



DIVISION OF BIOCHEMISTRY
ICAR- INDIAN AGRICULTURAL RESEARCH INSTITUTE



Pusa, New Delhi - 110 012

F. No. [ICAR-IARI-BIOCHEM-Equipment-2D Proteomics/23-24](#)

Dated: 09/01/2024

Gem Bid Notice

On behalf of Secretary, ICAR-IARI, Indian Agricultural Research Institute (IARI), Division of Bio-Chemistry invites online e-tender through GeM Portal, two bid system for Supply, commissioning and installation of "**2D Proteomics system and accessories**" to be installed ICAR-IARI, New Delhi, from the **serious supplier/manufacturers who can supply the material within time period as per bid.**

Tender Schedule

Tender No.	GEM/2024/B/4458385
Published Date	09.01.2024
Bid Submission start date	09.01.2024 at 4.00 pm
Last date & time for submission of bid	01.02.2024 at 3.00 pm
Bid Opening date and time	01.02.2024 at 3:30 pm
Address for communication if any	Asstt. Admn. Officer, Division of Bio-Chemistry, Room No.325, IIInd Floor ICAR-IARI, New Delhi

1) Details of Tender Deposits :-

- Tentative cost of Bid: Rs.25.00 Lakh.
- Earnest Money Deposit: **Rs. 1.25 Lakh/- (One Lakh Twenty Five Thousand Only)**
- Performance Security Deposit: 10% of the contract value. (The performance security should remain valid for a period of sixty days beyond the date of supply, commissioning and installation of the item)
- **The online Bid document can also be viewed from IARI website www.iari.res.in and www.gem.gov.in**

This equipment is proprietary article , therefore GeM Bid is invited on GeM portal to confirm the genuiness of the article.

Note : In case, a holiday is declared by the Government on the day of opening bids, the bids will be opened on the next working day at the same time. The IARI reserves the right to accept or reject any or all the tenders without assigning any reason. Please note that only online bids will be accepted.

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Pusa, New Delhi - 110 012

GeM Bid Notice

From:

Asstt. Admn. Officer (Bio-Chemistry)
Indian Agricultural Research Institute
Pusa, New Delhi-110 012

To

Dear Sir(s),

Online Tenders/Bid are hereby invited by Director, Indian Agricultural Research Institute (IARI) on behalf of Secretary, Indian Council of Agricultural Research (ICAR), New Delhi for "**2D Proteomics system and accessories**" to be installed at, ICAR-IARI, New Delhi.

- The terms and conditions of the contract are those contained in the General Conditions of contract applicable to the contracts placed by the ICAR-IARI as detailed in the tender forms. Please submit your rates in the GeM FINANCIAL PACKET if you are in a position to furnish the requisite supply, Commissioning and installation in accordance with the requirements stated in the bid.
- An Earnest Money Deposit [Bid Security] of **Rs. 1.25 Lakh/- (One Lakh Twenty Five Thousand Only)** must be deposited (physically) in the form of Demand Draft/Pay Order/FDR payable to **In favour of Director, ICAR-Indian Agricultural Research Institute payable at New Delhi -110012** to
Asstt. Admn Officer, Division of Bio-Chemistry, Room No. 325, 11nd Floor, ICAR-IARI, New Delhi - 110012 on or before the last date/time of submission of GeM Bid.
- The rates quoted by each firm for this in bid should be valid for 180 days and should be quoted both in words and figures failing which the same is liable to be rejected.
- No request for alteration in the rates once quoted will be permitted.
- The rates to be quoted should include cost of each and every item including transportation cost, manpower cost and taxes etc. The IARI shall not bear any extra charge for the same.
- Conditional bids shall not be considered. No overwriting or cutting is permitted in the tender documents. Such bids will be rejected out-rightly.
- Only those firms will be considered for financial bid who will qualify in the technical bid.
- Each page of the technical bid must be signed by the Vendor while submitting technical bid.
- If Vendor does not accept the offer, after issue of letter of award by IARI within 05 days, the offer made shall be deemed to be withdrawn without any notice & earnest money forfeited.

- An amount @ 10% of the estimated value of contract is to be deposited by the selected firm/successful Vendor as Performance Security Deposit (Performance Bank Guarantee) only after issuance of Supply order through GeM portal/this office. In the event of non-deposition of the same, the earnest money will be forfeited. No interest on Earnest Money (EMD) and Performance Security Deposit (Performance Bank Guarantee) shall be paid by the IARI to the Vendor.

3). The following document/vouchers are required to be uploaded with the Technical Bid in following manner with page number of each papers/documents, uploaded.

