization letter from their principal along with the quotation.
 - (h) **ICAR Research Complex for NEH Region, Umiam, Meghalaya, being a Scientific and Research Organization, is exempted from payment of Excise Duty (Certificate to this effect will be provided).**
11. **All Bidders should mandatory give their current, PAN Card No., TDS& other Bank A/C details to enable the office for releasing the dues via e- payment basis.**
 12. **The tenderers [except those who are registered with the Central Purchase Organization & National Small Industries Corporation (proof should be mandatory enclosed)] shall have to deposit Rs.20,000/- (twenty thousand) of the quoted amount (for indigenous as well as for foreign items quoted in foreign currency, equivalent Indian currency may be deposited) in the form of Demand Draft/ Banker's Cheque/ Bank Guarantee, valid for 6 (Six) months, drawn in favour of the Director, ICAR Research Complex for NEH Region, Umiam, Meghalaya, payable at Barapani, as a bid security, along with the quotation. Non submission of the Bid Security with quotation shall make the quotation/ bid liable to be rejected.**
 13. Performance Bank Guarantee is required for all indigenous items also. For items less than Rs.50, 000, the amount should be 5% of the actual cost of the equipment and for items more than 50,000.00 the amount should be 10% of the actual cost of the equipment. The bank guarantee should cover the entire guarantee/ warranty period which should be of at least one year duration.
 14. The selected tenderers must complete the supply/ installation/ demonstration within the stipulated time limit mentioned in the supply order. In case, the firm fails to execute the supply within the time limit, the bid security would stand forfeited and supply order shall be cancelled.

15. The guarantee/ warrantee should be from the date of installation. All guarantee/ warranty services should be attended within a maximum limit of 15 days, failing which, proportionate deductions from the security deposit may be made at the discretion of the Institute.
16. **The Firm/ Agency run by the Non-Tribal should produce Trading License issued by the KHADC at the time of awarding the Contract.**
17. The complete details regarding the Institutions/ Corporations/ Bodies, etc. where the Firm/ Dealer has made the supplies during the last 2/3 years should also be furnished, along with the supply orders.
18. The Bidders should mandatory provide their full Bank Details, PAN Card No. , IFS code No., and TDS so as to ensure e-payment to them directly on satisfactory completion of the Supply.
19. The Director, ICAR Research Complex reserves the right to reject any tender in part or full, without assigning any reason thereof.
20. Legal jurisdiction for all disputes shall be within the purview of the Shillong Court.
21. **All bidders shall give an undertaking that they fully and unconditionally agree to abide by all the terms and conditions which, if needed, may be modified at the discretion of the Competent Authority, in supply order, for which confirmation from the supplier shall be taken. Non submission of the undertaking may lead to rejection/ non-consideration of the tender.**
22. **The bidders should mandatory sign on every page of the Tender Document, which would show their unconditional acceptance of all the terms and conditions of the Tender Document.**
23. **Items should be supplied in time and with FOR destination (Umiam).**
24. Tenders shall be opened on **12th February, 2015 at 2:30 pm**, ICAR Research Complex for NEH Region, Umiam, Meghalaya. Interested bidders may attend the opening.
25. If the above mentioned closing /opening day of the tender happened to be non – working date due to Bandh/Strike as any other reasons, the tender will be received & opened on the following working day at the same time except on the 2nd (second) Saturday.
26. Other terms & conditions, as may be decided by the Competent Authority from time to time, depending upon the condition & requirement of the supply. The intimation in this regard, shall be provided well in advance & the bidder/ supplier shall be bound by the said terms & conditions.
27. For any query/ clarification, the undersigned may be approached at:
Contact No.: 0364-2570363 (Tel- Fax)
E-mail : **kcjoshiicar@yahoo.in/icarstore@yahoo.com**

