



**TENDER DOCUMENT  
FOR  
PROCUREMENT OF SCIENTIFIC EQUIPMENTS**

<b>DATE OF ISSUE</b>	<b>01.01.2021</b>		
<b>PRE BID CONFERENCE</b>	<b>15.01.2021</b>	<b>10:00 hrs</b>	<b>(Annexure-I)</b>
<b>LAST DATE OF SUBMISSION</b>	<b>29.01.2021 up to 12.30 P.M.</b>		
<b>DATE OF OPENING OF TECHNICAL BIDS</b>	<b>29.01.2021 at 15.00 P.M.</b>		
<b>PLACE OF SUBMISSION OF TENDER</b>	<b>Birbal Sahni Institute of Palaeosciences, 53, University Road, Lucknow – 226007 (UP) India</b>		

**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES  
53, UNIVERSITY ROAD,  
LUCKNOW – 226007 (UP) INDIA**

Tel: 91-522-2742903, Fax: 91-522-2740098

Website: [www.bsip.res.in](http://www.bsip.res.in)

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## **INTRODUCTION**

1. Birbal Sahni Institute of PALAEOSCIENCES, 53, University Road, Lucknow (UP) is an autonomous institution under the Department of Science & Technology, Govt. of India. The Institute is pursuing research in PALAEOSCIENCES and allied subjects including Geochemistry and dating.
2. BSIP, Lucknow invites "Sealed bids" under **Two-Bid system** from (i) either manufacturer or (ii) an authorised agent for the equipment/item fulfilling the criteria laid down in Technical Bid format for the supply of equipments.

Tenders should be sealed, superscribed **with**  
**"Tender No. BSIP/TENDER/STORES & PURCHASE/2020-2021/**  
**and submitted only at the following office:**  
**DIRECTOR**  
**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES**  
**53, UNIVERSITY ROAD,**  
**LUCKNOW - 226007**

and should be submitted on or before the closing date i.e. **29.01.2021 at 12:30 hrs.**, if delivered personally and if the quotes are sent by post/courier, the tender must reach **BSIP, LUCKNOW** at the address given above before closing time and closing date.

BSIP is not responsible for delays of any nature including postal and force majeure. Tenders received after the due date will not be accepted under any circumstances

The schedule of opening of quotes is as follows and at the following venue:

	<b>Date</b>	<b>Time</b>
<b>Technical part Opening in the presence of intending Tenderers at BSIP, LUCKNOW</b>	<b>29.01.2021</b>	<b>15.00 hrs</b>

**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES**  
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**Tender No. BSIP/TENDER/STORES & PURCHASE SECTION/2020-21/**  
**Tender Notice**

Director, Birbal Sahni Institute of PALAEOSCIENCES, Lucknow- 226 007( India) invites tenders ( Parts-I Technical Bid, Part-II Commercial Bid) in separate sealed covers from (i) either manufacturer or (ii) an authorized agent for the equipment/item under two bid system.

**Supply of Scientific Equipments with accessories**

**AT**

**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, LUCKNOW**  
**53, University Road, Lucknow -226 007**

Tender documents can be downloaded from Institute web site <http://www.bsip.res.in>. The bidder has to submit the tender document fee of Rs.5,000/- ( Rs. Five Thousand only) +18% GST in the form of DD drawn in favour of Director, BSIP, Lucknow payable at Lucknow(UP) with Technical Bid-Part I.

**Date of Issue of Tender Document** : **01.01.2021**  
**Pre-Bid Meeting (item No1-4 of Annexure I)** : **15.01.2021 at 10.00 hrs**  
**Last Date of receipt of Tender** : **29.01.2021 upto 12:30 hrs.**  
**Opening of Tenders (Technical Bid only)** : **29.01.2021 at 15:00 hrs.**  
**Venue of Pre-Bid Meeting - BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, 53, UNIVERSITY ROAD, LUCKNOW-226 007.**  
The Institute reserves the right to reject any or all tenders without assigning any reason therefore.

Registrar  
Birbal Sahni Institute of Palaeosciences

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**53, UNIVERSITY ROAD,**  
**LUCKNOW - 226007**  
**Tel: 91-522-2742903, Fax: 91-522-2740098**  
**E-mail: [registrar@bsip.res.in](mailto:registrar@bsip.res.in)**  
**Website: [www.bsip.res.in](http://www.bsip.res.in)**

### **DETAILS OF TENDER AND TENDER NOTICE**

Tender in sealed cover is invited by Director, BSIP from manufacturers or authorized agents **for the Scientific Equipments with accessories for the use of the Institute.** Details of the equipment, number of units, their specifications, are given in **Annexure I** of this the tender document.

The tender document can be downloaded from the websites of BSIP at [www.bsip.res.in](http://www.bsip.res.in) One tender document is adequate even if bids are submitted for more than one item. Tender documents are available: From **01.01.2021 at 11.00 am to 29.01.2021 at 12.30 pm.** LAST DATE FOR SUBMISSION OF DULY FILLED UP SEALED TENDER AT BSIP, LUCKNOW is **29.01.2021 upto 12.30 pm.**

A pre-bid meeting would be held at BSIP, LUCKNOW at 10:00 hrs on 15.01.2021. Maximum of 03 authorized representatives of each bidder will be allowed to attend the Pre-Bid meeting. The date of Opening the Technical Bid will be on same day i.e. **29.01.2021 at 3:00PM.** BSIP, LUCKNOW reserves the right to accept or reject any or all the bids either in full or any part at its discretion without assigning any reason thereof.

Address for Communication: **BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, 53, UNIVERSITY ROAD, LUCKNOW – 226 007, Tel.: 91-522-2742903 Fax 91-522-2740098.**

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## **TERMS AND CONDITIONS – GENERAL**

1. Tender documents shall be issued by BSIP at LUCKNOW to manufacturers / authorized agents.  
**The Tender Document fee of Rs 5000/- +18%GST (non-refundable) should be separately enclosed with the technical part and be submitted on or before the closing date.**  
**Separate Tender documents should be required for each item along with separate Tender fee.**
2. Modifications, if any, made in the above documents will be done by addenda / corrigenda, copies of which will be sent in duplicate to each bidder before the due date of the tender. One copy should be signed, sealed and submitted along with the technical bids. The bidder shall not make any additions / deletions to or amend the text of the documents except in so far as may be necessary to comply with any addenda / corrigenda issued. **The bidders shall use only tender documents as issued for submitting his bid and shall comply with various terms and conditions.**
3. All pages of tender documents shall be signed by the person authorized to file the tender.
4. The full name of the person authorized to file the tender, designation, current and main office address, Phone No., Fax No. & E-mail address shall be indicated in the tender.
5. Tenders sent through E-mail, Fax and Telex will not be entertained.
6. The tender should be filled in and submitted in English. All accompanying literature and correspondence shall also be in English.
7. No claim for costs, charges, expenses incurred by the bidder in connection with preparation of tender submission and for subsequent clarifications of their tender shall be accepted.
8. BSIP will not be responsible for any typographical errors/ambiguity/ additions /omissions committed by the bidder while filling up of the tender.

