

TENDER FORM

For purchase of Testing Instrument Under the "Eco Laboratory"



Tender Number	WRA/TENDER/ECO-01/2024-2025
Total Nos. of Testing Instrument	03
Cost of Tender Document	Nil
Sale of Tender Document at WRA	19.11.2024 (10.00 a.m.) to 09.12.2024 (4.00 p.m.)
Last date of submission of Tender	13.12.2024 (3.00 p.m.)
Tender Opening at WRA	16.12.2024 (11.00 a.m.)

WOOL RESEARCH ASSOCIATION (WRA)
P.O. Sandoz Baug Kolshet Road,
Thane - 400 607, Maharashtra.
Phone: (022) 25314294, Mob: 91-9892910834
E-mail: ecolab@wraindia.com, wra@wraindia.com.
Website: www.wraindia.com

INTRODUCTION

1. Wool Research Association (WRA) is a Co-Operative Research Organisation under Society's Act 1860, and approved by Ministry of Textiles, Govt. of India. It is engaged in multifarious activities with the objective of Rendering Scientific and Technical Assistance to the Textile industry, in general and Woollen Industry in particular. Various activities are described in brief as under:

- A. Research & Development
- B. Training and Man Power Development for Industry
- C. Testing and Evaluation
- D. Technical Services and Consultancy
- E. Publication, etc.

2. Wool Research Association (WRA) is well equipped with the Testing Instruments Eco Laboratory which includes complete testing of Dyes, Pigments and Finished Textile Products for all the tests as per international Standards and has been providing the Testing Services to the Textile Industry over a Decade. Presently, Eco Laboratory has the facility to test Formaldehyde, Heavy Metals, Moth proofing (Bioassay and Chemical assay) FTIR, UV analysis, DSC, Spectrophotometer and Particle Size analyser.

WRA's Eco Laboratory intends to procure various instruments as it is essential for the daily testing and analysis which will help us to provide services to the Textile and other Industries too.

3. The Tender document contains the following:

- i. Instruction to Tenderer
- ii. Tender form
- iii. Terms and Conditions
- iv. Technical Specification of the Testing Instruments
- v. Format of Bank Guarantee

PART - 1
INSTRUCTION TO TENDERER

1.0 GENERAL

1.1 Tender shall be issued by or it can be downloaded from website of Wool Research Association (**WRA**), Thane to manufacturers / suppliers / selling agents for the Free of Cost.

1.2 Modifications if any of the above documents will be made by addenda / corrigenda, copies of which will be sent in duplicate to each tenderer before the due date of the tender. One copy shall sign, sealed and submitted in an envelope along with the tender documents. Tender documents to be submitted, are as detailed hereafter.

The tenderer 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 tenderers shall use only tender documents as issued for submitting his quote and shall comply with various terms and conditions. E-mail, Fax, Telex or Telegraphic tenders shall not be entertained.

1.3 The tender shall be filled in & submitted in English. It will be expedient that all accompanying literature and correspondence shall also be in English. If any of such documents are in other language(s), English translation must be enclosed.

1.4 No claim for costs, charges, expenses incurred by the tenderer in connection with preparation of tender submission and for subsequent clarifications of their tender shall be accepted.

1.5 It is made absolutely clear that the purchaser viz. WRA reserves the right to withdraw any of the advertised item without any notice.

2.0 TENDERER TO STUDY DOCUMENTS

2.1 Submission of the tender by the tenderer implies that he has read tender documents and has made himself aware of the specifications of Instruments and the terms and conditions.

2.2 The tenderer shall be deemed to have full knowledge of documents and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

2.3 Any query or clarification on the tender document and discrepancies, if any, shall be directed to the Tender Issuing Authority in writing minimum 10 days prior to the due date of submission of tender. The Tender Issuing Authority shall issue clarifications, interpretations, meanings and specific directions, if any, in writing to the tenderer. **One copy of these shall be returned duly signed and seal affixed along with tender during submission**

3.0 SUFFICIENCY OF THE TENDERER

3.1 The Tenderer 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.

4.0 METHOD OF TENDERING

Each and every page of tender documents shall be signed by the authorized person(s) and seal affixed. Authorized person signing shall write in capital letters his full name, designation, current and main office address, Phone No., Fax No. & E-mail address etc.

4.1.0 Authority of signing

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

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

4.1.3 If the tender is submitted by a partnership firm, it shall be signed by all the partners of the 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 tender.

4.1.4 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 tender.

4.1.5 All witnesses and sureties shall be persons of respectable status and probity and their full name, occupations and addresses shall be stated below their signatures.

