

## **E-Tender Document**

**UNIVERSITY OF DELHI**

**Department of Zoology**



**Bomb Calorimeter Tender**

**E-TENDER DOCUMENT**

**Ref. No. - DU/ZOOL/RC/BC/2022**

**Prof. Rina Chakrabarti**

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## **E-PROCUREMENT TENDER NOTICE**

Prof. Rina Chakrabarti, Department of Zoology, University of Delhi invites tenders under Two Bids System (Technical and Financial) from reputed & eligible agencies through e-procurement of **Bomb Calorimeter** from **DBT project (2021-24)** in the Aqua Research Lab, Department of Zoology, University of Delhi, North Campus, Delhi 110 007.

<b>S. No.</b>	<b>Item Details</b>	<b>Date</b>
<b>1.</b>	Bid Document Download Start Date	<b>17.06.2021</b>
<b>2.</b>	Bid Submission Start Date	<b>17.06.2021</b>
<b>3.</b>	Bid Submission End Date	<b>08.07.2021</b>
<b>4.</b>	Technical Bid Opening Date	<b>11.07.2021</b>

**Notes:**

- (i) All details regarding the subject tender are available on our websites [www.du.ac.in](http://www.du.ac.in) and <https://eprocure.gov.in/eprocure/app>. Bidders are therefore, requested to visit our websites regularly to keep themselves updated.
- (ii) Manual bids shall not be accepted.
- (iii) For submission of E-Bids, bidders are required to get themselves registered with <http://eprocure.gov.in/eprocure/app>.
- (iv) Tender document's cost nil, submit your bids before the end date and time of bid submission. Failing which offer will be liable for rejection.
- (v) Clarifications/ queries, if any, can be addressed to Prof. Rina Chakrabarti, Department of Zoology, University of Delhi, Delhi 110 007. Contact no. 011-27666496 and email: [aquaresearchlab@yahoo.co.in](mailto:aquaresearchlab@yahoo.co.in)
- (vi) **Prof. Rina Chakrabarti reserves the right to accept or reject or cancel any tender or relax any part of the tender offer, without assigning any reason.**
- (vii) A supplier has to demonstrate the material in running condition before purchase.

**Prof. Rina Chakrabarti**

Notice inviting online tender for **Bomb Calorimeter** has been invited under two bid system (Technical & Financial) from manufacturers and suppliers for supply and installation of **Bomb Calorimeter** as per enclosed specification, term and condition by the office of the Registrar, University of Delhi, Delhi -110 007.

## List of Item and Technical Specifications

### Technical Specification of Fully Automatic Bomb Calorimeter

1. **Type / Method** : True Isoperibol.
2. **Instrument** : Automatic microprocessor controlled calorimeter, with automatic oxygen filling, bucket filling, bomb washing, as well automated vessel fill and rinse.
3. **Safety lock system for bomb:** The lid should automatically lock electronically when the instrument is in operation mode.
4. **Thick walled acid resistant having internal volume 250 ml made of high strength with proper insulation arrangement and capable of withstanding high pressure. Combustion vessel should be hydrostatically tested to 3000 PSI and comply with ASTM E144.**
5. **Measurement Range:** Up to 8,000 cal for 1 gm of Sample.
6. **Precision:** 0.1 % RSD.
7. **Resolution** : 0.0001 Cal/gm
8. **Analysis Mode:** Equilibrium mode / Dynamic mode.
9. **Analysis time:** 8 minutes in Isoperibol Method.
10. **Operator time per test:** ONE MINUTE.
11. **Tests per hour:** 6 to 8 tests.
12. **Temperature Measuring Resolution:** 0.0001°C
13. **Oxygen filling and Venting should be Automatic.**
14. **Water filling in to the Bucket as well as in to the Jacket should be Automatic.**
15. **Water draining after completion of analysis should be Automatic.**
16. **Bomb & Bucket:** Fixed Type
17. **Bomb washing:** Fully Automatic (To eliminate most tedious and time consuming operation and to increase life of Bomb)