### **9. Earnest Money Deposit :**

1. Tender must be accompanied by Earnest Money Deposit (EMD) as indicated in Annexure-I for each item being supplied in the form of DD/BG in favour of Director, BSIP, payable at LUCKNOW. EMD shall be paid in **Indian currency only**. In case of receipt of EMD in Indian currency from abroad, same shall be refunded in Indian currency only. BSIP will not be responsible for refunding the EMD in foreign currency.

- 2 The bids are to be submitted in two sealed envelopes. Technical Bid (Envelope I) shall contain Earnest Money Deposit (EMD), prequalification documents, tender conditions and contract form duly signed by authorized person or persons as a token of acceptance of terms and conditions of supply and work qualification as per **Annexure VI**. Financial Bid (Envelope II) shall contain price schedule of quantity.
- 3 The EMD deposit by the successful bidders shall be held back towards the security deposit and will be refunded after six month of successful installation of the equipment/machine at site.
4. The EMD of the unsuccessful bidder will be returned within one month from the date of opening of the technical bids

**Important : EMD should be kept in the technical part only. If the EMD is not found in the technical part, then the quote will be rejected outright. No Clarifications shall be taken by BSIP.**

10. **The E.M.D. is payable by all categories of tenderers and no exemption from E.M.D. is permissible. Quotes without E.M.D. shall be treated as invalid/ rejected.**

**EMD submitted in the form of Fixed Deposits will not be accepted.**

11. Technical Compliance statement for the tendered item is a pre-requisite for evaluation. Therefore the same must be submitted with the technical part. **Any falsification / suppression of facts in the compliance statement would lead to the rejection of the quote, along with forfeiture of the E.M.D.** Corresponding to each technical specification in the compliance statement, relevant serial no. / page no. / line no. etc., in the data sheet should be indicated. Incomplete compliance statement may lead to rejection of the quote.
12. The bidder shall be deemed to have full knowledge of documents and no extra charges consequent on any misunderstanding or otherwise shall be allowed.
13. Any question regarding the tender document and discrepancies shall be directed to the Tender Issuing Authority in writing minimum 3 days prior to the due date of submission of tender. The Tender Issuing Authority will issue all clarifications, interpretations, meanings and specific directions, if any, in duplicate in writing to all the bidders. **One copy of these shall be returned duly signed and seal affixed along with the bids.**
14. The bidder shall be deemed to have satisfied himself before tendering as to the Correctness and sufficiency of his tender and about the rates quoted by him and cover all his obligations under the tender.
15. Bids submitted by manufacturers and authorized agents only shall be considered.

## 15(A). Authority of signing

If the tender is submitted by an individual, it shall be signed by him.

If the tender is submitted by a proprietary firm, it shall be signed by the proprietor.

If the tender is submitted by a partnership firm, it shall be signed by all the partners of the firm or by a partner holding the power of attorney for the firm for signing the tender, in which case, a certified copy of power of attorney shall accompany the technical bid.

If the tender is submitted by a limited company or a corporation, it shall be signed by a duly authorized person or the person holding the power of attorney for signing the tender, in which case a certified copy of the power of attorney shall accompany the technical bid.

## 16. Price & currency bid

The tender shall be filled in English with a neat hand / type and all the figures and words shall be legible.

The rates shall be written both in words and in figures. The bidder shall also show the amount of each item, the total of each section and the grand total of the whole tender.

Correction, if any, shall be made by crossing out, initialing with date and rewriting. In case of conflict between the figures and words in the rates, the latter shall prevail.

The tenders shall be verified by the bidder for accuracy in the arithmetical calculations, prior to submission.

### 16.1 Technical details shall contain

- Original Tender document **duly signed** by the authorised person on all pages.
- Compliance to technical specifications of the equipment/item for which bids are submitted – Authorized person to indicate the **compliance of technical specifications in the respective pages** of the tender document and sign the same.
- **Compliance to the terms and conditions** of the tender document - Authorized person to specify, “**all the above terms and conditions will be complied with**” and signed in respective pages of the tender documents, where “terms and conditions” are given.
- Adherence to the stipulated **delivery schedule** of the equipment/item – Authorized person to specify “**delivery schedule given above will be complied with**” and signed in respective pages of the tender documents, where “**delivery schedule of each of the items**” is as given in **Annexure III**.
- **Proof that the bidder** is (i) either manufacturer or (ii) an authorized agent for the equipment/item for which the bid is submitted.

- List of organizations in India and abroad, along with Contact Person, address, Tel. No., Fax No. etc., to which **similar make/model** of the equipment were supplied.
- Compliance that the bidder has manufactured or supplied the equipment during the past 2 years and **performance report from at least 2 such users** for the past 2 years.
- Covering letter, in the letter head of the bidder stating:
  - a. That the minimum **warranty period of one year**.
  - b. That the bid **conforms to the terms and conditions** of the tender
  - c. Confirmation about the **supply of Certified Reference Materials/Samples** for checking the performance of the testing equipments, wherever applicable.
  - d. Confirmation that the quoted rates are valid till 31-03-2020.
  - e. The details regarding the service centers, stocking of spares etc.,
- Addenda / corrigenda /clarification issued by BSIP before due date of tender, duly signed by the authorized person.
- Descriptive leaflet/brochure giving the technical details of the equipments.
- A letter indicating assumptions, criterion, technical alternative etc., if any. However, the alternatives suggested by the bidder would not be taken as the basis for technical/commercial evaluation of the bids.
- The probable life expectancy of the equipments under normal conditions of operation should be stated wherever applicable.
- Details of pre-installation requirements including space, size of the table required, power point ampere, etc.
- Power of attorney authorizing the person who has filed the tender, if applicable.
- A copy of the certificate for the calibration of the similar makes and model equipment for which bid is submitted from an accredited calibration laboratory or National Physical Laboratory, wherever applicable.

## 16.2 Commercial details shall contains

- a) Total cost of the main equipment and accessories (imported/indigenous), required for the functioning of the equipment, including the test control system, printer, packing & forwarding etc., duly filled and signed **in the format prescribed in the tender document at Annexure - II**. No money other than the total indicated above will be payable on any account.
- b) Annual Preventive Maintenance charges for the next 3 years, after the expiry of the warranty period, in the format prescribed in the tender document at **Annexure - II**.
- c) The pre installation requirement should be mentioned in the bid.

## 17. **Validity of the tender**

Rates quoted by the bidder shall be valid up to 120 days after opening of commercial bid

The Bidder shall not withdraw or revise or alter any conditions, rate(s) quoted within this stated period, unless he is called upon to do so on mutual agreement/negotiations.

**17. Opening of tender**

The tender shall be opened by a Committee constituted by the Director, BSIP at LUCKNOW at the time, date and venue as given in the “Tender Notice”.

**18. Agreement**

The successful bidder shall sign an Undertaking on letter head as per the format prescribed in **Annexure-V** before releasing of the Purchase order by BSIP. A copy of The Purchase order once received should be returned as a token of acceptance of the terms and conditions of the Purchase Order.

**20. Criterion for rejection**

BSIP reserves the right to accept or reject any tender or reject all tenders without giving any reasons whatsoever for their decision.

Tenders are liable to be rejected in which any of the prescribed particulars / information is either missing or incomplete in any respect and/or if the prescribed conditions are not fulfilled.

Tenders which are found to be technically non - responsive shall be rejected and their commercial details shall not be considered.

Canvassing in connection with tender is strictly prohibited and tender submitted by bidder who resorts to canvassing will be liable to rejection.

