
Institute of Bioresources and Sustainable Development (IBSD)
(Department of Biotechnology, Govt. of India)
Takyelpat, Imphal-795001, Manipur

Tender No. 6/133/2020-IBSD(R&D VERT-PUR)

DATED: October 20, 2020

Tender For Supply & Installation of Equipments for the Institute of Bioresources and Sustainable Development (IBSD), Imphal

The Director, IBSD Imphal, invites quotations for supply of equipments as per details at Annexure in double bid in sealed covers and so as to reach the undersigned on or before 5 p.m of November 10, 2020.

INSTRUCTION TO BIDDERS:

A) Two Bids:

01. Quotations will have to be submitted in two Parts i.e. a) Technical Bid and (b) Price Bid, in two separate sealed covers; and both these covers will have to be again put in to a single sealed cover. Also, the address of the firm submitting the quotation and the Officer to whom the quotation is addressed, must appear distinctly on both the inner sealed envelopes, indicating Price Bid/Technical Bid as may be applicable. Further, on both inner and outer sealed covers the following lines are to be written:

QUOTATION FOR SUPPLY & INSTALLATION OF (*name of the equipment*) FOR IBSD, Imphal

To,
The Purchase i/c
Institute of Bioresources and
Sustainable Development (IBSD)
(Department of Biotechnology,
Govt. of India)
Takyelpat, Imphal-795001, Manipur

From: M/s
Contact No.:
Email ID:

Each equipment should have separate envelope

NOTE: The bid documents are not transferable and the firm's seal and signature of the authorized official must appear on all the papers and envelopes submitted. Tenders must be submitted separately for each item. Combined tenders submitted for more than one item together will be summarily rejected.

02. In Technical Bid the vendor must provide the followings:

- (a) Details of the technical features of the offered equipment vis-à-vis NIQ specifications;
- (b) Standard technical literature on each of the items offered;
- (c) Dealership certificate on the offered products in case of dealers;
- (d) In case of foreign quote, the address of Principal/Manufacturer and their bankers' details should be furnished. The mode of dispatch should be by Air Post Parcel/ Ocean Freight/ Air freight (on competitive rate). The approximate dimensions of the packages and weight of consignment are to be indicated.
- (e) List of reputed organizations/Institutions, where similar orders have been executed (copies of the purchase/work orders will have to be enclosed);
- (f) Up-to-date sales tax clearance certificate/ GST Registration Certificate indicating also the TIN number of the firm will have to accompany the quotation to be submitted;
- (g) Details of nature and maximum period of warranty offered by the vendor. The firm should give at least 2 years extended warranty.
- (h) After Sales Service: The name and address of the nearest available authorized service centre to IBSD, Imphal should be stated in the quotation.
- (i) Dealers should undertake to provide expert qualified engineers for maintenance /support within 24 hours of receiving complaint.
- (j) The tenderer has to state in detail the electrical power/ UPS requirements, floor space, head room, foundation needed and also to state whether Air- conditioned environment is needed to house the system etc. and to run the tests, i.e. pre- installation facilities required for installation in technical bid.
- (k) The firm/ supplier should submit guarantee letter of the spares or related chemicals/kit etc. of the respective equipment that the same will be available for next 10 years.
- (l) Amount of Earnest Money deposit (EMD), in the form of Demand Draft only will have to be enclosed with technical Bid only.

03. In the Price Bid, the vendor must provide the followings:

- (a) Quantity, basic price (against item-wise details of specifications of each of the offered items);
- (b) Prices of each of the optional accessories, as required by NIT specifications and also may be relevant for an offered equipment, will have to be specifically stated in the quotation.
- (c) Packing & Forwarding Charge, if any (percentage of basic price or as lump sum)
- (d) Applicable tax
- (e) Freight & Insurance charge, if any {as percentage of (a) + (b) + (c) or as lump sum}
- (f) Annual maintenance contract (AMC) rate (after expiry of the warranty period) is to be clearly indicated-preferably in both comprehensive and non-comprehensive terms, *failure to which the offer may not be considered eligible even if it turns out to be at the lowest price*. Discount on all spares have to be specified during warranty period.

- (g) Installation & commissioning charge (Including Service tax), to be shown item-wise extra, if any.
- (h) In case, if the quote is FOR/ FOB basis, estimated insurance coverage charges may please be indicated.
- (i) CIF, Kolkata value both by Airfreight and Ocean freight.

04. Date & Time:

(i) Last date & Time for receipt of tender: **November 10, 2020**

(ii) Bid opening date: **2 pm of November 13, 2020**

TERMS & CONDITIONS:

(Please note that the term “both foreign & indigenous’ wherever mentioned means the term is applicable to both foreign & indigenous purchase)

01. **Rates:** Rates quoted for indigenous items should be on **F.O.R. IBSD Imphal**, on door delivery basis, (for import items please refer additional terms for imported goods at clause No.22 below). The equipment has to be delivered at IBSD, Imphal premises. Unloading the item from the transport is under the risk of supplier.

Note: *Vague terms like “packing, forwarding, transportation extra” without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected.* Bidders shall indicate their rates in clear/ visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates will be written in words will prevail.