18. **Jacket Type** : Water Jacket with facility to maintain / control the jacket temperature with an accuracy of  $\pm 0.1^{\circ}$  C to meet the ASTM / BIS Standards.
19. **Display**: Graphical display with touch screen. Should have option to operate through PC.
20. **Correction**: Spiking, Ash/ Nitrogen or Acid, Fuse wire, Sulphur and net heat of combustion.
21. **Diagnostic mode**: Diagnostic mode should be available for automatic report generation and message display for pretesting cycle, bomb leak, poor bucket stirring, lid not etc. for easy diagnosis
22. **Water handling System**: Bomb Calorimeter should have inbuilt closed loop Water Handling system to re-circulate the water and to stabilize the instrument quickly.
23. **Memory Capacity**: Calorimeter should have minimum 1,000 tests results or more, data logging for jacket and bucket temperature
24. **Balance / Computer Connection**: RS 232 Interface, USB, Ethernet.
25. **Sample Crucible Capacity**: 0.5 gm – 1.5 gm.
26. **Sample Crucible**: Metal crucibles with Ni-Cr Alloy
27. Standard test methods compliance: ASTM D 5865, ASTM D 240, ASTM D 4809, ASTM D 5468, ASTM E711, ISO 1928, AS1038.5, BS1016, DIN 51 900, JIS M 8814 etc.,
28. **Certification**: Instrument should have CE certification and vessels should have national/international certification.
29. **Power requirement** : 230 VAC +/- 10 %, 50/60 HZ As per Indian condition.
30. **Reporting options**: Btu/lb, cal/g, J/Kg or MJ/kg.
31. **Oxygen bomb**: The oxygen combustion bomb should make with special stabilized stainless steel to resist the mixed nitric acid and Sulphuric acid produced in combustion. It should have PED Certification.
32. **Balance** (Compatible with machine and have system for automatic data transfer to machine Capacity 120 g and Readability 0.1 mg), **Gelatin capsules, Pellet press**.
33. The Bomb Calorimeter must be supplied with **PC compatible to operate the machine** through computer controlled system (compatible to operate the machine and collect the data and show the result).
34. Software for operating the Bomb Calorimeter through PC. (Software must be provided in protected manner so that re-installation facility available in future)
35. **Required consumables for 1000 tests** including ignition thread and other items.
36. Oxygen and Nitrogen **gas regulator** of good quality.

37. Crucibles minimum 6 and Benzoic acid tablets 100 as standard reference material.

**Warranty: 12 months from the date of Installation.**

**(B) Terms & Condition**

1. Payment will be done after receiving and successful demonstration of the equipment in running condition.
2. Vendor/Supplier must re-install the software if any software related problem detected upto one year from the date of installation.

## INFORMATION & INSTRUCTIONS FOR BIDDERS

Earnest Money Deposit	<b>Nil</b>
Cost of Tender Form (Non-Refundable)	<b>Nil</b>
Issue of Tender Document	Tender Document may be down-loaded from the University website <a href="http://www.du.ac.in">www.du.ac.in</a> and CPP portal <a href="http://eprocure.gov.in/eprocure/app">http://eprocure.gov.in/eprocure/app</a> as per the schedule.
Bid Document Download Start Date	<b>17.06.2021</b>
Bid Submission Start Date	<b>17.06.2021</b>
Bid Submission End Date	<b>08.07.2021</b>
Technical Bid Opening Date	<b>11.07.2021</b>

## 1. Bid Submission

“Technical Bid” shall be submitted as per Annexure I

“Financial Bid” shall be submitted as per Annexure II

Bids shall be submitted online only at CPP portal:

<https://eprocure.gov.in/eprocure/app>.

Tenderer/contractor are advised to follow the instructions provided in the ‘Instructions to the Contractor/Tenderer’ for the e-submission of the bids online through the Central Public Procurement Portal for e-procurement at <https://eprocure.gov.in/eprocure/app>.

Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

Tenderer who has downloaded the tender from the University website [www.du.ac.in](http://www.du.ac.in) and Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app>, shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tempered/ modified in any manner, tender will be completely rejected and tenderer is liable to be banned from doing business with University of Delhi.

Intending tenderers are advised to visit regularly University website [www.du.ac.in](http://www.du.ac.in) and CPP Portal <https://eprocure.gov.in/eprocure/app> at least 3 days prior to closing date of submission of tender for any corrigendum/addendum/ amendment.

## 2. OPENING OF FINANCIAL BID AND EVALUATION

Financial bids of eligible and technically qualified bidder will be opened. The lowest financial bid in respect of **Bomb Calorimeter** will be considered for the award of work.

## 3. FINAL DECISION MAKING AUTHORITY

The University reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders. No claim whatsoever will be entertained/paid by the university to the bidder(s).

#### **4. AMENDMENT OF TENDER DOCUMENT:**

Before the deadline for submission of tender, the University may modify the tender document by issuing addendum/corrigendum.

5. Any addendum/corrigendum thus issued shall be a part of the tender document and shall be uploaded on the University website ([www.du.ac.in](http://www.du.ac.in)) and CPP portal <https://eprocure.gov.in/eprocure/app>.

#### **6. ARBITRATION AND SETTLEMENT OF DISPUTES:**

In the event of any question, dispute or difference arising under this agreement or in connection there with (except as to matter the decision of which is specifically provided under this agreement), the same shall be referred to sole arbitration of the Registrar or any other person as approved by the Vice-Chancellor, University of Delhi. There will be no objection for any such appointment on the ground that the arbitrator is an Employee of University of Delhi or that he/she has to deal with the matter to which the agreement relates or that in course of his/her duties as University of Delhi Employee he/she has express views on all or any of the matter under dispute. The award of the arbitrator shall be final and binding on the parties.

