

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
2A & 2B, Raja S.C.Mullick Road
Jadavpur, Kolkata - 700032

Tender Notice No.: IC/AD/MNRE/14/18 dated 22.04.2014

Sub: Inter Atmosphere Glove Box with Integrated Solvent Purification System

Sealed Tenders are invited for Purchase of 'GCMS System'. The bids are to be submitted in Two-Bid pattern i.e. Technical Bid and Price Bid in two separate sealed covers distinctly marked accordingly and both to be put inside another envelope, which should be super scribed with tender reference no., due date and time of opening. Two bids, i.e. Technical Bid and Price Bid, should be identical in all respect except that the Technical Bid should have blank space at the places where prices have been stated in the Price Bid.

Complete tender should reach the Office of the Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, 2A &2B, Raja S. C. Mullick Road, Jadavpur, Kolkata-700032, India on or before scheduled date & time specified below.

Tender Notice Number	IC/AD/MNRE/14/18 dated 22.04.2014
Last date and time of submitting tender	30 th May, 2014 at 12.00 noon
Pre-bid Meeting to discuss technical specifications	6 th May, 2014 at 3.00 P.M.
Date and time of opening tender	30 th May 2014 3:00 p.m.
Place of Opening Tender	2 nd floor, ERU building, IACS
Contact	icad@iacs.res.in, +91-33- 2473 4971 (extns: 1366)

The technical bids will be opened first to evaluate technical specifications only of the equipment and thereafter the price bids of the technically qualified companies shall be opened. The rest of the bids will stand rejected. The bidders shall submit bids duly signed in their respective company's letterheads.

A) TECHNICAL BID:

The Technical Bids will be evaluated on May 30, 2014 at 3:00 pm in the office of Dr. Abhishek Dey, ERU building, I.A.C.S., Kolkata in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Technical Specifications:

“Inter Atmosphere Glove Box with Integrated Solvent Purification System”

Both the glove box and the solvent purification system should be manufactured and sold by the same parent company or its agents.

Inter Atmosphere Glove Box

Box : Outer Box Dimensions > 900mm x 1200mm x 720mm (H x W x D)
Box Windows inclined panel chemical & scratch resistant
3 Standard Stainless Steel shelves, 6 adjustable height.
2 Glove Ports Type , >180mm dia. O ring sealed ,
Three Butyl Gloves, thickness 0.4mm -0.6 mm
Quick lock door for pollution free gloves change.

Stand: Levelling feet, Castors

Filters: Dust filter 0.3 micron, class H13, One gas inlet/one gas outlet filter,

Box Light: Fluorescent lamp. External On/Off switch

Pressure: Inside the box, adjustable from -15mbar to +15mbar,

Automatic pressure adjustment by pressure sensor. Vacuum free pressure adjustment will be preferred.

Antechamber: Cylindrical, must be,SS, thickness 2.5mm

Inside dimensions > 350mm diameter x Length 550mm

Anodized, thickness 10mm

Sliding tray stainless steel, spindle lock type door lock

Pressure gauge, manometer analogue display

Vacuum/Refill process-manual operation Via. Hand valves

Purification: Should be closed loop gas re-circulation containing

Single Filter Purifier bed, re-generable

Attainable purity: Less than 1 ppm H₂O and Less than 1 ppm O₂.

Capacity: O₂: 30L, H₂O: 1300 g

Circulation unit should consist of integrated blower

Vacuum tight, Flow rate > 35 m³/hr

Vacuum pump should be of Type rotary vane pump

Oil mist filter, Oil re-circulation

Automatic gas ballast control , >20m³/h, dual stage

Valves/piping: Valves of the box Main purifier valves should be of Electro-pneumatic, valves of high vacuum,

Antechamber valves of butterfly type/high vacuum bellow valves

Manual valves of Swagelok type

Piping of the box should be

Main piping: SS pipe DN40 KF-Flange system

Control pipe work: SS (US 304L) preferred but copper pipe DN 6/10 is also acceptable.