02. Validity (both foreign & indigenous): Quoted rates must be valid for **120 days**.

03. Earnest Money Deposit: (both foreign & indigenous)

Refundable earnest money deposit, amounting to minimum 2.5% of the total quoted value (rounded off to the nearest thousand rupees) must be deposited as earnest money along with the “Technical Bid” by demand draft in favour of ‘**Director, IBSD Imphal** and payable at **Imphal**. The EMD of unsuccessful bidders shall be returned after award of contract. All tenders received without EMD shall be summarily rejected. EMD of the successful bidder will be released on submission of the Performance Bank Guarantee (PBG).No interest will be paid on EMD.

04. Performance Bank Guarantee (both foreign & indigenous): The successful bidder shall furnish an unconditional performance bank guarantee valid till 60 days after the warranty period from a scheduled bank

for 10% of the Purchase order value within 21 days from the placement of this order failing to which the contract shall be deemed as terminated (Applicable only to orders costing more than INR 5,00,000.00).

a) The vendor shall provide a certificate of Guarantee guaranteeing xxx (Name of the equipment) of the satisfactory operation of the components and against poor workmanship, bad quality of materials used, faulty designs and performance figures given by the Vendor.

b) The guarantee shall be operative for a period of 60days after the warranty period. The performance bank guarantee would be to the extent of 10% of the order value.

c) The vendor shall at their own risk/cost rectify the defects/replace the items supplied, for defects identified during the period of guarantee.

(d) While clause 4(a), 4(b) & 4(c) are applicable to all orders worth INR Rs 5, 00,000.00 or more, competent authority may take appropriate decisions on exceptional cases.

05.PENALTY FOR DELAYED DELIVERY (for both foreign & indigenous supplier): In the event of delayed delivery, installation & commissioning i.e. after the expiry of the period as agreed by both parties, the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 10% as detailed below:

@ 1% to one week

@ 2.5% upto two weeks

@ 5% upto three weeks

@ 10% for four weeks and above

For the purpose of this clause, part of the week is considered as a full week.

In case of delayed delivery, the Director of IBSD Imphal reserves the right not to accept the subject consignment.

06. In case of indigenous suppliers, the goods should be insured against theft, loss or breakage during transit and insurance charge should not exceed 1% of the cost of material supplied. The rates of sales tax, excise duty etc. (as applicable) should be clearly indicated. (Form C & D are not applicable to us.)

07. Pre-Installation (both foreign & indigenous): Pre-installation requisites (electrical/floor/space/air-conditioning etc.) if any should be invariably mentioned clearly. Installation/training will be the full responsibility of the supplier/Indian agent.

08. Short Shipment: If any short-shipment is noticed, the same will be arranged immediately with all charges to this effect to be borne by supplier/Indian agent.

09. Genuine pricing (both foreign & indigenous supplier): **Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with your offer.**

10. Concessional GST @ 5% will be applicable as per GOI norms for research institutes. In this regard, IBSD, Imphal will provide GST concession certificate (DSIR) to the successful bidder.

11. Delivery: a) delivery of goods at IBSD, Imphal, will have to be within 45 days from the date of the order.

a) **Safe Delivery of goods:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination the packing will be opened in presence of IBSD user/representative. The proper commissioning will be the basis for receipt in good condition.

b) **No part delivery/shipment will be allowed.**

12. Mode of Payment for Indigenous Purchase:

a) Payment for indigenous purchases will be within 45 days from the date of successful delivery and installation of goods at IBSD Imphal, generally through A/c payee cheque. In case payment is required by DD, the draft commission will be deducted from bill amount.

Note: Please note as per Organization's norms advance payment is not allowed for indigenous purchase

13. Late & delayed tender (both foreign & indigenous): Late & delayed tender will not be considered. In case any unscheduled holiday occurs on prescribed closing/opening date the next working day shall be prescribed date of closing/opening.

14. Conditional tenders not acceptable (both foreign & indigenous): Conditional tenders shall not be accepted on any ground and shall be rejected straightway. In other word, printed conditions mentioned in the tender bids submitted by vendors will not be binding on IBSD. All the terms and conditions for supply, payment terms, penalty etc. will be as those mentioned herein and no change in the terms and conditions by the vendors will be acceptable.

15. Specifications are basic essence of the product (both foreign & indigenous): **It must be ensured that the offers are strictly as per our specifications.** At the same time it must also be kept in mind that merely copying our specifications in their quotation shall not make the firms eligible for consideration. **A quotation has to be supported with the printed technical leaflets/literature and the specifications mentioned in the quotation must be reflected/supported by such printed technical leaflets/literature** model quoted/tendered specifications should invariably be highlighted in the leaflets for easy reference.

16. Enquiry during the course of evaluation not allowed: No enquiry shall be made by the bidders during the course of evaluation of the tender till the final decisions conveyed to the successful bidder(s). However, the committee/its authorized representative can make any enquiry/seek clarifications from the bidders. In such situation, the agency shall extend full co-operation. The bidders can also be asked to arrange demo of the offered items, in a short notice, as such the bidders have to be ready for the same.