Sd/-S. V. Ngachan
Director

TECHNICAL SPECIFICATIONS:

| Sl. No. | Item code no. | Item | Specification |
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| 01. | ADSAH D- 01. | WATER PURIFICATION FOR TYPE II APPLICATIONS: | <p>System should produce Type II water directly from tap water feed.</p> <p>System should contain inbuilt prefiltration containing 0.5um filter, activated carbon and polyphosphate granules.</p> <p>System should include reverse osmosis with conductivity sensors before and after the membrane to ensure the quality of purification. Reverse osmosis should have a maximum water recovery of upto 20%.</p> <p>To reduce the consumable replacement, the water system will include an automatic regenerative EDI (Electro Deionization) module that does not require softening pre-treatment.</p> <p>Electro -Deionization cartridges with carbon beads at cathode for maintain PH.</p> <p>To ensure on-time reordering of the pre-treatment consumables, the system should have automatic warnings and alarms regarding the water quality.</p> <p>Should have option for connecting to online tap water connection in future.</p> <p>Product water quality Resistivity : 5Mohm.cm @ 25° C till 15Mohm.cm @ 25° C TOC : <30 PPb Product water delivery : 3 Lt/hr Bacteria < 10 cfu/MI</p> <p>The System should be quoted with proper prefilter & Iron Removal Filter. Both of these have to be provided by the same company who manufactures the water System.</p> |
| 02. | ADSAH D-03. | High speed preparative centrifuge ($\geq 25,000$ rpm). | <ul style="list-style-type: none"> • Should have maintenance-free induction drive and Motor driven lid lock. • Should have microprocessor with Splash Proof large LCD display of pre- set & actual for Speed, RCF, Temperature & elapsed time (timer) etc. • Should have automatic rotor identification system with over speed protection & correction. • Should have active imbalance-identification and -cut off. • Acceleration time to maximum speed should be less than 1 min at Max load and a deceleration time of less than 1 min with the standard 24/30 x 1.5/2 ml rotor but has option to accelerate and decelerate gently for sensitive samples using soft function. • Noise level should be under 60 dBA at max. speed |

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| | | | <ul style="list-style-type: none"> • Should have the option for selection of speed in both rpm and g-force. • Should have 10 acceleration and deceleration rates with storage of up to 99 runs (program memory). • Pre-selection of the running time from 30 sec to 99 h 59 min or continuous. • Pre-cooling program arrangement for 'fast cooling', Standstill cooling. • Program memory to store 0- 99 (100) complete centrifuge runs • Quick-key for short runs. • Centrifuge should conform to CE-requirements • Should be manufactured according to international safety regulations, i.e. IEC1010. and 1010-2 standard • Max. speed : 30000 rpm • Max. RCF : 65390 x g • Max. volume : 6 x 250 ml • Temperature range : - 20°C to +40°C in steps of 1°C. • Should have the option for interchangeable fixed angle and swing out rotor. • The original quotation should have the option for at least two free rotors. • A suitable 10 KVA voltage stabilizer should be offered FOC. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be minimum 2 years after the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 03. | ADSAH D-04. | Micro-plate Multimode reader. | <ul style="list-style-type: none"> • A single unit combines with absorbance (DNA/RNA), ELISA plate reading and protein estimation facilities with the flexibility to upgrade in future. • Should provide unlimited wavelength selection and scanning, and thereby allows both spectral analysis and measurement at any single wavelength and scanning at range of wave length. • It should be useful for direct DNA, RNA and protein quantitation, ELISA assays, Enzyme kinetic studies etc. • Detection limit for DNA/RNA: 0.1-1.0 ng/microlit. • Plate types: 6 – 384-well plates • Cuvette type: 1-4 cuvette places • System should be capable to low volume Quantification tool for DNA/RNA (1-2 ul). • Wavelength selection: Double dual monochromators • Wavelength range: 200 – 1000 nm • Bandwidth: 5 nm • Light source: UV - Xenon flash lamp • Linear measurement range: 0 – 4 Abs • Measurement modes: Endpoint, kinetic, spectral scanning with all detection technologies. • System should be provided with a dedicated PC with all the necessary accessories. <p><u>Software</u></p> <ul style="list-style-type: none"> • A powerful Software, which allows easy assay optimization, |