4.2.0 Stating of Rates

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

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

4.2.3 Correction if any, shall be made duly initialling, dating and rewriting. Overwriting must be avoided.

4.2.4 In case of conflict between the figures and words in the rates, the latter shall prevail.

4.2.5 The tenders will be verified for accuracy in the arithmetical calculations

4.3.0 Packing and Submission

4.3.1 The Tender shall be submitted on and at the address given in Appendix-TF given in Tender form. Any tender received after this date and time shall not be accepted. Tenders shall be packed, marked and sealed and submitted in original with documents listed below.

4.3.2 TECHNICAL BID

Sealed cover "A" shall contain technical offer such as,

- a) Technical Specifications in details.
- b) List of items including spare parts with quantities for which the financial bid is being submitted. (Please refer to Annexure I)
- c) The equipment for which bid is being submitted, should contain Client List of reputed Testing Laboratories/ Industries/Institutions located in India and other countries.
- d) Profile of bidders Organisation.
- e) If the bidder does not manufacture the equipment, authorization of the manufacturer to the bidder for marketing and servicing the equipment's in India should be enclosed along with the tender. In the absence of such authorization, the tender will not be considered.

4.3.3 FINANCIAL BID

Sealed cover "B" shall contain financial offer

- a) Bill of Quantities duly completed with price.
- b) The undertaking that Tender Form is duly completed signed and sealed for entering into agreement with terms and conditions for this contract.
- c) Covering letter in duplicate bringing out the tenderer's reservations, if any, regarding compliance with the tender document and his own specific assumption, if any.
- d) Tender Form, Appendix - TF, Terms & Conditions, addenda / corrigenda/ clarification issued before due date of tender duly signed and sealed (in token of acceptance of documents).

4.3.4. Separate bid to be submitted in an envelope super scribed **with the name of the item at the top, date of submission, name and address of the bidder.**

4.3.5. The sealed envelope containing covers "A" & "B" as above shall be marked in the name of the, **Director, Wool Research Association (WRA), Kolshet Road, Thane- 400607** clearly indicating the name of the item for which the bid is submitted.

5.0 VALIDITY PERIOD OF RATES IN TENDER

Rates quoted by the tenderer shall be valid for a period as given in Appendix- TF from the date of submission or till extended date mutually as agreed on expiry of the said period.

The Tenderer shall not withdraw or revise or alter any conditions, rate(s) quoted within the stated period, unless he is called upon to do so in mutual agreement / negotiations. WRA reserves the right to cancel the bid if the tenderer revokes or withdraws the tender within the stated period.

5.1 OPENING OF TENDER

5.1.1 The tender shall be opened by the Tender Opening Committee of WRA. Technically qualifies bidders will be communicated further.

6.0 AGREEMENT

6.1 The successful tenderer(s) shall be bound to implement the contract on receipt of intimation acceptance from WRA.

6.2 The successful tenderer(s) shall bear stamp duty and other expenses pertaining to preparation and execution of contract document/agreement.

7.0 PROCEDURE FOR REJECTION

7.1 The Wool Research Association (WRA), Thane reserves the right to accept or reject any Tender or reject all tenders without giving any reasons for their decision.

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

7.3 Canvassing in connection with tender is strictly prohibited and tender submitted by tenderers who resort to canvassing will be liable to rejection.

7.4 Tenders containing uncalled remarks or any additional conditions are liable to be rejected. Tenderer can bring out in his/theirs covering letter along with submission of tender cover "B", his/theirs any reservations, additions, omissions, and assumptions they might have made while pricing the tender. Tender Issuing Authority reserves the right to ignore such additions, deletion other than brought out in covering letter packed in cover "B", by the tenderer. Decision of the Wool Research Association (WRA), Thane in this regard shall be final and any non-compliance shall reject the bid.

PART-2
TENDER FORM

To,
The Director
Wool Research Association
Kolshet Road, P.O Sandoz Baug,
Thane- 400607

Sub: Supply of testing instrument under the "Eco Laboratory" WRA, Thane as per the specifications and quantities mentioned in the tender.

Dear Sir,

a. Having examined the conditions of Tenders / Specifications of the testing instrument.

We, the undersigned, offer to supply testing instrument as mentioned in the Annexure I as per the quantity and specifications given in the tender along with spares for two years.

b. We agree to abide by this tender for the period given in Appendix TF 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.

c. If our tender is accepted, we undertake to supply the Testing instrument and install the Same in WRA, Thane mentioned in the tender within the specified periods in Appendix-TF on receipt of written order from the Wool Research Association (WRA), Thane.

d. We agree to supply consumable spare parts for Two years and replacement of the broken/damaged parts during the guarantee / warrantee period without any charge.

e. We agree to train the personnel of WRA in 2 phases at WRA, Thane and principal's premises as a package, as per the terms and conditions.

f. If our tender is accepted, we will, obtain and arrange:

1. Transit insurances
2. Any other statutory obligation, if any, prior of commencement of supply of Instruments.

g. We agree to your right to cancel the order or stop payment without prejudice to any other right or remedy for the following failure on your part.