17. Due to the pandemic COVID-19 situation, bidding parties may present during the opening of quotations either through videoconferencing or physically wherever possible. Parties may be invited during the meeting for any clarification, if required through videoconferencing.

18. The acceptance of the quotation will rest solely with the Director, IBSD Imphal, who in the interest of the organization is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reason.

19. Termination for default: Default is said to have occurred

- If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by GBP.
- If the supplier fails to perform any other obligation(s) under the contract.

If the vendor, in either of the above circumstances, does not take remedial steps within a period of 30 days after receipt of default notice from **Director**, IBSD Imphal (or takes longer period in spite of what IBSD may authorize in writing), IBSD may terminate the contract/purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, IBSD may at its discretion also take the following actions: IBSD may procure, upon such terms and in such manner, as it deems appropriate, good similar to the undelivered items/products and the defaulting supplier shall be liable to compensate IBSD for any extra expenditure involved towards goods and services obtained.

20. Applicable Law (both foreign & indigenous):

(a) The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of competent Court & forum in Imphal, India only.

(b) Any dispute arising out of this purchase shall be referred to the **Director**, IBSD Imphal, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an arbitrator, who should be acceptable to both the parties, to be appointed by the **Director**, IBSD Imphal. The decision of such arbitrator shall be final and binding on both the parties.

ADDITIONAL TERMS FOR IMPORTED GOODS:

In addition to above mentioned terms, the following terms will be applicable in case of foreign purchases:

21. Rates: Quoted rates should be in CIF/CIP Kolkata terms and charges to be stated in the following break-up

- (a) Ex-works value
- (b) + Documentation & handling Charge, if any
- (c) + Estimated Overseas Freight to be paid at actual against authentic documents and monetary receipt
- (d) + Estimated Overseas Insurance charge to be paid at actual against authentic documents and monetary receipt (in case the firm holds open insurance policy, the insurance certificate relating to the consignment will have to be provided).
- (f) Total CIP/CIF Kolkata value

22. Delivery:

- (a) Delivery of goods at IBSD Imphal, will have to be within 95 days from the date of issue of the Purchase order.
- (b) Supplier must take necessary steps for custom clearance at Kolkata. IBSD will provide necessary documents on request.
- (c) While transshipment will be allowed, part shipment will not be allowed.

23. After Sale Service: In case of imported items, foreign manufacturing firms should indicate facilities available for after sales service in India without which their offers are liable to be ignored. Detail address and contact number of local representative in India, without which the offers are liable to be rejected.

24. Country of Origin: While the country of origin will not be insisted, the same however will have to be stated in the original Invoice for payment through LoC.

25. LoC Amendment: LoC/FDD amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.

Price Schedule for Goods Being Offered From Abroad

Name of the Bidder _____

TENDER No. _____

1	2	3	4	5	6		7		8		9
Sl No.	Item Description	Country of origin	Unit	Quantity	Unit Price		Total Price (5x6)		Charges for insurance & transportation to port/ place of destination		Total Price (7+8) CIF
					FOB (named port of shipment)	FCA (named place of delivery)	FOB (named port of shipment)	FCA (named place of delivery)	Ocean	Air	

Note:

Total Bid Price in foreign

Currency _____ in words

(a) Indian agents name & address _____

Signature of Bidder

(b) Installation, commissioning & training charges, If any _____

Name
Business

(c) Cost of spares _____
Address _____

(d) The Indian agent's commission shall be paid in Indian Rupees only based on the Exchange Rate prevailing on the date of negotiation of documents in accordance with clause 22.1 of GCC.

(e) The cost of optional items shall be indicated separately

Price Schedule For Goods Being Offered From India.

Name of the Bidder _____
Tender No. _____

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	Item Description	Country of origin	Unit	Quantity	Ex-Works. Ex-warehouse, Ex-showroom off the shelf price (inclusive of all taxes already paid)	Total price Ex-Works Ex-warehouse, Ex-showroom off the shelf price (inclusive of all taxes already paid) 5x6	VAT & other taxes like excise duty payable, if contract is awarded	Packing & forwarding up to a station of dispatch, if any	Charges for inland transportation, insurance up to Lab./instt.	Installation Commissioning and training Charges, if any

Total Bid price in foreign currency _____ in words.
Signature of Bidder _____

Name _____

Business _____

Address _____

Note:

- (a) The cost of optional items shall be indicated separately
- (b) Cost of Spares _____

Bidder Information Form

- a) The Bidder shall fill in this form in accordance with the instructions indicated below. No alternations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm

Date: (of Bid Submission)

Tender No.: (insert number from invitation for bids)

Page 1 of _____ pages

1. Bidder's Legal Name:
2. In case of JV, legal name of each party:
3. Bidder's actual or intended Country of Registration:
4. Bidder's Year of Registration:
5. Bidder's Legal Address in Country of Registration:
(1) 6. Bidder's Authorized Representative Information Name: (Authorized Representative's name) Address: (Authorized Representative's Address) Telephone/Fax numbers: (Authorized Representative's Telephone/Fax numbers) Email Address: (Authorized Representative's Email Address)
7. Attached are copies of original documents of: (check the boxes of the attached original documents) Articles of Incorporation or Registration of firm named in 1, above , in accordance with ITB Sub-Clauses 4.1 and 4.2

Signature of Bidder _____

Name _____

Business Address

Manufacturer's Authorization Form

The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.