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| | | | <ul style="list-style-type: none"> • Flexible data handling and convenient report formatting. The feature should make the assay setup highly visual, flexible and the workflow logical and easy to follow. The software should be compatible with a research edition for scientists working in life science research. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be minimum 2 years after the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 04. | ADSAH D-05. | Gradient PCR thermal cycler. | <ul style="list-style-type: none"> • The system should be 0.2 ml independent control Thermal Cycler with separate peltier blocks to provide independent temperature zones. • The system should be Accessible by multiple users. • It should allow up to 3 experiments to be run simultaneously and completely independent of each other without interference. • The system should have flexible block configuration, Different blocks can be fitted into the base module of the system. • Each block to accommodate 16 wells and having the ability to set up PCR with a specific temperature differential of up to 5 degree centigrade between blocks. • On board Tm calculator facility to approximate the optimal annealing temperature. • The system should provide for Standard and Fast run modes in a single instrument with the ability to use 0.2ml PCR tubes or 8-well strips etc. • The system should support PCR volumes ranging from 10 to 80 microlitre. • Mouse or stylus free navigation capability with wide color touch screen TFT LCD for easy intuitive graphical user interface programming and should have option to operate 3 programmes simultaneously. • block ramp rate should be 6.00°C/sec • Sample ramp rate 4.40C/sec • Temperature accuracy should be $\pm 0.25^{\circ}\text{C}$ (35–99.9°C) • Temperature range should be 0°C to 100.0°C • The system should allow easy product updates via USB port. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Minimum warranty two years after installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 05. | ADSAH D-07. | Gel documentation system with PC and soft wares | <ul style="list-style-type: none"> • A table top compact system attached wit PC for documentation. • Useful for documentation and analysis of different types of gels, including agarose and acrylamide nucleic acid gels stained with various dyes, such as ethidium bromide, SYBR® Green, SYBR® Gold, SYPRO® – 500, FLSC - 500 or protein gels stained with conventional dyes. • System should include a multi-image light cabinet, 8 Megapixel digital camera, a fast computer (minimum 300 GB Hard Disc, Pentium 4 with 2 GB RAM) with 1 KVA UPS and 3 in 1 Laser printer. • The light cabinet should be a convenient tabletop chamber with an UV |

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| | | | <p>transilluminator and should have high and low level illumination facility. Above this transilluminator, there should be a transilluminating EPI white platform, which may be folded into the top, when using the UV. Light from both of these sources (UV and EPI white) can be utilized directly, or as reflected light.</p> <ul style="list-style-type: none"> • Filter wheel should have flexibility of at least 5 different filters. • The software loaded into the system should be latest version and versatile in use. • The system should be operated entirely from the computer, from choosing the light source to changing the filters and acquiring the photograph. The software should help in the adjustments of the camera parameters. The analysis tools should provide molecular weight calculation, Rf determination, 1-D lane densitometry, 2-D spot densitometry, quantitative PCR, microtiter plate reading, object distance measuring, gel scoring, automatic colony counting etc. The analysis tools should be versatile that may also be able to perform phylogenetic analysis of nucleic acid fragments from gels containing related genetic polymorphisms from studies using different genetic distance parameters. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be at least 2 years from the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 08. | ADSAH D-08. | -86°C Upright Ultra-low freezer | <ul style="list-style-type: none"> • Total Capacity: 400 to 440 Lit • Fitted with at least 5" thick polyurethane foamed in place in the main body for maximum product protection • Should have minimum 4 stainless steel adjustable shelves • Should be coated with antimicrobial coating eliminates 99.9% surface bacteria within 24 hrs • Should have triple gasket seal for maximum protection against thermal intrusion • Should have separate sample port for easy access through wall • Should have heated pressure equalisation port with spring –assisted mechanism to prevent icing on the vent • Should have individual inner doors which can be opened independently to minimize sample exposure • May be fitted with caster wheels with adjustable lock • Should have at least two powerful 1 HP compressors operated at low speed for longer life • Noise level should be less than 60 dBA which ensures a quiet and pleasant working environment of laboratory • May have heater recycler technology allows efficient recycling of the heat generated by the system. • Must be supplied with a 10 KVA Servo Stabilizer FOC. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be at least 2 years from the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 07. | ADSAH | Cooling | <ul style="list-style-type: none"> • Microprocessor controlled Incubator Shaker with precise setting of |