Regeneration: Regeneration of purifier material should use 95% N₂ and 5% H₂ flow gas. It should be automated (PLC controlled), with automatic switching modes.

User Interface

Touch panel: English

User help: Integrated to touch panel

Display: Pressure (Pa or mmWG or mbar), O₂, ppm

Controls: Vacuum chamber handling, force flushing, regeneration/purification

Mini Antechamber: Dia 150-180 mm Length 300mm

O₂ Analyzer:

Technology: Galvanic fuel cell oxygen sensor or Solid State

Measurement and analysis range: Minimum 0-1000 ppm

Electronics: Integrated microprocessor control, user should be able to calibrate.

Output: Analogue

Accuracy: +/- 1 ppm in full range.

H₂O Analyzer:

Measurement and analysis range: Minimum 1-1000 ppm

Electronics: Integrated microprocessor control, user should be able to calibrate.

Output: Analogue

Accuracy: +/- 1 ppm in full range.

Leaktight Feedthroughs (all of these must be included):

one electrical feedthrough 220V-15A

2 blanket leaktight feedthroughs ISO KF 40

one Vacuum Feedthrough for connecting external vacuum pump,

one 4 banana Ø4 /NW40 feedthrough

two Gas feedthroughs with Swagelok valves inside and outside the box

Solvent Purification Platform and Manifold

Fully enclosed unit

Main Inlet Working gas and vacuum regulator and gauge

Independent Pressure regulator for each solvent to adjust flow rate and pressure

Independent Pressure gauges for each solvent

3 way valve for vacuum or inert gas purging or closed

3 way valve for vacuum/inert gas and solvent filling or closed

Color coded stainless steel line per solvent

Levelling feet and castors

Three Double purification column per solvent, 800 L capacity

Ability to add two more double purification columns, Upgrading to five solvent line

Column MOC US type 304 SS, with pre-filters, Each Column capacity- one gallon

All purification columns should be completely enclosed.

Working shelf with Spill tray

Shelf should be adjustable height to accommodate different sized glassware,
Integrated with Clamping posts to hold the glassware
Vapor hood over the collection tray
Three Stainless steel (1.4301 / US 304) reservoir , each 17L capacity
2 way solvent valve and 3 way gas valve per reservoir
Gas and solvent tube and dip tube per reservoir
Stainless Steel Piping, Swagelok Fittings and 1/4" Stainless Steel Jacket
Grounding and Safety valve per reservoir
Integrated Safety Cabinet, for storing total 5 flammable and combustible solvent
reservoirs
As per EN 14470-1, Fire resistivity type 90
System should be fully enclosed -purification columns and reservoirs
Exhaust connection for vapor removal on the top of the purification column cabinet
Exhaust connection for vapor removal on rear side of the safety cabinet with reservoirs.
Proper Grounding of Electro Static Charging and Emergency cut off

Important notes:

- i) Vendors should quote rate involved, if any, for the Optional Items/services.
- ii) Bidder providing misleading or wrong information will be disqualified.
- iii) All technical claims of the Bidder should be supported by product catalogue, public website of the manufacture.
- iv) The Indian Agents desiring to quote on behalf of their foreign principals must have valid registration with the Central Purchase Organization (eg. DGS&D) as provided in Rule 143 of general Financial rules, 2005.

B) FINANCIAL BID:

The financial bid should be super scribed as "**Financial Bid**" on the outer cover of the envelope.

1. The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as "PRICE BID" on the outer cover of the envelope as already detailed above. The price bids of only technically qualified bidders will be opened and they will be intimated the date and time of opening of price bids at their email id-(s). Rest of the bids will stand rejected.
2. PRICE: Price to be quoted both on FOB and CIF basis for foreign currency or in Indian currency. Name of the particular port from where our authorized forwarder will lift the consignment must be mentioned clearly with FOB price.
3. **Bid Security (EMD) :** An Account Payee Demand Draft for Rs.2,00,000/- (Rupees two lakh only) drawn in favour of "Indian Association for the Cultivation of Science" payable at Kolkata is to be furnished by the bidders, as Bid Security money or Earnest Money Deposit (EMD) with the tender.