- (a) Scanned copy of Earnest Money Deposit (EMD)
- (b) Scanned copy of Registration Certificate of the firm under Company/Shops & Establishment Act of the respective state for this purpose.
- (c) Scanned copy of valid registration certificate issued by National and Small Industries Corporation (NSIC), (MSME) if applicable for exemption as per Govt. of India Orders.
- (d) Scanned copies of proofs of minimum last three year's i.e. 2020-21, 2021-2022 and 2022-2023 satisfactory supply, installation and commission of the product.
- (e) Scanned copy of proof of minimum turnover of the firm not less than **Rs.10,00,000/- (Ten Lakhs Only)**, during each of the last three financial years (2020-2021; 2021-2022 & 2022-2023 with balance sheet duly approved by Chartered Accountant.
- (f) Scanned copies of Income Tax (PAN), Service Tax /GST Registration Certificates
- (g) Scanned Copy of ISO certificate with literature of the equipment **"2D Proteomics system and accessories "**
- (h) The firm/agency must enclose a certificate indicating that there is no criminal legal suit pending or contemplated against it. An Undertaking as per attached Format duly attested by Notary on a non-judicial stamp paper of value of Rs.100/- (Rupees One Hundred Only) regarding their non-blacklisting by any of the Govt. Departments, Public Sector Undertakings and/or by Central Vigilance Commission during the last three years.
- (i) Valid authorization Certificate of the participation firm.

Yours faithfully,

Asstt. Admn. Officer
ICAR-IARI, New Delhi

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TECHNICAL BID for purchase of "2D Proteomics system and accessories "

Sl. No.	Technical Requirement	Particulars
1.	Name of the Tendering /Firm/Agency/ Contractor : (Attach attested copy of certificate of registration).	Yes/No (Page No.)
2.	Name of Director of Company/ Active Partner of the firm/: authorized Agent/ Proprietor.	Yes/No (Page No.)
3.	Full address of Operating/ Branch Office Telephone No., Fax No., E-mail address:	Yes/No (Page No.)
4.	Full address of Operating/ Branch Office at: Delhi/ New Delhi	Yes/No (Page No.)
5.	Banker of the Company/ Firm/ Agency/ Contractor with Full address (Attach certified copy of latest Bank statement)	Yes/No (Page No.)
6.	Scanned copy of Earnest Money Deposit (EMD)	Yes/No (Page No.)
7.	Scanned copy of Registration Certificate of the firm under Company/Shops & Establishment Act of the respective state for this purpose.	Yes/No (Page No.)
8.	Scanned copy of valid registration certificate issued by National and Small Industries Corporation (NSIC), (MSME) if applicable.	Yes/No (Page No.)
9.	Scanned copies of proofs of minimum last three year's i.e. 2020-21, 2021-2022 and 2022-2023 satisfactory supply, installation and commission of the product.	Yes/No (Page No.)
10.	Scanned copy of proof of minimum turnover of the firm not less than Rs.10,00,000/- (Ten Lakhs Only) during each of the last three financial years, 2020-2021; 2021-2022 & 2022-2023 with balance sheet duly approved by Chartered Accountant.	Yes/No (Page No.)
11.	Scanned copies of Income Tax (PAN), Service Tax /GST Registration Certificates	Yes/No (Page No.)
12.	Scanned Copy of ISO Certificate with literature of the equipment.	Yes/No (Page No.)
13.	The firm/agency must enclose a certificate indicating that there is no criminal legal suit pending or contemplated against it. An Undertaking as per attached Format duly attested by Notary on a non-judicial stamp paper of value of Rs.100/- (Rupees One Hundred Only) regarding their	Yes/No (Page No.)

	non-blacklisting by any of the Govt. Departments, Public Sector Undertakings and/or by Central Vigilance Commission during the last three years.	
14.	Copy of Valid Authorization Certificate	
15.	Additional Information/detail, if any must be supported by attested certificate	Yes/No (Page No.)

I, the undersigned certify that I have gone through the terms and condition mentioned in the GeM Bid document and undertake to comply with them. The rates quoted by me are valid and binding upon me for the entire period of contract.