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| | D-11. | orbital shaker | <p>agitation speed, running time & temperature</p> <ul style="list-style-type: none"> • Refrigeration should be through a hermetically sealed compressor uses CFC free refrigerant • Should have a wide variety of interchangeable platforms, flask clamps & test tube racks. • Should be offered with a platform for flasks and tubes. • Should be fitted with Intuitively programmed Keypad • Should have large, clearly visible LED character display presents a menu of function/status readouts including speed, running time, self-diagnostic indicators & temperature • Must be driven by unicentric heavy duty counter balanced drive with DC brushless motors and permanently lubricated ball bearings • Timer should be enabled for programmable shaking periods from 0.1 hr to 99.9 hrs. • Should have Acceleration /Deceleration Circuit and fitted with Audible & Visible alarms • Speed range may be 50-400rpm \pm 2 rpm • Temperature control may be 15°C below ambient to 60°C • Accuracy & Control: \pm 0.1° C at 37° C regulated by PI microprocessor feedback control with platinum RTD sensor • Heaters: Low watt density resistance type heaters • Shaking control : \pm 2 rpm • Ambient operating conditions: Temperature 10° C to 35° C. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be at least 2 years from the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 09. | ADSAH D-12. | Vertical Autoclave | <ul style="list-style-type: none"> • Capacity minimum 50 litres • Heater Capacity minimum 2KW • Inner and Outer Chamber should be made of Thick Gauge SS • Glass Wool insulation should be provided to arrest radiation of heat • Should have Thermostatic Control auto pressure cut off. • Should have analogue pressure gauge to show pressure of chamber • Should have heavy duty heating coil to give faster heating and long durability. • Door safety lock system, water-lacking protection, over temperature & over pressure auto-protection • Should provide minimum 3 additional gaskets FOC. • Power supply: 230v, 50Hz, Single phase supply • Should be supplied with minimum 2 Stainless Steel baskets. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be at least 2 years from the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 09. | ADSAH D-13. | Universal incubator | <ul style="list-style-type: none"> • Capacity minimum 160 litres • Temperature Range: +4oC to 60oC • Temperature Controller: Microprocessor based digital controller • Accuracy: \pm 1° C |