Tenders containing specific conditions of the bidder other than the terms and conditions given in the tender document and not acceptable to BSIP are liable to be rejected.

If the validity of the tender is not up to **31.03.2021** the tender will be rejected.

If the tender document duly signed by the authorized person on all pages is not submitted, the tender will be rejected.

BSIP caters to wide range of customers / stakeholders including the manufacturers/exporters. Hence, Purchase Committee may at its discretion give preferences to more popular brands of equipments, which give results that, are widely accepted internationally by buyers abroad and the decision of the Committee will be final.

Before submission of the tender, the prospective bidders are expected to examine technical specifications of the equipments required, terms and conditions, etc., given in this tender document. Failure to furnish all information required in the tender document may result in the rejection of the bid.

BSIP reserves the right to cancel items, from the list of requirement of equipments without assigning any reason thereof.

## **TERMS AND CONDITIONS- SPECIAL**

1. Cost details are to be filled up in the prescribed format as given at **Annexure – II** for all the equipments as applicable to imported /indigenous indicating therein total CIF charges.

2. All accessories, start up kit required for installation & commissioning the main equipments are to be specified and quoted

3. The terms of payment in case of imported equipments shall be:

**100% irrevocable Letter of Credit (L/C) in favour of the Principal supplier**

a) 90% will be paid against delivery of the equipment in good condition.

b) 10% remaining amount will be paid after successful commissioning of the equipment, demonstration of satisfactory performance and imparting training to the technical personnel of the laboratory concerned.

5. The terms of payment in case of indigenous equipments shall be:

a) 90% of the ex-works price of the equipments will be paid against invoice and delivery of the equipment in good condition.

b) 10% remaining amount plus packing, freight and insurance charges will be paid after successful commissioning of the equipment, demonstration of satisfactory performance and imparting training to the technical personnel of the laboratory concerned.

6. For indigenous items, the bidder should take responsibility for delivering the equipments inside the premises of the respective BSIP at Lucknow and its Associate partners as mentioned in the Purchase Order.

7. The suppliers of the equipment should provide adequate training for at least 2 technical personnel of the laboratory per equipment including trouble shooting etc., and making them confident of operating the equipment independently.

8. The bidder shall adhere to the delivery period of the equipment/item as committed by him as indicated in **Annexure III** of the tender document, whichever is earlier. Penalty for non-execution of the order within the delivery period shall be 1% of the cost of the equipment/item for every week of delay.

9. The delivery installation & commissioning period of the equipments as agreed to should not be extended; under normal conditions. Suitable penalty for non-execution of the order may be enforced to the extent of 1% of the cost of equipment for every week extended. In case of the delay beyond scheduled

period due to some unforeseen reason, written permission is required from the Director, Birbal Sahni Institute of Palaeosciences, Lucknow with proper justification to avoid penalty.

9. The bidder shall give warranty for at least one year in respect of items quoted.
10. During the warranty period, regular servicing/maintenance should be undertaken free of charge, including replacement of defective parts/travel cost, etc. Subsequently, servicing/maintenance should be undertaken by the authorized agency of the manufacturer / supplier as per the annual maintenance contract conditions.
11. Operation manuals, calibration procedures and other instruction manuals should be provided along with each of the equipment.
12. The bidder shall also mention the probable life expectancy of the equipments under normal conditions of operation should be stated wherever applicable
13. Terms for service contract (comprehensive or non-comprehensive) after the expiry of warranty period are to be included.
14. The Test Control Systems like computer and printer, compatible to the main equipment, are to be supplied indigenously with latest configuration and licensed operating system.
15. If the equipment/item is not manufactured by the bidder, authorization of the manufacturer to the bidder for marketing and servicing the equipments in India should be enclosed along with the technical bid of the tender. In the absence of such authorization, the tender will not be considered at all.
16. In case of short supply or wrong supply of equipments, its parts or accessories or supply of items in damaged conditions, it is the responsibility of the bidder to arrange for the supply of the required items in working condition as per the purchase order, within a reasonable time. Any additional expenditure, whatsoever, for the above will be borne by the bidder only.
17. The specifications given in this document are the minimum requirement. The bidders are free to offer equipments with better features also. However, the evaluation shall be based on the features mentioned in the tender document. If different model are quoted, the cost details may be given in separate sheet
18. Orders for the supply of items, once placed with successful bidder is non transferable and no sub-contracting is permitted. BSIP, Lucknow reserves the right to cancel the order in such event.
19. Any non-fulfillment of the stipulation given above will make the bid invalid.
20. The full payment will be released to the bidders only after completion of satisfactory performance check of the equipment.

21. In case of computer related equipment, the bidders have to quote for indigenous computer only instead of imported computers, if any.
22. The bids shall first be evaluated for their “technical responsiveness” which shall inter-alia include,
  - (i) Proof that the bidder is (i) either manufacturer or (ii) an authorized agent for the equipment/item for which the bid is submitted,
  - (ii) Compliance to technical specifications of the equipments for which the bid is submitted,
  - (iii) Adherence to the warranty period,
  - (iv) Documents in support of compliance to the calibration of the equipment and its traceability to national/international standards of measurement and proven performance through proficiency testing, wherever such requirement is specified,
  - (v) Necessary documentary proof that the bidder has manufactured or supplied the equipment during the past 2 years along with the list of such customers and performance report of the equipment from at least 2 such customers/users for the past 2 years,
  - (vi) Details regarding the service centers, stocking of spares etc.
  - (vii) Confirmation about the supply of Certified Reference Materials/Samples for checking the performance of the testing equipments, wherever applicable.
  - (viii) Compliance to all other relevant and critical terms and conditions of the tender.
  - (ix) Validity of the tender upto **31.03.2021**.
  - (x) **If any of the above mentioned parameters are not fulfilled, the bid will be considered as technically non-responsive.**
23. The commercial details of those bidders who are technically responsive only shall be evaluated based on the following criterion :
  - (i) Total price of the equipment as CIP / CIF for imported items.
  - (ii) Total price of the indigenous items should include delivery charges up to the location at BSIP, Lucknow, India.
  - (iii) AMC charges for three years after the expiry of the warranty period.

**Annexure I**

**DETAILS OF ANNEXURE**

**List of equipments to be procured**

Item No.	Particular of Items	Qty.	EMD in DD/ BG/ BC	Performance Security
1.	<b>(IRMS)</b>	1	5%	10%
2.	<b>Inductively Coupled Plasma Optical Emission Spectrometer</b>	1	5%	10%
3.	<b>Electronic Fusion Bead Machine</b>	1	5%	10%
4.	<b>FTIR Spectrometer with Microscope</b>	1	5%	10%

## **COMPLIANCE STATEMENT TO SPECIFICATIONS OF EQUIPMENTS**

(Compliance with specification column is to be filled up by the bidder stating “YES/NO” as the case may be)

### **Item: IRMS with accessories**

#### **The Instrument (IRMS) Configuration:**

The Geochemistry division at Birbal Sahni Institute of Palaeosciences (BSIP) , Lucknow is willing to procure an extended geometry Stable Isotope Ratio Mass Spectrometer with auto-sampler module(s) for isotope analyses of C, N, O, S and H including carbonate clumped Isotopes and Triple Oxygen in samples from geological archives. The instrument is to be optimised for continuous flow operation but with a clear option for optimised operation in dual-inlet mode. Alternative specifications allowing similar performance may also be considered. The general configuration of the instrument should have the following components:

Item I. High Sensitive Mass Spectrometer for Stable Isotope in 8-10 KVA Range: I

#### **1. Analyser Configuration:**

- 1.1. Analyser to be designed in a monolithic and weld-free unit and it should also be consisting of integrated heating option with computer controlled operation.
- 1.2. Mass range & Resolution: Mass range from 1 to 150 u (and above) at full acceleration voltage. For Carbon, Nitrogen, Oxygen, Sulphur:  $m/\Delta m > 200$  (10% valley); For Hydrogen:  $m/\Delta m > 25$  (10% valley)
- 1.3. The Collector (Faraday cup) assembly:
  - *Faraday cup assembly* suitable for all standard applications involving  $N_2$  and  $CO$  (28, 29, 30),  $NO$  (30, 31, 32),  $O_2$  (32, 33, 34),  $CO_2$  and  $N_2O$  (44, 45, 46, 47, 48 and 49), and  $S_0_2$  (64, 66).
  - *H/D Collector system*- Apart from the Collector assembly, additional faraday cup(s) should be provided for H/D applications in Dual Inlet and Continuous Flow mode with separate collectors for  $H_2$  and  $H_3$
  - Stable, linear high Voltage to Frequency Converters (VFC) with zero dead time.
- 1.4. Abundance sensitivity to be at least or better than 2 ppm ( $CO_2$ ) in continuous flow modes.
- 1.5. High sensitivity, electron impact source with self-aligning source magnets and filament. Sensitivity to be  $\sim 900$  molecules per  $m/e = 44$  ( $CO_2$ ) ion in continuous flow mode of operation whereas in dual inlet mode it should be  $\sim 600$ .

- 1.6. Source linearity to be better than 0.02 ‰ per nA at a beam intensity of  $2 \times 10^{-8}$  A for CO<sub>2</sub>, measured on the 45/44 ratio. This is equivalent to less than a 0.3 ppm change in 45/44 ratio per nA.
- 1.7. Same source filament should be used for all the species to be analysed.
- 1.8. Sets of operating parameters (including ion source parameters) for IRMS and preparation systems to be stored in parameter files, which can be recalled and edited for automatic sample runs. Option should also be there for automatic/manual control routines for source tuning.
- 1.9. H<sub>3</sub><sup>+</sup> correction factor to be < 10 ppm per nA .
- 1.10. Programmable electromagnet with closed loop feedback field control.

## 2. Vacuum System

- 2.1. Novel strategy for true differential pumping via 70 l/s drag stage turbo-molecular pumps, backed by a minimum two-stage rotary pumps. The turbo pumps should also be having an active cooling device for their smooth operation. The system could be capable of attaining in the high vacuum ( $\sim 10^{-8}$  mbar) range.
- 2.2. Automatic system protection in case of power failure.

## 3. Continuous Flow (CF) and Dual-Inlet (DI) Interfaces

- 3.1. CF capillary interface with triple port reference gas injection.
- 3.2. Dual micro-inlet of mono-block construction and ultra-low dead volume. Viscous flow adjustable crimp capillaries. Turbo pump (70 l/s) for changeover valve HV pumping and two-stage rotary pump.
- 3.3. Option of 10-sample multi-port inlet to interface with the DI system, with additional option of tube-crackers for releasing sample gases.

## 4. SAMPLE PREPARATION MODULE(S) (Optional)

- 4.1. *Device (or measurement of Carbonates- quantity 1)* For the analysis of carbonate samples with extremely low amount with excellent linearity with its Interface options with Mass Spectrometer. The device must have automated sample preparation capabilities for the precise determination of the isotope ratios of gases like CO<sub>2</sub> from air or CO<sub>2</sub> released from carbonates. The Auto-sampler or multi-position sampler (to be operated by the mass spectrometer's host computer) should present successive samples to the preparation system and it should have option for 50-100 sample positions in different vial capacities (1-10 ml).

## 5. Electronics

Flashover-resistant source electronics with full control and monitoring of all instrument parameters through on-board microprocessors (distributed intelligence) and software

## 6. Host Computer and associated components.

- 6.1. The mass spectrometer and any specified preparation system attached to it shall be driven from a dedicated computer system having >3 GHz or faster processor speed and 8 GB or more RAM, and running through Windows 10 or latest version operating system.
- 6.2. The computer system must include a Read/Write DVD ROM drive for archiving, a network card with capability to network graphical data to users' e-mail terminals. 1 GB graphic card.
- 6.3. The computer system should include a 19" or 21" LCD screen and desktop colour laser printer.
- 6.4. A Notebook PC for analyzing & plotting data generated from the IRMS shall also be supplied with latest specification (Pentium Dual Core, 2.8 GHz or faster processor, 4 GB or more RAM, 5 TB HDD, and latest Windows OS with 15" TFT screen, DVD/CD-RW combo, 56 K modem USB Ports etc.).

## **7. Software (Quantity 1)**

- 7.1. The software shall provide fully integrated control of analysers and sample preparation systems.
- 7.2. The software shall be capable of safe machine operation, be able to read output values of all important parameters involved in machine operation and should be exportable to common MS-Office format.
- 7.3. The software should allow incorporation of user-written routines in a suitable flexible programming language.
- 7.4. Software to be fully compatible with Windows latest version operating systems.
- 7.5. Source code to be made available to the user.
- 7.6. Free software upgrades to be ensured for lifetime, excluding cost of any hardware up gradation deemed necessary.
- 7.7. Software should also be compatible with Remote diagnostic protocol(s) using a telephone modem link (to be provided by supplier).
- 7.8. Software should be of open platform type

## **8. Instrument performance**

- 8.1. Quotation to include full printed public domain document booklet or leaflet or website of the principle describing specification of mass spectrometer performance, including both internal and external precision in measurement of H,C,O isotope ratios on standard gases in CF and DI modes, as appropriate.

## **9. Analytical Performance**

- 9.1. Quotation to include printed document stating clear, unambiguous statements of expected routine performance or the various preparation systems in combination with the mass spectrometers. It should slate:
- 9.2. The overall precisions derived from analyses of multiple replicate samples of standard materials, with a clear indication of any effects in relation to sample size (especially important in the case of carbonate samples).

9.3. Overall sample analysis times and expected throughput of samples per day using batch loading of multi-position sampler/auto-sampler.

## **10. Manuals and diagnostic tools**

10.1. Full service manuals printed as well as soft copy with circuit diagrams and circuit descriptions must be supplied, along with diagnostic tools including interface cards and software, plus any specialised mechanical tools required for instrument servicing or repair.

10.2. Quotation should include an option for training for two persons in routine operation and maintenance of all instruments and modules supplied, to include instruction in fault diagnosis, servicing and on-site repair procedures. Training should be given on the site of installation as well as at an internationally well established laboratory or at the laboratory of manufacturer.

10.3. Where operation requires provision of liquid gases, compressed air or compressed gases, the quotation should include provision of all appropriate connectors, valves and control systems for these. Suitable vessels (e.g. Dewar) should either be included or a clear indication of requirements provided, including appropriate volumes and qualities for routine, trouble-free operation for these. For each module (mass spectrometer, preparation system) the quotation should include an indication 01' all consumables required per full batch of samples.