Date: (date of Bid submission)

Tender No.: (insert number from invitation for bids)

To: (Complete name and address of Purchaser)

Whereas

We (complete name of the manufacturer), who are official manufacturers of (type of goods manufactured), having factories at (full address of manufacturer's factories), do hereby authorize (complete name Bidder) to submit a bid the purpose of which is to be provide the following Goods, manufactured by us (name and or brief description of the goods), and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty in accordance with Clause 21 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: (signature(s) of authorized representative(s) of the Manufacturer)

Named: (complete name(s) of authorized representative(s) of the Manufacturer)

Title:

Duly authorized to sign this Authorization on behalf of: (complete name of Bidder)

Dated on _____ day of _____, _____ (insert date of signing)

BID SECURITY FORM

Whereas _____
(Hereinafter called the tenderer)

Has submitted their offer dated _____

For the supply of _____
(Hereinafter called the tender)

Against the purchaser's tender enquiry no. _____

KNOW ALL MEN by these presents that WE _____ of
_____ having our registered office at
_____ are bound unto _____ (hereinafter called the
"Purchaser")

In the sum of _____

For which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of _____, 20_____.

The Conditions of this Obligation are:

- (1) If the tendered withdraws or amends, impairs or derogates from the Tender in any respect within the period of validity of this tender.
- (2) If the tendered having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
- (3) If the tenderer fails to furnish the Performance Security for the due Performance of the contract.
- (4) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)
Name and designation of the officer

Seal, name & address of the Bank and address of the Branch

Performance Statement Form
(For a period of last 3 years)

Name of the Firm.....

Order Placed by (full address of Purchaser)	Order No. and Date	Description and quantity of ordered equipment	Value of order	Date of completion of delivery as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been installed satisfactory? (attach a certificate from the Purchaser/Consignee	Contact person alongwith Telephone No.,FAX No. and email-address

Signature and Seal of the manufacturer/ Bidder.....

Place:

Date:

Deviation Statement Form

- 1) The following are the particulars of deviations from the requirements of the tender specifications:

Clause	Deviation	Remarks (Including Justification)

Place:

Date:

Signature and Seal of the
Manufacturer/Bidder

NOTE:

- 1) Where there is no deviation, the statement should be returned duly signed with an endorsement indicating “No Deviation”.

Service Support Detail Form

Sl No.	Nature of training imparted	List of similar type equipments serviced in the past 3 years	Address, Telephone Nos., FAX Nos. and email address

Signature and Seal of the Manufacture/Bidder

Place:

Date:

ANNEXURE

LIST OF EQUIPMENTS FOR R & D VERTICALS OF IBSD, IMPHAL

Sl. No.	Name of the Equipment/Consumables	No. of Equipment
1.	<p>HPTLC with Automatic applicator, Scanner, Documentation system and auto development chamber</p> <p>-----</p> <p>Integrated HPTLC system for quantification, identification, finger printing and micro-preparative separations. High Performance Thin Layer Chromatography:</p> <p><u>HPTLC SOFTWARE</u> – New generation complete system & data acquisition, single software to link, control, integrate, manage the individual instruments for application, development, scanning and image documentation. Guides the user through chromatography steps. Numerous methods library available for internet download for lifetime. Client-server system for flexibility. Powerful database tracks individual samples and ensures data integrity. Automatic System Suitability detection and check. Built-in automatic back-up and restore tool for data. Produces a comprehensive GLP compliant analysis report with instrument, analyst, date, time, place, method parameters etc. and complete details. Communicates in both directions with instruments. Random and unique report ID given to each printout. Stores infinite number of methods and downloads them to instruments, when called for. Data security achieved through access control, customizable user Management, defined access levels to success. Safe database prevents accidental alteration / deletion. Essential for GLP & optional 21 CFR Rule 11 compliance and electronic data storage security and transmission.</p> <p>SEMI AUTOMATIC SPOT / BAND APPLICATOR</p> <p>5th Generation. Sprays sample to layer. Stand alone or System Manager Control. 4 mode applicator 1) Quantitative analysis 2) Micro-preparative chromatography (190mm band length & 500µl sample in one go) 3) Superimpose – int. std. or derivatization reagent in same method 4) in – situ clean-up (sample application at 110mm on y axis). Sample syringe – 100µl (for analytical work) 500µl (for micro-preparative work). Sample position on X & Y axis freely selectable. Automatic rate of sample dispensing. Method storage – 10 built-in or infinite through system manager. Method entry – Manual or download from System Manager. Can auto – test instruments (self-diagnosis).</p> <p>CHROMATOGRAM DEVELOPMENT CHAMBERS</p> <p>All glass, moulded, one piece, bubble free chamber for TLC/ HPTLC. Bottom divided into two equal halves with a sloping divider. Chamber top and bottoms (both outside the chamber and inside the two troughs) should be perfectly parallel to each other.</p> <p>Chamber ground finish on top for good seal and at bottom for perfect level. Heavy chamber to minimize effects of vibration. One-piece joint less moulded chambers prevent leakage and tough to handle while cleaning. Stainless steel rust proof lid with overhang to completely seal the chamber. Appropriate sizes for 20x20 cm, 20x10 cm and 10x10 cm plates.</p>	One