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| | | | <ul style="list-style-type: none"> • Inner wall should be made duly polished stainless steel • Outer walls may be made of epoxy coated steel • Should have solid door with viewing window • Should have forced air circulation • Should have heater for control of temperature • Should have automatic high temperature cut off • Must be fitted with SS mesh trays (minimum 4 no.) • Power supply: 230 V, 50 Hz, single phase <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none"> • Warranty should be at least 2 years from the date of installation. • Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
| 10 | ADSAH D-13. | Real Time PCR | <p>The system should be capable of applications such as Absolute quantitation; Simultaneous analysis of data for relative quantitation for 10 number of plates of 96 wells each; Multiplex-PCR upto 5 targets, allelic discrimination (SNP), Dissociation curve analysis, Pathogen detection and plus/minus assay using internal positive control. The normalization of reaction due to non-PCR related fluctuations such as pipetting variations should be possible by using ROX™ or any calibrated dye. A Peltier based 96x 0.1ml well thermal cycle Temperature range of 4 °C-100 °C is essential. Peak block heating rate of 4.5Deg C/Sec or more. Reaction volume 10-30 µL and should use Universal thermal cycling conditions. Standard transparent 96-well plates or individual 0.1 mL transparent PCR tubes or 8 strip tubes compatibility. Run time of less than 40 minutes in Fast Mode and less than 2 hrs in Standard Mode Six independent Peltier Block to provide six independent temperature zones to run six different assays with varying annealing temperature at the same time. Each block having the ability to set up PCR with specific temperature differential of up to 5 degree centigrade between blocks and 25 Deg from one end to another. The excitation by LED light source with a > 10 years lifespan and detection by Photodiode. System must collect data for all filters for all wells regardless of plate setup. System should be capable for detection of 7 dyes SYBR Green I , FAM ,VIC, JOE, NED, TAMARA and ROX on a single plate The data collection and instrument control software should provide multicomponenting algorithm for de convolution of multiple dye signal with minimum cross talk. It should be possible to alter the plate setup after the</p> |

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| | | | <p>completion of run. Licensed full version software for primer and probe design must be included in the supply. System should be an open platform enabling use of various chemistries without hardware change. It should be standardized for Taqman-MGB Probe based 5' Nuclease Assay and SYBR Green Chemistry, to be set-up on single plate with seamless switchover during the run. Pre-validated and functionally tested Taqman Gene Expression Assays as well as Taqman SNP Genotyping Assays should be readily available . At least one set of Taqman Assay , inclusive of primer Minor Groove Binder probe and Taqman Master Mix for gene expression should be quoted. Consumables such as master mix, plastic wares- strip, plate with cover, filter tips of different range for 1000 reactions. Vortex mixture to mix PCR reagent. Spin win for tube and plate. Warranty for 3 years. Online UPS for 2 hrs bake up Quoted price should be FOR destination</p> |
| 15 | ADSAH D-13. | Inverted microscope with fluorescence and imaging system | <ol style="list-style-type: none"> 1. Inverted Microscope stand for transmitted light LED illumination; 5W LED illumination with up to 20 years life cycle (40 working hours / week), stabilized power supply 110 – 240V/ 50 – 60Hz, Automatic intensity adjustment of illumination to phase contrast and brightfield, 2 hour auto-off for enhanced safety and extended life cycle, Illuminated on / off switch, Constant color temperature, no flash or color changes 2. Contrasting technique – transmitted light brightfield, phase contrast// RL – Fluorescence 3. Condenser with 80 mm working distance with N.A. 0.30 4. Object guide with an adjustment range (x-y) of 126 x 83 mm with Universal Holding Frame for Petri dishes with diameter 24 mm up to 68 mm and slides with a length up to 120 mm. 5. Plan Achromat Objective set 4x/0.10, 10x/0.22, L20x/0.30, L40x/0.50 // eyepiece pair 10x with 20 mm. field of view or better 6. Solid State Fluorescence Light Source - illumination device for Fluorescence microscopy with slots for up to 5 different LED Modules. With Touch Control Panel & Power supply. Complete with 3 different LED modules for 365 nm, 470 nm & 530 nm. 7. Filter sets for UV(340-380nm), Blue(450-490nm), Green Excitation(520-560nm) (DAPI, Acridine Orange & FITC) with further different filter sets with respective LED Modules, 8. Fluorescence Filter cube 365nm, excitation filter: 360/40, emission filter: 470/40, dichromatic mirror: 455 |