10.4. The quotation should include a clear statement of all site requirements for installation and operation of the equipment specified.

10.5. The quotation should include cost of the full set of tools kit including swagelock fitting (of 1/16, 1/8 and 1/4), spanners, pliers, Wrenches, etc (which are required to the Factory as well as the Lab engineers) for the smooth trouble shooting of the instrumental problems.

## **11. Warranty** for three years along with optional additional 2 years guaranteed supply of spares and consumables.

11.1. A three years warranty (from the commissioning of the instrument) should be provided and should include routine maintenance calls and for the Engineer to visit BSIP, Lucknow during regular as well as emergency on SOS basis. The quotation should also include an optional extended warranty/AMC for additional 2 years after the expiry of the full warranty period.

11.2. Quotation for spares and consumables for three years for each instrument and preparation device should be included. (i.e., the supplier should separately quote for all essential spares and consumable kits which are not covered under warranty for the basic instrument and peripherals, essential for trouble-free performance for at least 3 years).

## **12. Supporting Facilities to be quoted**

The supporting facilities for Mass Spectrometry are

*12.1 Dehumidifier:* This is required for eliminating atmospheric moisture which may affect measurements.

*12.2. Wall Mounted Gas Supply Purification System* for CF operation.

12.3. *UPS System*: An appropriate, branded UPS system (at least 20 KVa) required for complete operation of the system (IRMS+ attachments) with a backup of 1 hours. *Isolation transformer* This is required for eliminating spikes so that it cannot damage the electronics console.

12.4. Ultra high pure gases (as per analytical requirement of CNSOH system) with cylinders, regulators Purification Panels and Tubing till the Mass Spectrometer for each analysis. One number of each reference Gas and 2 Nos. of Helium and Oxygen should be included in the quotation.

**13. Standards for the calibration and further use:** A set of elemental and isotopic standards (in International practice) for the calibration for C, H, O, N and S analysis covering the testing (and further laboratory use) of all the mentioned sample attachments/modules (Gas Bench, FA, Carbonate analysis system etc) should be provided with the purchase. Therefore, cost of the important standards should be given clearly in quotation.

**14. Installation and commissioning:**

14.1. The representative of the supplier firm will install the instrument in laboratory at BSIP and fully demonstrate analysis of some test samples to the satisfaction of the user at BSIP. The demonstration should be given covering all aspects of the analysis. The time given to this activity (explanation of the instrument parts and functioning and demonstration of the sample analysis) should be adequate and not less than 10 days. A certificate to this effect will be issued by the user department.

14.2 All the arrangement regarding the testing and commissioning of the instrument (IRMS along with its attachments and associated gadgets /reagents/connections/Gas/Cylinders with regulator etc ....) must be completed by the supplier on ***the turn Key basis***.

**15 Personnel Training**

15.1. Two weeks training (instrumental, trouble shooting & standard analytical protocols etc.) at the factory (free for operation and maintenance for two persons that is covered in the IRMS basic system as well as inlets and peripherals ordered with the system) and Air Ticket, lodging and boarding including incidental expenses.

15.2. During the installation of the IRMS at BSIP, Lucknow, appropriate training in handling of the instrument shall be provided to the group of IRMS' users.

## **Specification for ICP-OES**

A bench top state-of-the-art model Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) for analysis of geological and environmental samples.

1. Vertical/horizontal plasma with dual view capability – Axial and radial. Plasma optimization should be through software interface with programmable power, start and shutdown of plasma.
2. The system should be with state-of-the-art solid state RF generator with 40/27 MHz frequency with stability better than 0.01%. Solid state RF generator with warm up time of <15 minutes. Power output range should be 800-1550 Watts for 40 MHz and 1400 – 2000 Watts for 27 MHz, with increments of <1 Watts. The power output should be controlled by software. Flow rates of plasma and nebulizer of all channels should be independently controlled through computer programme. RF coil cooling unit may be inbuilt/external unit.
3. Spectral range should be 167-850 nm. Instrument should be based on high dispersion Echelle based polychromator or double mono-chromator optical system with a resolution better than 0.007 nm @ 200nm.
4. Built-in solid-state detector based on CCD/CID/CMOS technology covering entire wavelength range (167 to 850 nm). Detector must receive analyte signal as well as reference signal simultaneously during each run, in order to avoid wavelength drift while extended operation.
5. Argon flow for plasma, Auxiliary and nebulizer should be variable, and software controlled. Plasma torch unit (torch, spray-chamber, nebulizer, etc.,) must be easily detachable and mountable with the main instrument without the need for realignment. The accessories should include HF resistant assembly. Standard V-grove nebulizer/equivalent for introducing high matrix samples and concentric nebulizer should be supplied along with the system.
6. Compact and integrated auto-sampler which can accommodate more than 50 samples for automatic uninterrupted sample introduction controlled by software.
7. Demonstrated in-run precision for a suit of elements should be less than 1.5% at ppm and ppb level in 3 hour long run. ICP should also demonstrate precision less than 3% RSD for all elements in high matrix/TDS conditions (20 % NaCl) in a 3 hour long run.
8. Instrument should be supplied along with computer with standard up-to-date windows-based software for the system control, operation, data acquisition and data reprocessing. It should have wavelength automatic selection, automatic generation of coexistent element information, Qualitative analysis, Quantitative analysis, can store data for entire wavelength range. All results and spectra should be stored and retrievable for reprocessing and reporting. Copy of the software should be provided separately for installation, if computer need to be changed in future.
9. Installation, demonstration, and training for user on routine sample analysis should be done at BSIP. Precision of the measurements in ppb and ppm range should be within 2% which needs to be demonstrated during the installation of the equipment.

10. PC and laser printer should be included. (PC: i5 processor or better, HDD-2TB or more, RAM-8GB or better, 22-inch LED TFT monitor, or better, 64 bit)
11. Exhaust system, argon gas purification unit, compressor and external chiller unit (if any for operation) should be supplied and installed along with the instrument.
12. Quote should include UPS power back-up (for 30 minutes) supply and installation.
13. It should include additional set of essential spares (torch assembly, maintenance kit for demountable torch assembly, nebulizer, spray chamber, HF Sample introduction Kit, moisture trap, capillary tubes). Regulator and Argon gas cylinders (for 3 cylinders) should be supplied and installed.
14. Three years comprehensive warranty, followed by five years of on-site servicing

## **Technical Specification for Fusion Bead Machine**

**(A) Productivity:**

1 samples at a time for sample throughput of minimum 3 fusions per hour.

**(B) Heating requirement:**

1. Electrical resistance heating.
2. Heating elements supporting up to  $1200^0\text{C}$  for a great resistance.
3. Heating chamber temperature  $1200^0\text{C}$  or more
4. There should be provision to monitor Temperature chamber stability.
5. There should be a provision to monitor and display temperature inside the heating chamber.
6. The bead machine should not need any external cooling device like chiller.

**(C) Electrical requirement:**

1. Voltage: Should operate at standard Indian Voltage conditions 230-240V
2. Frequency: 50-60 Hz
3. External power supply

**(D) Programmable Fusion Parameters:** there should be provision to program following parameters to insure stable and reproducible glass disks.