The arbitrator may from time to time with the consent of parties change the time for making and publishing the award. Subject to India Arbitration and Conciliation Act 1996 and the Rules made there under, any modification thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause.

#### **7. TERMS OF PAYMENT**

**PAYMENT MODE:** Payment will be released after the installation and demonstration of the equipment

The maintenance or any other equipment related call shall have to be attended within one week.

#### **INSTRUCTIONS FOR ONLINE BID SUBMISSION:**

The bidders are required to submit soft copies of their bids electronically on the CPP



Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submit their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app> .

## **REGISTRATION**

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link.

“Online bidder Enrolment” on the CPP Portal which is free of charge.

2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3) Bidders are advised to register their valid e-mail address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

## **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS/e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Helpdesk.

## **PREPARATION OF BIDS**

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

## **SUBMISSION OF BIDS**

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable.
- 4) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 5) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 125 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys.
- 6) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 8) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

## **ASSISTANCE TO BIDDERS**

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

## Annexure-I

### TECHNICAL BID

1. Name of the Company\_\_\_\_\_

2. Make & Model\_\_\_\_\_

3. Address (with Tele No. fax No. & e-mail )\_\_\_\_\_

4. Contact person Name and mobile number\_\_\_\_\_

5. (a) The number of years of experience in dealing Bomb Calorimeter.

\_\_\_\_\_

(b) Total value per year of Business during the last three years\_\_\_\_\_

(Attested certificate from Chartered Accountant should be attached.)

6. (a) Registration Number \_\_\_\_\_

(b) GST number\_\_\_\_\_

(c) PAN Number \_\_\_\_\_

(d) Service Tax Number \_\_\_\_\_

7. Most important things

1. Installations

2. One year warranty for whole system should be provided.

3. One year software installation warranty.

NOTE: Place of supply - Aqua Research Lab, Department of Zoology, University of Delhi, North Campus, Delhi - 110007. Quoted price should include the Cost, Freight and Insurance, All Applicable taxes, Transportation and Installation charges.

**Vendor/Supplier must quote with 5% GST and DSIR certificate will be provided after installation and receipt of the bill.**

**Document Confirmation**

<b>S. No.</b>	<b>Document</b>	<b>Whether attached</b>
<b>1.</b>	Whether the firm is in existence for three years or more in the trade in Central/State Govt. /Autonomous bodies. If yes necessary documents should be Attached.	
<b>2.</b>	Have you attached copies of the last three financial years	
<b>3.</b>	Have you attached a copy of authorization certificate	
<b>4.</b>	Have you attached a certificate regarding the technical assistance, repair and maintenance charges will be included in the financial bid	
<b>5.</b>	Have you attached a copy of Service Tax Registration Certificate, GST, Registration Certificate and PAN Certificate	
<b>6.</b>	Have you attached details of complete address of the company office and service centre with names of contact person (s) and their telephone/mobile/fax numbers	
<b>7.</b>	Have you attached a letter that company/vender has not been blacklisted by any state/central government/public sector undertaking/university in India in the last 3 years	
<b>8.</b>	Have you attached a copy of the tender acceptance letter	

Declaration

I hereby certify that the information furnished above are full and correct to the best of our knowledge. We understand that in case any deviation is found in the above statement at any stage, the company will be black-listed and will not have any deal with the Organization in future.

**Authorized Signature**

**With Seal of Company**

**ANNEXURE II**

**Financial Bid**

<b>S. No.</b>	<b>Description of Items</b>	<b>Quantity</b>	<b>Unit cost</b>	<b>Total cost inclusive all taxes</b>
<b>1.</b>	<b>Bomb Calorimeter as per specifications</b>	01		

F.O.R. Aqua Research Lab, Department of Zoology, University of Delhi, North Campus, Delhi-110 007

**Authorized Signatory**

**With seal of company**

**Annexure-II**

**TENDER ACCEPTANCE LETTER**

(To be given on Company Letter Head)

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Sub: Acceptance of Terms & Condition of Tender.**

Tender Reference No: \_\_\_\_\_

Name of Tender / Work:-

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

\_\_\_\_\_  
\_\_\_\_\_

As per your advertisement, given in the above mentioned website (s).

2. I/We hereby certify that I/we have read the entire terms and conditions of the tender documents from Page No. \_\_\_\_ to \_\_\_\_ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I/we shall abide hereby by the terms / conditions/ clauses contained therein.

3. The corrigendum(s) issued from time to time by your department / organization too has also been taken into consideration, while submitting this acceptance letter.

4. I/we hereby unconditionally accept the tender conditions of above mentioned tender document(s)/corrigendum(s) in its totality/entirely.

5. I/we do hereby declare that our firm has not been blacklisted/ debarred by any Govt. Department/Public Sector undertaking.

6. I/we certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/organization shall reject the bid or terminate the contract, without giving any notice or reason.

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Yours faithfully

(Signature of the Bidder, with Official Seal)