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| | | | <ol style="list-style-type: none"> 9. Fluorescence Filter cube 470nm, excitation- filter: 470/40, emission filter: 525/50, dichromatic mirror: 495 10. Fluorescence Filter cube 530nm, excitation filter: 525/50, emission filter: 620/60, dichromatic mirror: 570 11. Full metal Fluorescence Illuminator - with 5-position filter cube turret, with centerable aperture and field diaphragms, with 3 switchable neutral filters N2, N4 and N16 for intensity reduction, and light stop. <p>12. Digital Camera</p> <ol style="list-style-type: none"> 13. High-resolution scientific (dedicated for microscopy use) Microscope Camera with Software // stand alone operation without any PC should be possible // High definition live image 1920x1080p, 30fps // JPG images with max. 1824x1368 pixels, 2.5 Mpixels // MP4 movie clips with max. 1920x1080 pixels, 2Mpixels // Camera control via computer (PC mode) or via remote control RC2 (HD mode), switchable // Capture of JPGs or MP4s directly to SD card // Display of images or playback of movie clips directly on high-definition screen, without using a PC; to be offered with proper C-mount 14. Suitable & branded latest (DELL / LENOVO / HP) PC workstation 15. Microscope, Scientific Camera & Software must be from same manufacturer for best compatibility & service 16. voltage stabilizer (With specification and price separately) 17. Warranty for 3 years <p>Quoted price should be FOR destination</p> |
|  | ADSAH D-13 | Water Bath/dry bath Shaker | <ol style="list-style-type: none"> 1. Heating, mixing and cooling in all common vessel and plate formats from 5 µl to 50 mL 2. Timer ; 15 sec to 99.30 hour, continuous 3. Cooling Rate : Max. 2.5°C/min between 100°C and RT 4. Interfaces : USB Interfaces 5. Heating Rate : Max. 6°C/min 6. Temperature Range : Min. 15°C below RT, max. 100°C 7. Mixing and Vortexing radius : 1.5 mm 8. Mixing Orbit : 3 mm 9. Mixing Frequency : 300 – 3000 rpm 10. Max. speed : 3000 rpm 11. Temperature Accuracy : Max. ± 0.5°C at 20-45°C 12. Temperature Settings : 1°C / 100°C 13. Smart Blocks for : Plate, 1.5/2.0 mL, 5 mL, 15ml, 50 mL tubes/flask 14. Should be supplied with all consumables 1000 each. |

| | | | <p>15. One Spinwin Mini Centrifuge machine to spin down small volume.</p> <p>16. Warranty for 3 years.</p> <p>17. Quoted price should be FOR destination</p> | | | | | | | | | | | | |
|--------------|------------|---|---|--------------|----------|----------------------------|-------------------------|----|----------|-------------------|----------------|----|----------|-------------------|----------------|
| 13 | ADSAH D-13 | Liquid Nitrogen Containers/Cryocan | <p>Cryogenic containers, easy to handle with very low evaporation rate (capacity of 35 Liters & 20 Liters)</p> <p>Dewars with vial storage Systems</p> <p>These Dewars with canister and rack storage systems offer long-term, cost-effective storage for cells, tissues, and other biological samples. Vial rack hold samples in either the vapor or liquid phase depending on the liquid nitrogen level. Temperatures are maintained from -184°C under the closed necktube core to -196°C at the liquid nitrogen level. Choose from seven different capacities and three different neck diameters to suit your storage requirements. .</p> <p>All models feature lightweight construction for easy handling. Ribbed-body design and high strength aluminum construction ensure durability.</p> <p>Each Dewar comes with racks to hold any combination of cryogenic vials, tubes, or sample containers. Rack handles are numbered for easy identification and trouble-free sample retrieval.</p> <p>LN2 level measure scale</p> <table border="1"> <thead> <tr> <th>Capacity (L)</th> <th>Nec k ID</th> <th>Included racks (L x ID cm)</th> <th>Outer dimensions x dia)</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>2.5 4</td> <td>Six (27.9 x 6.99)</td> <td>61.8 x 39.7 cm</td> </tr> <tr> <td>35</td> <td>11. 9</td> <td>Ten (27.9 x 6.67)</td> <td>66.8 x 47.8 cm</td> </tr> </tbody> </table> <p>Warranty 3 years</p> <p>Quoted price should be FOR destination</p> | Capacity (L) | Nec k ID | Included racks (L x ID cm) | Outer dimensions x dia) | 20 | 2.5 4 | Six (27.9 x 6.99) | 61.8 x 39.7 cm | 35 | 11. 9 | Ten (27.9 x 6.67) | 66.8 x 47.8 cm |
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| 35 | 11. 9 | Ten (27.9 x 6.67) | 66.8 x 47.8 cm | | | | | | | | | | | | |
| 14 | ADSAH D-13 | Sonicator | <p>The instrument (preferably imported) should be portable, should be able to disrupt yeasts or bacteria, homogenize cells from tissue cultures, to generate emulsions or dispersions, to disrupt macromolecules such as DNA with ultrasound. To ensure that samples are rapidly disintegrated – the isolation of DNA, RNA and proteins is made more efficient than when using hand homogenizers. In addition it should reduce the use of enzymes, which would otherwise be needed for lysing the cells. The energy input into the sample can be monitored with connection to a PC.</p> <p>It should allow fast sonication with a maximum of 100 W output. The application range should be between 10 µl with the 0.5 mm dia</p> | | | | | | | | | | | | |