1. Temperature
2. Time
3. Rate of heating
4. Crucible rocking speed
5. Cooling air flow

**(E) Security features:** The offered system must be equipped with following security features:

1. Integrated safety door
2. Emergency stop button
3. Can operate supervision free
4. Fully automated
5. The instrument should comply with International safety norms as per CE standard.

**(F) Software and operation with following features: -**

1. One touch operation
2. Touch screen
3. Windows based system
4. Should contains present programs
5. Possibility to create new fusion programs and modifies the present programs
6. Programmable pre-heat mode
7. Should be possible to connect to external PC

**(G) One mold holder for fusion instrument. To be used with 40 mm diameter platinum molds.**

1. Four Pt-Au(5%) mold, having an internal diameter of 40 mm, a nominal weight of 35 g and an internal height of 4.8 mm. Used for glass disk production. This platinum-gold alloy is universally accepted as the material of choice for crucibles and casting molds for XRF analysis.
2. Four, 26ML 30G Flat Bottom Crucible (Pt-Au5%) 25 ml, 30 gm.
3. 4 kg High-purity (99,98+%) pre-fused flux to prepare samples for XRF or ICP analysis. Composition : 100 % Lithium Tetraborate. Properties: spherical vitreous beads, anhydrous and non-hygroscopic, homogeneous particles, no dust, controlled granulometry, high fluidity.
4. 4 kg High-purity (99,98+%) pre-fused flux to prepare samples for XRF or ICP analysis. Composition : 100 % Lithium Metaborate. Properties: spherical vitreous beads, anhydrous and nonhygroscopic, homogeneous particles, no dust, controlled granulometry, high fluidity.
5. 9 kg High-purity (99,98+%) pre-fused flux to prepare samples for XRF or ICP analysis. Composition : 66,67% % Lithium Tetraborate, 32,83% Lithium Metaborate and 0,5% Lithium Bromide.. Properties: spherical vitreous beads, anhydrous and non-hygroscopic, homogeneous particles, no dust, controlled granulometry, high fluidity.
6. Add on accessories requested to prepare borate solutions with LeNeo Fusion Instrument. Content: 1 x magnetic agitation spin bar, 1 x Teflon beaker 150 ml Zirconium crucible for sample preparation by fusion for ICP analysis. Specially designed for peroxide or carbonate fusion. Volume of 25 ml. Zirconium lid for 25 ml zirconium crucible. Used for sample preparation by fusion for ICP analysis. Specially designed for peroxide or carbonate fusion.
7. A set of synthetic standards that will handle fused bead major element analysis of many of the elements required by the mining and mineral industries. Twenty multi- element synthetic standards to be delivered as powders. These synthetic standards should able to cover a wide range of oxides and to be used for calibration and to verify in-house standards for press powders pellets.
8. Set of CRMs with full traceability of following elements as per the following range should be provided. All CRM's (minimum 5 gm each) should be used to make fused bead locally to be supplied.

Sl. No.	Elements	Range (%)
1.	Fe <sub>2</sub> O <sub>3</sub>	5 – 82
2.	SiO <sub>2</sub>	0.2 – 80
3.	CaO	0.01 - 80
4.	MnO <sub>2</sub>	0.02 – 75
5.	Al <sub>2</sub> O <sub>3</sub>	0.1 – 75
6.	TiO <sub>2</sub>	0.01 - 40
7.	MgO	0.02 – 70
8.	P <sub>2</sub> O <sub>5</sub>	0.005 – 35
9.	SO <sub>3</sub>	0.005 – 50
10.	Cr <sub>2</sub> O <sub>3</sub>	0.1 – 10
11.	NiO	0.01 - 10
12.	ZnO	0.01 - 10
13.	BaO	0.01 - 40
14.	V <sub>2</sub> O <sub>5</sub>	0.01 – 10
15.	Na <sub>2</sub> O	0.01 -55
16.	K <sub>2</sub> O	0.01 -40
17.	CuO	0.01-8
18.	SrO	0.01-20
19.	ZrO <sub>2</sub>	.01-40
20	PbO	0.01-10

Relative accuracy of above mentioned elements of concentration from .01 to 1 % should be  $\pm 5\%$ , 1% to 10 % should be  $\pm 2\%$  and above 10 % to 80% the relative accuracy should  $\pm 1\%$ , and 80% and above relative accuracy should be 0.5%.

## **Specification for FTIR spectrometer with Microscope**

### **FTIR specification**

Wavelength Range	: 4000–600 $\text{cm}^{-1}$ with moisture resistant long durable ZnSe Optics (with ZnSe beamsplitter).
Wavenumber Accuracy	: 1.5 $\text{cm}^{-1}$ or better
Wavenumber reproducibility	: 0.005 $\text{cm}^{-1}$ or better
Spectral Resolution	: $< 2\text{cm}^{-1}$
Peak to peak noise apodization.	: 30,000: 1 for 1 minute, at 4 $\text{cm}^{-1}$ without apodization.
Source	: Mid IR source, user friendly with 5 years free replacement warranty
Reference Laser	: Solid state laser with 10 years warranty.
Interferometer	: permanently aligned with minimum 10 years warranty
Detector	: Linear DLaTGS Detector (inferior detectors like LiTaO <sub>3</sub> not accepted)
Optics	: Completely sealed and desiccated optics with life indicator
Software	: Suitable software for Spectral collection, Quantitative analysis, baseline correction, smoothening, derivitazation, spectral deconvulation, library search etc. Windows 10 operated
Accessories	: 1) Hydraulic press kit with 13 pellet holder and die. Kit should also accompany with Agate, Mortar and Spectroscopy quality KBr powder. 2) Diamond ATR accessory should be quoted for analysis of corrosive and reactive solids, liquids, resins, powders, gels etc Libraries of 10,000 compounds including pharma, polymer etc. 3) Suitable branded computer and printer.
Installation and Familiarization	: At lab by dedicated engineers

### **Microscope Specification**

Spectral Range	: 600 – 4000 $\text{cm}^{-1}$
Modes of operation	: Reflection , ATR , and transmission
Micro ATR	: Clip on diamond ATR to cover entire spectral during microscopy
Field of View	: 1900um using visible camera, with resolution 5 mega pixel.