4. The Demand Draft for the Bid-Security money should have at least 45 (forty five) days validity period after the opening of the Bids.

5. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders. Bid security money to the successful bidder will be refunded on receipt of the Performance security money.

6. **Performance Security:** An Account Payee Demand Draft for an amount of 10% of the order value drawn in favour of "Indian Association for the Cultivation of Science" payable at Kolkata is to be furnished by the successful bidder as Performance security. Performance security money would be released by IACS after a period of 60 days from the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money will be refunded to successful bidder on receipt of the Performance security money.

C) General Instructions:

1. **Vendor Eligibility:** The bids must be submitted by OEMs or OEM supported single vendors only with original authorization certificates from the OEMs. Vendors should have proven experience in setting up such systems in India. A brief proof for such experience (copies of orders/installation certificate) should be included in the technical bid. Part Quotation by a vendor is not admissible as future warranty and maintenance are difficult in the cases of fragment purchases. The OEM/OEM supported vendor should have their own service centre in Kolkata. The response time should not be more than 24 hours/next working day.

2. **Submitting Tender:** The Tender must contain materials related to these specifications and should not contain materials that can overtly or covertly try to canvass for the vendor. The vendors are allowed to deviate from the specifications given below only when such deviations are demonstrated to be technically superior. Additional features in the quoted items which are better than those in the indent – may be highlighted. The technical bid should not have any mention of pricing. The commercial bid should have the pricing for each option separately. Prices should be inclusive of all charges taxes/duties as applicable, shipping charges, delivery at site, installation etc.) with clearly indicated breakups. Fax, e-mail Tender will not be accepted. Duplicate Bid document must be submitted in Separate closed cover.

3. **Installation and Commissioning:** Free of cost at IACS, Kolkata. The vendors are required to give an estimate of the time required for installation and hand-holding/training of the principal users in the technical bid.

4. **Post-sales service:** The vendor must submit the names of the service engineers employed by them who are competent to serve the system along with their contact details in India. At least ten installations of the same or similar systems in Eastern India will be preferred.

5. **Tender updates:** Prospective bidders may please refer to our website <http://www.iacs.res.in>, occasionally for any update on the tender which may appear from time to time.

6. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
7. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the Institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
8. Payment: 100% against delivery and successful installation or in advance subject to submission of performance guarantee.
9. Warranty: Minimum 2 years with 1 year AMC (after completion of warranty) along with original manufacture date declaration by the original manufacturer of the specific instrument.
10. Installation/Demonstration/Application Training at site: Free of cost by the supplier.
11. Validity of tender: Tender submitted shall remain valid at least for three months from the date of opening of the tender. Validity beyond three months from the date of opening of the tender shall be by mutual consent.
12. The tender should accompany a compliance chart. A technical compliance chart should also be provided in the following format:

Serial Number	Tender Specification	Specification of your offered instrument	Extent of compliance
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13. The rate should be inclusive of all taxes, transportation etc. Nothing extra will be paid in addition to the quoted rate.
14. The model number, make, and a printed literature of the product shall be submitted positively.
15. Proposed delivery schedule should be mentioned clearly.
16. Manufacturers/exclusive distributors/vendors should have history of supplying similar type of instruments to this or other Scientific Organization(s).
17. Authorized Dealership Certificate is a must in case of principal manufacturing company is not quoting directly.
18. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.

19. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of technical bids will be the following working day at the appointed time.
20. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
21. For any clarification regarding technical specifications etc. please send your queries to Dr. Abhishek Dey, icad@iacs.res.in
22. The Institute reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Registrar