Date :

Signature of Authorized person

Place :

(Full Name and Designation)

Seal :

DIVISION OF BIOCHEMISTRY

Technical Specifications for the Purchase of 2-D Proteomics System and Accessories

1st DIMENSION ISOELECTRIC FOCUSING SYSTEM

- 1) System should include Individual Lane Control for running different samples, pH gradients and focusing protocols in a single run.
- 2) System should be able to run minimum 12 strips simultaneously.
- 3) System should have touch screen User Interface for easy creating and editing protocols and setting up the program rapidly.
- 4) System should include dedicated site for online data interpretation for Graphing data, Comparing lanes and generating reports.
- 5) System should include USB Port to export data for storage and analysis
- 6) System should include run mode flexibility- to run IPG strips gel Side Up, Gel Side Down and with cup loading configuration.
- 7) System should have voltage 0–10,000 V, 1 V increments(50-10000V)
- 8) Current range should be 0–100 μ A per lane, 1 μ A intervals
- 9) Power range of 0–1 W per lane.
- 10) System should have peltier based cooling platform.
- 11) Temperature range should be 10–25°C \pm 1.0°C @ max ambient 23°C 18–25°C \pm 1.0°C @ max ambient 31°C.
- 12) Focusing trays should be made of polycarbonate for contaminant free process.
- 13) System should accommodate IPG strip of length 7, 11, 13, 17, 18, and 24 cm.
- 14) System should have display QVGA resolution (320 x 240) touch screen or mouse control.
- 15) System should have ramping Step, linear, gradual, and hold voltage ramping for each focusing step. Hold mode as a final step to prevent diffusion when IEF is complete.
- 16) System should have 2GB capacity for storing protocols.
- 17) Data collection should be in .dat format.
- 18) System should have following regulatory compliances:
- 19) Safety EN 61010-1:2001, IEC 61010-1:2001 Use NRTL to test for compliance to UL61010-1:2004 and CAN/CSA C22.2 No. 61010-1-04
- 20) EMC EN61326 (1997 w/A1:98) Class A FCC Code of Federal Regulations, Title 47, Part 15, Subpart B, Class A
- 21) Other approvals RoHS/WEEE Research Materials to determine level of EFUP.
- 22) Instrument should be supplied with positive and negative electrode assemblies, 7 cm, 11 cm, and 17 cm focusing trays with IPG strip retainers.
- 23) Instrument should be supplied with 1 pack each of 7 cm, 11 cm, and 17 cm rehydration/equilibration trays
- 24) Instrument should be supplied with 4 pairs of forceps, 4 packs of electrode wicks for gel-side down and gel-side up applications, mineral oil (02 bottle), 2 cleaning brushes, cleaning concentrate, 2 USB flash drives, 3 styluses.

- 25) Instrument should be supplied 05 packets (12 each) of pH 3–10 ReadyStrip™ IPG strips in 7 cm, 11 cm, and 17 cm lengths, rehydration sample buffer, and other consumables required for the 2-DE along with the instruction manual.

2nd DIMENSION (SDS-POLYACRYLAMIDE GEL ELECTROPHORESIS)

A) Tetra Mini SDS PAGE Apparatus (7cm IPG strip)

- 26) The system should be capable of accommodating & simultaneously running 1 to 4 mini gels in less than an hour.
- 27) The system should be easy to assemble, include a casting stand and glass plates with permanently bonded gel spacers for leak proof casting of gels and avoid messy agarose sealing & tape casting of gels.
- 28) The system should be capable of accommodating interchangeable modules for tank transfer, 2-D electrophoresis & electro-elution.
- 29) The system should come with molded, one-piece buffer dam when running (only) one or three gels.
- 30) The system should come with color coded electrodes to prevent accidental reversal of polarity.
- 31) The system should be capable of accommodating 5 well, 9 well, 10 well, 15 well & Prep/2D combs for sample volumes ranging from 20-150 μ l.
- 32) System should be supplied with a starter kit of acrylamide solution with dissolved fluorescence dye such that the PAGE gel after running does not require any staining for visualizing proteins in gel.
- 33) The system should be capable of accommodating both hand cast & precast gels of the below said dimensions :
- Gel size (W x L) : Approximate Precast 8.6 x 6.8 cm , handcast 8.3 x 7.3 cm

B). Midi Vertical Electrophoresis System

- 34) The system should have following features: Gel Capacity: 1 to 4 gels
- 35) Runs gels of 16 X 16cm size to perform SDS-PAGE and the second dimension 2-D using IPG Strips, upgradeable to accommodate 18.3 x 20cm gels
- 36) Can accommodate 11cm IPG strips, upgradeable to accommodate 17 and 18cm IPG strips
- 37) The casting stand should have single-screw clamps that exert even pressure along the entire length of the glass plates, providing leak-proof seal without grease or agarose plugs
- 38) Central cooling core can be connected to tap water or a cooled recirculating bath, or filled with coolant, providing smile-free patterns with as little as 1.5 L of buffer

POWER SUPPLY

- 39) Should have four slot Power pack with LCD display.
- 40) Should have volt: 10-500V 1 V steps, Current: 0.01-2.5 A with 1mA step, Power: 1-500W.
- 41) Should have constant voltage, constant current or constant power.
- 42) Should have timer: 1 min – 99 hr 59 min.
- 43) Should have volt-hour control 99000.