Sampling Accessories	: Diamond Compression cell and sample preparation kit including coated mirrors, needles, forceps, roller knife, gold coated mirrors and ir reflection mirrors (Kevley, 25 numbers)
Microscope stage	: 1x 3 inch travel XY stage with coarse/fine focus and condenser focus.
Software	: Windows 10 operated software for For both visualization and collection of Visible image and IR spectrum.
Minimum working distance	: 1/3" , with coarse/fine Z stage alignment.
IR image masks	: Variable from 60 micron to 2000 micron

## **Annexure II**

### **FORMAT FOR COST DETAILS**

(Cost particulars should be given in this format Equipment wise/ accessories wise separately)

**Note: All the cost particulars should be furnished either in Indian Rupees or Foreign Currency. If more than one model of the Equipment is quoted, use separate sheets**

#### **Part 1: Cost details of imported equipments/instruments**

<b>Name of the Equipment:</b>	
-------------------------------	--

S.No.	Cost Details for foreign components	Cost with currency
i)	Total CIP / CIF Cost (with full detailed break- up) BSIP, Lucknow	
ii)	AMC details: - AMC rate/per year (comprehensive/non-comprehensive) for the next 3 years, after the expiry of warranty period including the accessories (Two preventive and one breakdown visits)	1 <sup>st</sup> Year: 2 <sup>nd</sup> Year: 3 <sup>rd</sup> Year:
	Total	
<b>Delivery schedule of the equipment:-</b>		months

#### **Part 2: Cost details of Indigenous equipments/instruments**

<b>Name of the Equipment:</b>		
S.No.	Cost Details of indigenous items	Cost in Rs.
i)	Total Cost (with detailed break-up)	
ii)	AMC details (including the accessories):- (a) AMC rate comprehensive/non-comprehensive cost for the next 3 years, after the expiry of warranty period	1 <sup>st</sup> Year: 2 <sup>nd</sup> Year: 3 <sup>rd</sup> Year:
	Total	
<b>Delivery schedule of the equipment:-</b>		months

**Annexure III**

**DELIVERY SCHEDULE OF EQUIPMENT**

<b>Sr. No</b>	<b>Equipment</b>	<b>Delivery Schedule from the date of acceptance of Purchase Order – maximum</b>
1.	Indigenous equipments	
2.	Imported equipments	

**Annexure IV**

**FORMAT TO BE FILLED UP AND SUBMITTED  
IN THE LETTER HEAD OF THE BIDDER**

**To,**

**DIRECTOR  
BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES  
53, UNIVERSITY ROAD,  
LUCKNOW – 226007**

**Sub: Supply of equipments to BSIP at Lucknow.**

Dear Sir,

- a) Having examined the conditions of Tender and Specifications of the equipments, we, the undersigned, offer to supply instruments /equipment as mentioned in the **Annexure I** as per the quantity and specifications given in the tender along with standard spares/accessories as specified.
- b) **The original tender document duly signed on all pages is enclosed.**
- c) We agree to abide by this tender for the period from the opening date fixed for receiving the same and it shall remain binding upon us for a mutually extended period agreed in writing by us.
- d) If our tender is accepted, we undertake to supply the instruments/equipments and install the same in the BSIP premises as mentioned in the tender within the specified periods mentioned in **Annexure III** from receipt of the order from the BSIP, Lucknow in writing.
- e) We agree to supply consumable spare parts and replacement of the broken/damaged/non-compatible parts during the guarantee / warrantee period, free of charge, as per the terms & conditions.
- f) The probable life expectancy of the Equipments under normal conditions of operation should be stated wherever applicable.
- g) We agree to train the personnel of laboratories free of charge, as per the terms and conditions.
- h) If our tender is accepted we will, obtain and arrange:
  1. To sign an Undertaking on Rs. 100/- Stamp paper as per the format prescribed in **Annexure V** before releasing of the Purchase order by BSIP.
  2. Any other statutory obligation, if any, prior to commencement of supply of equipments.

- i) We agree for the validity of our tender upto **31-03-2021**.
- j) We have used only tender documents as issued for submitting his bid and shall comply with various terms and conditions.
- k) Unless and until a formal Agreement/order is prepared and issued, this tender together with your written acceptance thereof, shall constitute a binding contract between us and BSIP.
- l) We understand that you are not bound to accept the lowest or any tender you may receive.
- m) We agree to make a presentation of the products to be supplied by us, before the Committee if needed on a mutually convenient date.

**Authorized Signatory**

**Signature dated**  
**Designation / Capacity**  
**Name**

**Annexure V**

Tender Reference No.: **BSIP/TENDER/STORES & PURCHASE/2019-2016/** Dated \_\_\_\_\_

**UNDERTAKING / DECLARATION**

To,

**DIRECTOR**  
**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES**  
**53, UNIVERSITY ROAD,**  
**LUCKNOW – 226007**

Dear Sir,

- i. We, \_\_\_\_\_ (Bidder's Name & Address) undertake to supply the item \_\_\_\_\_ (Name of equipments) as per the detailed specification of Tender and honour the terms and conditions of the tender document.
- ii. We undertake to supply the equipment within the stipulated period of time and accept the penalty clause imposed by BSIP as per the terms and conditions of the Tender.
- iii. We undertake that during the warranty period, regular servicing/maintenance will be carried out as per the Warranty Clause.
- iv. We undertake to provide adequate training (normal operation, trouble shooting) to two technical personnel of the laboratory on the supplied equipment and making them confident of operating the equipment independently.
- v. We agree that the full payment will be released to us only after completion of satisfactory installation, trial and training on the said equipments.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 2021.

**Authorised Signatory**

**Signature**

**Name:**

**Designation:**

**Name & Address of the Company:**

**Seal of the Company:**

(To be submitted by the bidder on ` 100 stamp paper)

Annexure VI

**Technical part & Commercial part of the tender**

<b>SL.No.</b>	<b>Technical part should contain</b>
1.	Tender document Fee of Rs.5,000.00 + 18% GST Extra towards the Tender document.
2.	<b>EMD of 5 % of the Total quoted price</b>
3.	Technical quote giving the compliance details of execution of the work as per the requirement. Compliance to the Detailed scope of work
4.	Makes & Models of the standard items.
5.	Technical Compliance
6.	Commercial Compliance
7.	Blanked Commercial Part
8.	Scope of Warranty
9.	Client list
10.	Acceptance for submission of Bank Guarantee for 10% of the PO value for a period of one year from the date of acceptance of the item from BSIP, in the event the PO is placed.
11.	Documents related to Eligibility criteria of this document.

The commercial part should contain information on price quoted for equipment upto BSIP designated place, payment terms, delivery period, warranty/guarantee period and other relevant information as per below.

<b>SL.NO.</b>	<b>Commercial part should contain</b>
1.	Commercial quote containing the price information of the make & model quoted in the technical part exactly as per Bill of Materials. : a. Supply of Equipments and Accessories as per enclose specification on total TURNKEY BASIS. b. The rates to be quoted as per Annexure - II
2.	Payment terms – Acceptance as per our Terms & Conditions - Special
3.	Delivery schedule – Supply, installation and training to be mentioned

## **BANK GUARANTEE & PERFORMANCE BANK GUARANTEE**

**THIS BANK GUARANTEE TOWARDS THE E.M.D SHOULD BE TYPED  
OUT ON RS.50/- NON-JUDICIAL STAMP PAPER GIVING FULL  
POSTAL ADDRESS OF THE BANK.**

**Guarantee No :**

**Amount :**

**Guarantee Cover      From:      To :**

**Last Date for  
Lodgment of Claim :**

The BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, 53 UNIVERSITY ROAD, LUCKNOW - 226007 having floated a Tender for (Tender for \_\_\_\_\_) with Tender no. hereinafter referred to as the tender, and M/s \_\_\_\_\_ (name and address of the supplier) having the intention of participating in the above mentioned, we, the (banker's name and address) hereby irrevocably undertake and guarantee to you that in the event of the award of the Contract to the tenderer and subject to the failure of the Tenderer to perform any of the following clauses, we undertake to fully compensate the Beneficiary to a maximum amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) (in words) as and when the same is claimed from us in writing during the validity of the contract as per the terms and conditions of the tender contract.