MULTIPURPOSE CHAMBER FOR METHOD DEVELOPMENT

Multipurpose Chamber for a) Method development b) Rapid screening of samples c) Horizontal development. Chamber comprises layer scraping module and development module. Uses 10 x 10 cm glass plates. Can run six mobile phases on one plate, side by side at the same time, with or without saturation. New method developed in 3 – 4 runs. With mobile phase creation guide. For screening, run same sample with 6 different mobile phases.

PLATE IMMERSION DEVICE FOR DERIVATIZATION

Uniform distribution of derivatization reagent due to controlled dipping. Suitable for 20 x 20 cm & 20 x 10 cm plates; Universal plate holder clamp; Dipping speed - 30 mm to 50 mm /sec., Variable dip time - 1 to 8 secs. & indefinite. Ribbed and narrow dip chambers for reduced volume of reagent. Battery operated. Complete with 20 x 10 cm dip tank & its lid.

MANUAL REAGENT SPRAYER

Glass reagent sprayer with spray head & 100 ml flask. Ultra-fine and uniform spray.

TLC / HPTLC PLATE HEATER

For in-situ derivatization and layer activation. Stain resistant ceran glass top; temp range 25 to 200°C. Uniform heating of plate. Digital display of set & actual Temp. display remains on as long as plate is hot. Upto 20 x 20 cm size plates.

CHROMATOGRAPHY VISUALISATION: UV CABINET

UV Cabinet, Model 4 Dual wavelength 254 nm + 366 nm with guaranteed minimum intensity, as follows: UV lamp at 17 cm distance. Short wave UV (254 nm) 1600, long wave (366 nm) 1000, Visible light (<400nm) 0.4. Full protection to viewer's eyes and skin from UV light for safety. High tech 50 kHz power supply for flickerless, instant illumination. Auto switch off after 10 min. Thermal sensor and tilt sensor built in for user safety.

TLC / HPTLC SCANNER WITH DATA EVALUTION :

System Manager controlled Scanner / Densitometer for automatic spectrum scanning for identity check as well as purity check; Automatic quantitative measurement by absorbance & fluorescence; All facility plate sizes acceptable; Reproducibility of positioning better than 50µm in Y direction & 100µm in X direction. Scan speed 100mm/sec @ 25µm resolution; Quick scan facility; Wavelength range 190-900 nm; Wavelength accuracy better than 1nm and reproducibility better than 0.2nm. Monochromator flushing by nitrogen; Data sampling rate – 4000 / sec; Special Macro optics for TLC & Micro optics for HPTLC. Apochromatic suprasil – fluorite lens system. Spectrum scan speed 100 nm / sec; Max 999 spectra / plate; Visible pilot slit image / scan compartment illumination with UV to check sample alignment with scan beam; D2, Hg, W lamps built-in. Self-diagnostic + Service dialog + Universal filter for fluorescence also built-in; scan slit size variable; bandwidth selectable 5 or 20 nm. 16 bit, 2 channel interface, 100mg per double conversion.

Data evaluation 32-bit software (latest version), Excellent S/N ratio. High reproducibility; Controlled by System Manager, Automatic / Manual data integration, Auto baseline correction. Spot check facility. 3D display with data storage and auto calculation of each peak at its λ_{max} . Sub-component evaluation. Calibration - single level, multilevel, linear / non-linear. limit test support. Track profile subtraction. Statistics CV / CI. Reproducibility check facility. Auto calculation of data from wts and dil. factors, Computer generated random no. for each report (GLP compliance). Lamp use tracking. 2 level digital user manual. Service Dialog + self-Diagnostics + Tutorial all built – in. Meets GLP. Optional IQ-OQ and 21 CFR Rule 11 certification.

ESSENTIAL SOFTWARE FOR SCANNER

Spectrum Scanning option
Scanner Quantification
Scanner Multi Wavelength

PROFESSIONAL TLC / HPTLC PHOTODOCUMENTATION SYSTEM under GLP:

Professional TLC / HPTLC Photo documentation System, System Manager Controlled, comprising:

Fully automated image documentation at 254nm, 366nm and visible light.

Illumination Unit, Industrial Camera and HPTLC specific software.

Illumination unit – with 254 + 366 nm UV + Visible light (from above & below the plate). Uniform illumination.

60 KHz supply for instant, flickerless illumination. Easy access for changing tubes & filters and PCB. Auto switch off. Total darkness. Viewing window to observe plate in UV. Safety - UV switched off if door opened.

Camera 48 bit, high resolution industrial camera head (2^{48} grey level resolution). Images of the highest quality. Fixed parameters for total reproducibility. True colours capture. Very linear response. Individually calibrated. Camera head is PC operated and does not have any controls. Image data and report through system manager software only, Tamper proof data.