- 44) Pause /resume function.
- 45) Should have safety feature no load, load change, overload/short circuit detection.
- 46) Should have automatic recovery after power failure.
- 47) Should programmable 9 methods with 9 steps.
- 48) Should have EN61010 safety.

SOFTWARE FOR IMAGE ANALYSIS

- 49) Easy-to-use wizard-directed user interface
- 50) Automated spot detection and matching
- 51) Sophisticated quantitation
- 52) Statistical analysis tools
- 53) Flexible visualization tools
- 54) Sample classification for comparative analysis
- 55) Gaussian modeling based software is preferred.
- 56) Sophisticated algorithms for Automatic Spot Detection & Quantification.
- 57) Sypro ruby filter for auto recognition and removal of background speckles
- 58) Simultaneous analysis of minimum fifteen gels and can upgradable to unlimited images.
- 59) User adjustable significance level and Boolean analysis by using different set and subset
- 60) Can upgradable for multiplex gel normalization with normalization table feature.
- 61) Gel land marking and automatic spot matching
- 62) Sophisticated variable background removal to quantitate low abundance protein
- 63) Can Export XML data and JPEG file format

GEL IMAGING SYSTEM

- 64) System should be compact, have minimum footprint, table top type
- 65) System should have detector of atleast 6.0 MP CMOS having pixel size of 2.4 μm x 2.4 μm and pixel density (grey levels) of 65.535.
- 66) System should have dynamic range of >3.5 orders of magnitude
- 67) Imaging system should have Automatic capabilities with Application driven, user selected or recalled by a protocol.
- 68) System should have Smart Tray Technology : System should automatically recognizes the application-specific tray and adjusts imaging parameters and software options accordingly
 - a. System should have auto-focus : Pre-calibrated focus for any zoom setting
 - b. System should have auto-exposure : Two auto-exposure algorithms (rapid or optimal)
- 69) Should have 100 % repeatability via recallable protocols.
- 70) System should have Stain free tray technology for the minimal use of dyes with validate/proven total protein normalization consumables from same manufacturer.
- 71) System should have pre-calibrated focus for any zoom settings & sample height.
- 72) Should have appropriate flat fielding correction automatically & consistently applied to image data for every application.
- 73) System Should have Excitation source : Trans-UVB (standard), Epi-white (standard), Trans-white (optional), Trans-blue (optional)
- 74) Emission filter: 535–645 nm (standard)

- 75) Versatile system to support wide range of applications like- Fluorescent dye like Sybr green, Sybr safe, 2-D, 1-D, Dot Blotting, Nucleic acid detection , Quantization, stain free imaging.
- 76) Maximum image area: 21 x 14 cm (W x H)
- 77) System should come with white light conversion screen.
- 78) System must have manual in/out sliding door facility design for easily accessible during gel excision experiments
- 79) System should have auto-exposure: Two auto-exposure algorithms (rapid or optimal)
- 80) System should have touch-screen capable Display resolution 1,024 x 768 pixels 8-10" display or more
- 81) System should have reproducibly position or center the sample on the image platen by using gel alignment templates.
- 82) System should have comprehensive automated quantitative analysis of proteins & DNA samples in seconds.
- 83) System should have Intuitive and well organized (efficient) selection of workflows based on applications
- 84) System should have 3D viewer, Absolute and Relative quantization
- 85) Software should be multi user for multiple PC for use of multiple users and license free with life time free upgrades.
- 86) System should have auto exposure – 2 user defined modes (intense or faint bands)
- 87) Software should be single for imaging and analysis.

Compulsory Accessories

- 88) Branded 4 kVa Online UPS with 1 hr backup.
- 89) Computer (One) should be provided with all latest drivers, operating system, software's, sufficient storage and RAM, etc.
- 90) Colour printer (One) should be provided for taking the hard copy of the image.
- 91) Modular Table, chair and cubicle (one each) for the proper installation and smooth functioning of the instrument and other accessories.
- 92) Minimum 2 year warranty should be provided for the instrument and other accessories.
- 93) On site wet demonstration/training should be provide.

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Financial Packet (Must be submitted in Online Mode Only)