1. If the tenderer fails to accept the contract with the terms and conditions of the contract.
2. If after the acceptance of the contract, the Tenderer fails to carry out the services in accordance with the terms and conditions of the contract.
3. If the tenderer withdraws the tender during the validity period.
4. If the tenderer fails to complete their services in accordance with the terms and conditions of the contract or if there is any unexcused delay on the tenderer's part which may warrant forfeiture of E.M.D. amount and or imposition of liquidated damages and or closure/termination of the contract for default.

We, the bank, abide by your Tender terms and conditions and we shall on demand and without demur, pay to you all and any sums upto a maximum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) being the E.M.D. furnished by the tenderer to you in the form of this bank guarantee.

We further agree that the Beneficiary shall be the sole judge as to whether the Tenderer has failed to perform as per the Tender terms and conditions duly specified by the Beneficiary.

We further hereby undertake to pay the amount due and payable under this guarantee without any demur merely on a demand in writing from the Beneficiary stating the amount claimed due by way of loss or damage. Any such demand made on the bank shall be conclusive and binding upon us as regards the amount. Lodgment of claim through Registered Post shall be conclusive evidence of claim made on us by the Beneficiary. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.\_\_\_\_\_ (Rupees \_\_\_\_\_). We further agree that the claim made on us shall be settled within a period of 30 days from the date of lodgment of claim by the beneficiary.

We agree that the guarantee herein contained shall remain in full force and effect for a period of 6 months (six months). Unless a demand is made on us in writing within one month from the date of expiry of six months, we shall be discharged from all liability under this guarantee.

We further agree that any change in the constitution of the bank or the tenderer shall not affect our liability under this guarantee.

We further agree that the Beneficiary shall have the fullest liberty without in any way affecting our liability under this guarantee alter any or all of the terms and conditions of the tender.

Notwithstanding anything contained herein before our liability under this guarantee is restricted to Rs.\_\_\_\_\_ (Rupees \_\_\_\_\_). This guarantee shall remain in force upto a maximum of six months (6 months). Unless a demand in writing is made on or before \_\_\_\_\_ (one month from the date of expiry of six months (date) all your rights under this guarantee shall be forfeited and we shall be relieved and discharged from all liabilities under this guarantee.

We lastly undertake not to revoke this guarantee during the penance of the above said tender/tender contract except with the prior consent of the beneficiary in writing.

This guarantee must be returned to us in original immediately on the expiry of the validity date.

Sealed with the common seal of the bank on this the..... day of..... 2021.

DATE :

For BANKERS NAME

PLACE :

SEAL, ADDRESS

**PERFORMANCE BANK GUARANTEE**

**GUARANTEE NO** : \_\_\_\_\_

**AMOUNT** : \_\_\_\_\_

**GUARANTEE COVER FROM** : \_\_\_\_\_ **TO :** \_\_\_\_\_

**LAST DATE FOR  
LODGEMENT OF CLAIM** : \_\_\_\_\_

In consideration of the BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, 53 UNIVERSITY ROAD, LUCKNOW - 226007, hereinafter referred to as the Purchaser having placed order(s):

1. (Order no and date) 2. (Order no and date), with our constituents M/s \_\_\_\_\_ (name of your organization) hereinafter referred to as the contractor, having their office at \_\_\_\_\_ (address of your organization) for the supply and installation of (give brief detail of the order placed) and our constituents having undertaken to guarantee the faithful performance of the contract during the warranty period as mentioned in the purchase order(s) referred above, we the (Banker's name and address), do hereby bind ourselves as their guarantors and undertake to be responsible

to the purchasers and their successors and assigns for payment of all or any sums of money, losses, damage, costs, charges and expenses, that may become due or payable by the contractor, in the faithful performance of his said obligations and covenants under the above contract stated therein provided however that the total amount to be so recovered by the purchaser from us shall not exceed Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) amount of guarantee to be mentioned) payable under the said Purchase Order. We, \_\_\_\_\_ (name and address of the bank) do hereby

unconditionally and irrevocably guarantee payment, without demur and without recourse to the purchaser of sums upto Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) amount of guarantee in Rs. \_\_\_\_\_ and words) on the purchasers first demand in writing making claim for payment to the purchaser by reason of failure on the part of the contractor to fulfill their obligations under the contract.

We hereby agree that lodgment of claim through registered post shall be conclusive evidence of lodgment of claim.

We further undertake to settle the claim within 30 days of lodgment of claim.

This guarantee shall not be revocable by notice or otherwise and is unconditional and without recourse and our liability as surety shall not be impaired or discharged, until the contractor has fulfilled all the obligations

under the contract and shall not be affected by any change in the constitution of the purchaser, Contractor or the bank.

Notwithstanding anything stated herein above our liability under this guarantee is restricted to Rs. \_\_\_\_\_ (Rupees

\_\_\_\_\_ amount of guarantee) and shall remain in force till (last date of guarantee) unless a demand or claim under the guarantee is made on us in writing within one month of the above mentioned date, i.e., before (date one month from the last date of guarantee cover) all your rights under this guarantee shall be forfeited and we shall be relieved and discharged of all liability hereunder.

Dated:

Place:

FOR  
(Banker's name)

Address and common seal

Sr. No.	Details of Requirement for Opening L/C.(for imported items only)
1.	Foreign Supplier' s Name and Complete address on whom L/C will be opened.
2.	Foreign Banker' s Name & Address
3.	Foreign supplier's Bank Account No.
4.	Port of shipment
5.	Country of Origin
6.	Period to keep L/C open– (Validity of L/C)
7.	Period of negotiation will be 21 days
8.	Delivery Schedule from the date of issuance of purchase order

**Note:**

1. Additional copies may be taken for each Equipment
2. Octroi, if paid , will be reimbursed separately at actuals

## **CHECK LIST TO THE BIDDERS**

1. Get all the clarification regarding terms and conditions, specification etc during the pre bid meeting or by writing to the Director, BSIP, Lucknow prior to submission of bids.
2. The original tender document downloaded in full has to be submitted along with the technical details duly signed on all the pages.
3. Fill up the relevant compliance columns in the specifications given for the equipments quoted by stating "YES" or "NO". If any deviations are there in the specifications, the details may be given separately as Annexure.
4. A covering letter duly signed by the authorized person as per the specimen given at **Annexure IV** of the tender document.
5. Ensure that User certificates from atleast two users, on their letterhead stating that the performance of similar make and model supplied to them is satisfactorily, is enclosed
6. Descriptive leaflet / brochure of the equipment quoted are enclosed along with the technical details.
7. Copy of the certificate for the calibration of similar make and model of the equipment / instrument for which bid is submitted from an accredited calibration laboratory or NPL, if applicable, is enclosed.
8. The Technical and commercial details are to be submitted separately superscribing "Cover "A" – Technical details for equipment or Cover "B" – Commercial details for equipments. Both the details are to be put together in one envelope and sealed properly, superscribing the name of the equipments.
9. Proof regarding manufacturer / authorized agent, as the case may be, is enclosed.
10. Prior to submission of bids, bidders have to ensure that the equipment quoted by them is suitable for testing as per the national / international standard mentioned in the specification.
11. Cost details are to be given in the prescribed format only. If more than one model of equipment is quoted, separate sheet may be enclosed. may be given.

**Note: If the bidder fails to furnish all the relevant document/ information as mentioned in the Tender Document, the Tender will be rejected.**

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