HPTLC Specific Software – Automatic image optimization. Automatic exposure time to suit brightest zone within dynamic range of CCD. Full function annotation. R_f scale. Child image with or w/o ROI (Region of Interest) blow up. Auto image capture at 254nm and or 366nm and or white light. Raw data inaccessible to user. Spot application tool to detect faintest fractions. High speed data transfer USB 3.0. Control by System Manager. Options to process the image.

SOFTWARE FOR PROFESSIONAL TLC / HPTLC PHOTODOC SYSTEM (GLP) :

High Resolution Documentation software for IQ-OQ, performance check, clean plate correction, image averaging, image subtraction, white adjust and flat field corrections. Very useful to create the best possible image for evaluation.

	<p>Image comparison viewer software. Allows comparison of different tracks from different plates under GLP. A must for accurate comparison. Extremely user friendly. Can create artificial plate with relevant data.</p> <p>Enhanced evaluation option Chromatogram advance algorithms for quantitative evaluation for images. Very useful for chromatography quantification at 254nm, 366nm and visible light.</p> <p>Specifications should be confirmed from the website of the manufacturer.</p> <p>Good support from India is essential.</p> <p>Maintenance: A good team of service engineers, trained by the manufacturer is essential. Complete HPTLC CV should be within 2% analysis scanning. Detailed information of service engineers and their product training to be provided. AMC or CMC rates should be offered reasonably.</p> <p>Live product demo, with our samples is necessary. The same may be arranged at supplier's cost.</p> <p>Analysis support: Since we deal with complex samples, support for analysis should be given by the supplier by sending their application specialist.</p> <p>Equipment should be future proof and manufacturer is expected to offer upgrade whenever available rather than change models.</p> <p>Warranty period: 2 years desirable. After sales services must be described in detail. After sales support through Application Lab is very essential.</p> <p>Training: 3 levels – 3 days during installation. Subsequently at supplier's Application lab and in our lab. Please provide full details of after sales services staff and application lab.</p> <p>Demo of various specifications should be given by the successful bidder before placing order.</p> <p>A live demo nearby and analysis of our samples will have to be done by bidders at their cost.</p> <p>Please provide complete details of your customer support lab. in India and training charges, if any in the next three years after the installation.</p> <p>The winning bidder will have to prove compliance with specifications before placing order!</p>	
2.	<p>Liquid Chromatography - Quadrupole Time-of-Flight/ Mass Spectrometry (LC- QTOF/MS)</p> <p>Mass Spectrometer System:</p> <p>General: - We require state of art Mass-Spectrometry facility for studies of small molecule, metabolomics & natural product applications etc.</p> <p>It shall consist of- (1) Separation device, (2) Mass spectrometer, (3) Software (4) and required Accessories like Nitrogen generators, gases cylinders, Computer, vibration free tables, suitable chairs, online UPS with battery etc.</p> <p>ION SOURCE:</p> <ul style="list-style-type: none"> The instrument must be equipped with a High Performance atmospheric pressure ionization (API) technique. 	One

- MS should have dedicated ESI and APCI with better sensibility
- Positive and negative ionization capabilities must be included as standard on the instrument.
- System should have latest technology of ion focusing to the analyzer.
- De-solvation Temperature should be 500° C or Higher.
- Flow rate handling capacity for ESI and APCI modes 2ml/min or better without split.

MASS ANALYZER (High Resolution):

Mass Analyzer should be equipped with quadrupole analyzer and collision cell followed by equivalent high resolution mass analyzer/Time of flight mass analyzer system with the below mentioned capabilities:

- Quadrupole isolation range :100- 1000 m/z or better.
- TOF Mass Range **40,000 m/z** or better and 6000 amu or better for similar technology.
- System should have high capacity detector (preferably 10 GHz or more) to provide the highest sampling speeds and maintain high resolution across the mass range – even at low m/z region of the spectrum.
- Syringe pump or equivalent for direct infusion of samples.

INTERFACE: Simple interface for maintaining cleanliness of ion optics and capable of handling large batches of complex samples

COLLISON CELL: The instrument should be configured with a collision cell for maximum transmission of ions at fast data acquisition speeds with a minimum cross talk.

VACUUM SYSTEM: A fully protected air cooled vacuum system using turbo molecular pumps and rotary pumps with automated vent system

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ACQUISITION RATE: Minimum 30 Spectra per second in MS/MS mode for both DIA and IDA workflow or better 18 Hz per sec for equivalent technology

MASS RESOLUTION: The resolution of the instrument should be **more than 50,000 (FWHM)** or better. The specification must be demonstrated on installation and the data must be produced for evaluation and validation of the