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| | | | <p>probe and 750 ml maximum with the 10 mm dia probes. Using a flow cell, even larger samples should also be able to process.</p> <p>Technical data Operating frequency: 30 kHz Output: max. 100 W Output settings: 20 to 100 % Duty cycle (pulsed operation): 0 to 100 % Probes (dia in mm): 1; 3; 7, should be compatible with probe dia 0.5; Power consumption: 115 W Setting times: by means of an optional timer PC-connection: Optional, socket integrated Operating temperature: + 5 to + 40 °C Limits of humidity: 10 to 90 %, non-condensing Line voltage: 230 V/ 50 Hz, 115 V/ 60 Hz External dimensions: W x H x D 130 x 180 x 50 mm Weight (net): 0.75 kg</p> <p>Required probes:</p> <ol style="list-style-type: none"> 1. Probe dia 1 mm, approx. 80 mm long, For sample volumes (ml) 0.1–5; 2. Probe dia 2 mm, approx. 80 mm long, For sample volumes (ml) 2–50; 3. Probe dia 10 mm, approx. 80 mm long, For sample volumes (ml) 20-500 <p>Should be supplied with accessories like Stand, Timer and Sound Damping Chamber.</p> |
| 16. | ADSAH D-16. | Refrigerated table top centrifuge (≥16,000 rpm) | <ul style="list-style-type: none"> • Compact table top model • Max speed : 18,000 rpm.; Max rcf: 30,076 xg • Max Volume: 1600 ml • Temperature: -20 to +40°C, CFC free refrigeration • Single Knob operation • Should be maintenance free, noiseless, brushless induction motor drive • Should have pre-selection of run parameters in terms of rpm and rcf • Pre-selection of time up to 10 sec. to 99 hrs. 59 min or continuous • 20 curves of acceleration and deceleration • Storing of up to 60 run protocols • Free Programming of All Parameters • Magnetic rotor identification & imbalance sensor • Self-diagnostic error messages • Motorised lid lock and inter lock • Operates on 230V/50 Hz • With swinging bucket 8 x 1.5/2.0 ml, 48x0.2 ml single PCR tubes and 24 x 1.5/2.0 ml angular type of rotors including adaptors for 0.5 ml and 0.2 ml tubes. |

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| | | | <ul style="list-style-type: none">• A suitable voltage stabilizer 5.0 KVA should be offered FOC. <p><u>Warranty & Pricing</u></p> <ul style="list-style-type: none">• Warranty should be at least 2 years from the date of installation.• Price should be quoted FOR Barapani including all the handling and clearing charges and it is to be done by the supplier. |
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