	<p>claim</p> <p>MASS ACCURACY: Mass accuracy, internal Less than 1 ppm RMS or better</p> <p>Mass accuracy, external Less than 2 ppm RMS or better</p> <p>SENSITIVITY: Sensitivity, pos MS/MS quant Using the ESI probe in MS/MS mode reserpine 1 pg g on column S/N > 250:1 or better.</p> <p>The specification must be demonstrated on installation and the data must be produced for evaluation and validation of the claim.</p> <p>LINEAR DYANAMIC RANGE:</p> <p>Greater than four orders of magnitude for quantitative acquisition or better</p> <p>REFERENCE MASS INTRODUCTION: Capable of internal reference mass correction for MS and MS/MS operation without losing sensitivity standard has to be quoted. System should be capable of doing automatic calibration in MS/MS Mode.</p> <p>ACQUISITION MODES: Qualitative and quantitative expression in ESI and APCI. The software should be capable of data acquisitions whereby high and low collision energy data is acquired to provide fragmentation data for all detectable molecular ions in a single run. The instrument should have variable collision energy between low and high-energy in the collision cell.</p> <p>System should be capable of chromatographic separation of all LCMS amenable compounds including the isobaric compounds or coeluting compounds improve the spectra quality and their MS and MSMS determination.</p> <p>OPERATING SOFTWARE: Multitasking suite of analytical applications and instrument management software operating in Microsoft Windows environment, featuring graphical user interface with multiple windows Software includes:</p> <ol style="list-style-type: none"> 1. Mass spectrometer control software 2. Complete integrated software to control MS, LC and Autosampler. 3. System parameter checking and alerts. 4. LC/MS System Check – automated on-column performance test. 5. Inlet Control Software (LC from multiple vendors) 6. Spectrum Review and Processing 7. Spectral library search facilities (user defined or commercial libraries) 8. Auto-calibration/tuning, accurate mass measurements, elemental composition determination (automatic formula generation by matching true isotopic pattern with parent and fragment ions), MS/MS experiments and quantification. 9. Software should be capable of doing relative and absolute both quantification (Label and Label Free). 10. Software for the Metabolite, Lipids Identification and quantification shall be quoted. 11. Software for the Student T test, Principal Component analysis as well as Principal variant grouping shall be quoted. 12. Deconvolution Software shall also be quoted. 13. System should have real time dynamic background subtraction for identifying the trace level metabolite even in presence of high abundant one. <p>The software should have capabilities to control, acquire, store, process and reproduce the data to perform the following functions:</p>	
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1. Automatic library searching against Free and commercially available libraries
2. Automatic library searching against user defined libraries
3. Should be capable of qualitative, quantitative and characterization with suitable library system.
4. Library for metabolites, food contaminants (Pesticides, Mycotoxins, antibiotics etc) residues analysis and NIST standards with a minimum size of 50,000 compounds.
5. Targeted accurate mass screening, for presence/absence/confirmation of large number of compound in complex mixtures. Automated quantification and reporting of acquired samples.
6. Software for empirical formula calculation/ finder.
7. System should have real time Multiple mass defect filter for identifying the low level metabolites in complex samples
8. System should have the remote monitoring tool that Proactively sends alerts that could indicate instrument problems
9. Send alerts to service teams when an instrument is down, and triggers a remote fix or onsite service visit and improves the uptime.
10. Enables users to view their sample queues and most recent chromatogram remotely, so they know their runs are going smoothly.
11. System shall be easy to operate and robust.

COMPUTER PLATFORM:

A standard make PC with all necessary hardware and operating software required to operate all the specified equipments. All hardware and software including drivers, TFT color monitor, device interface cards or control cards/network adaptor card must be preinstalled and pre-configured on the computer provided. The computer must control the mass spectrometer; LC system & auto sampler in an integrated fashion. Latest window platform with minimum 1 TB HDD, RAM 8 GB, or better configuration.

Latest color laser printer

- The processing PC should have the following minimum configuration:
- processor: E5-2667 v3 (8C HT, 20MB Cache, 3.2GHz Turbo); RAM: 32GB (4x8GB) 2133MHz DDR4 RDIMM ECC; 4x2TB SATA 7.2k RPM HDD; 512MB NVIDIA Quadro NVS 310 (2DP), 27 inch LCD monitor or better with full HD resolution or better.

MS Office for both PC

GAS GENERATOR:

A suitable imported gas generator with compressor capable of providing all the gases, pressure and flow rate for the Mass Spectrometer must be quoted. The compressor should be noise-free.

6 gas cylinders should be supplied FOC during 3 years warranty period. Also required regulator and piping/panel work needs to be done by vendor.

REFERENCE MASS INTRODUCTION (CALIBRATION): The calibration modes have to be clearly specified.

DIRECT INFUSION: Syringe pump to inject samples directly to the instrument for MS and MS/MS analysis through syringe.

Separate device for automatic calibration should be supplied.

<p>OPERATING MODES: The instrument should be capable of performing simultaneous qualitative and quantitative MS & MS/MS analysis for all detectable ions.</p> <p>LIQUID CHROMATOGRAPHY UPLC SYSTEM: A liquid chromatography system should provide an integrated configuration for solvent and sample management with the following specifications.</p> <p>Pump:</p> <ul style="list-style-type: none"> • Binary pumps • Vacuum degassing capability of solvents. • Operating Flow Rate Range 0.2 to 2 ml/min. • Maximum Operating Pressure 18,000 psi or above. <p>Effective System Delay Volume 200 µl or less, independent of system back-pressure (with standard mixer) should be specified.</p> <p>UPLC with quaternary pump 18000 PSI whole at least 3 columns, ambient temperature -5° C to 80° C.</p> <p>Auto Sampler: Number of Samples: 90 vials or more of 1/1.5 ml or more capacity Injection Volume Range 0.5 to 50uL or better Sample Temperature 4 – 40 deg. C Programmable in 0.1 deg. C increments (ambient temp of 25 deg. C) Sample Carryover < 0.005% or <2.0 nL, whichever is greater.</p> <p>Column Thermostat: Column Temperature Control 10 deg. C below ambient to 95 deg. C or better</p> <p>ON-LINE UPS On-line suitable UPS with One-hour battery backup for the MS and accessories such as gas generator, gas cylinder, regulators, noise-free compressor essential for the operation of the instrument.</p> <p>Training: The vendor should arrange training of faculties, technical staffs and others as instructed by the indenting officer within 1 month of the installation of the equipment.</p> <p>Operator: Provision or option for supplying operator for 3 years by the vendor who would be able to operate the equipment and help analyzing the data.</p> <p>Warranty:</p> <ul style="list-style-type: none"> • 3-year Comprehensive Warranty including all spares, electronic parts, boards, hardware consumables, UPS and nitrogen gas generator (excluding printer cartridges and UPS batteries). • Note:- The bidder shall provide 36 months Warranty (on site and comprehensive) on all items from the last date of installation and shall be responsible for any defects that develop in the Lab item.. All the parameters and technological features claimed should be supported with clear technical brochure for our reference and should be demonstrated at the time of installation. • Bidder should have minimum 5 installation of quoted model in India and performance certificate need to be attached with technical bid. • Quoted MS system should be compatible with 2D/ Nano/ PRAP for the future upgradation and shall be quoted optionally with validity of 2 Year. • All other required accessories must be quoted along with system for the smooth functioning. • All required gases, cylinder etc shall be provided free of cost during the
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	<p>warranty period. PM Kit shall be part of warranty/or provided FOC every year. Note: As per the recent guidelines of Govt of India at least 20% value component of the system would be added in India.</p>	
3.	<p style="text-align: center;"><u>Extraction System</u></p> <ol style="list-style-type: none"> 1. Fully automated 6-place Soxhlet Extraction System for simultaneous extraction of six samples with full visibility of the processes including pre-set method, comprehensive solvent library and intuitive navigation facilities. The extraction process should be completed in three steps viz, Extraction, Rinsing and Drying. The system should comprise of following features: 2. The system should support different extraction methods freely selectable by the extraction position and should be able to extract active compounds from plant materials. The system should be suitable for extraction with water and all organic solvents 3. Individual heating for activation/deactivation of individual positions such that malfunctioning of one heater position does not affect the other positions. 4. All components in contact with sample and the solvents should be made of inert material to eliminate sample contamination and memory effects from leaching material. It should also have provision to supply inert gas to avoid oxidation of samples during extraction processes. 5. Solvent recovery of better than 90% and minimal solvent exposure to ensure safe and environment friendly extraction process. 6. Analyte protection sensor to prevent deterioration of heat sensitive analytes. 7. The system should have remote control possibilities for easy monitoring and reporting. 8. Options to use glass sample tube with frit so that it can be reused. 9. Permanent monitoring of heaters, cooling water and solvent levels through sensors. 10. Possible to connect with chiller for better recovery rate and better efficiency of the system. 11. Power Consumption 1780W 12. Maximum Working Volume: 320 mL 13. Sample holder volume 250 mL (Maximum) 14. Solvent use per sample 200 mL (Maximum) 	One

	<p>15. Maximum cooling water consumption 1.7 Liters/minute</p> <p>16. Solvents With boiling points less than 150°C</p> <p>17. Material in Contact with Sample Borosilicate Glass.</p> <p>18. Interface Touch Screen with display</p>	
<p>4.</p>	<p>SPECIFICATION : Rotary Evaporator</p> <p>Rotary Evaporator with vertical condenser without adaptor (i.e. single piece) , insulated heating bath with digital display RT-180⁰C, motorized lift with safety function, automatic lifting of flask during a power failure and digital vacuum controller.</p> <p>2. Capable of using 50-4000 ml evaporating flasks</p> <p>3. Speed: 20-250 RPM or more</p> <p>4. Digital display for Vapor temp & Rotational Speed</p> <p>5. The instrument should supply with Evaporating and receiving Flask.</p> <p>6. Vacuum pump should be chemical resistance PTFE 2 stage diaphragm pump with</p> <p>a.100% oil free transfer</p> <p>b. Flow rate: 30lit/min</p> <p>c. Ultimate vacuum <10mbar</p> <p>2. CHILLER FOR ROTAVAPOR</p> <p>Specification:</p> <p>a. Temperature range: -10⁰C to 150⁰C</p> <p>b. Pump flow rate: 10lit/ min</p> <p>c. Cooling power: 300W at 15⁰C</p> <p>d. Refrigeration machine air-cooled, CFC free</p> <p>e. Insulating tube for coolant circulating tube</p>	<p>One</p>