1. Changes to tender are made within Validity Period as specified in Appendix- TF.

2. Supply and installation of testing instrument is not commenced within specified Period as given in Appendix-TF

3. Obligations under clause (e) above are not fulfilled.

h. Unless and until a formal agreement/purchase order is prepared and executed, this tender Together with your written acceptance thereof, shall constitute a binding contract between us.

i. We understand that you are not bound to accept the lowest or any tender you may receive.

j. We agree to make a presentation of the products to be supplied by us, before the Purchase Committee / Sub-Committee on the date specified by WRA.

k. Fluctuation in foreign exchange rates in respect of the imported Testing instrument shall be borne by the equipment / Instruments suppliers / authorized Agents.

l. We hereby declare that the rates quoted by us are the lowest rates.

m. In case of Imported Items, we have quoted Free On-Board value (at nearest foreign Airport/Sea port) & Also CIF Value at Sahar International Airport, Mumbai or JNPT Nava Seva Seaport, Mumbai (whichever applicable). We have specified the freight charges & Insurance Charges separately and also specified the packing dimension, Nos. of Box/Cartoon & gross weight of each Box/Cartoon along with the name of the port & country, from where the goods will be dispatched.

Authorised Signatory
Tenderer Designation / Capacity Name

Signature dated

WITNESS 1
Signature
Name
Date

Address

WITNESS 2
Signature
Name
Date

Address

APPENDIX - TF

Sr. No.	Particulars	Remarks
1.	Validity of Tenders	180 days from the date of opening of tender.
2.	Address, date and time of submission of the tender documents.	Wool Research Association Kolshet Road, P.O. Sandoz Baug, Thane (W) - 400607 Last date of submission of tender at WRA: 13/12/2024 (3.00 pm)
3.	Supply of the Testing instrument etc	Within 3 months from the date of placement of order or advance paid, failing which order may be cancelled, unless the period is extended by WRA, in writing, in exceptional circumstances.
4.	Installation and commissioning of the Testing instrument	Within 2 weeks after the delivery of the ordered item at WRA, installation and commissioning should be carried satisfactorily by the supplier. In case, installation/ commissioning is delayed by the supplier, 2% per day of the cost of Testing instrument will be charged unless relaxation in this regard accorded by WRA, in writing, in exceptional circumstances.
5.	Period of warranty of Testing instrument	3 Years warranty (Companies standard warranty plus additional two years) from the date of commissioning of the Testing instrument.
6.	Performance guarantee of Testing instrument	3 Years performance guarantee from the date of commissioning of the Testing instrument as per Annexure II
7.	Submission of the details schedule for delivery	Within 21 days from the date of the acceptance of the order placed

SEAL AND SIGNATURE OF TENDERER

PART - 3

TERMS AND CONDITIONS

1. Before submissions of the tender, the prospective bidders are expected to examine Technical of the Testing instrument allied items required, terms and conditions, etc., given in the Tender Documents. Failure to furnish all information required by the Tender a result in the rejection of the bid. Detailed specifications of the items tendered accessories should be given, in the bid.
2. The descriptive leaflet (English Version) giving the technical details of the Testing instrument allied items should be supplied along with the quotation.
3. Minimum required essential spare parts for Two years operation are to be supplied along testing instrument. The list of such essential spare parts shall be submitted along with the Tender.
4. All accessories required for using the main Testing instrument to make it fully operational are to be specified.
5. The suppliers of the Testing instrument should provide both theoretical and practical training to at least 2 technical personnel per testing instrument of WRA, Thane in two phases as described below. Training is to be imparted after commissioning the Testing instrument at an appropriate stage.

Phase I: Training at the Principals' Factory: - All expenses of the trainees viz Travel (domestic or abroad), Boarding, Lodging, Local Conveyance etc shall be provided by the Testing instrument manufacturer/Supplier/tenderer.

Phase II: Training at site: Hands on training at the time of installation and commissioning of testing instrument inside the WRA, Thane premises.

6. The price quoted should be exclusive of duty, ST, installation etc., which should be shown separately in the bid, if applicable. Freight and Insurance charges are to be indicated separately the same will, be paid at actual against supporting documents produced. Packing, forwarding and other charges as applicable are to be indicated separately in the tender.

7 (a) the terms of payment in case of indigenous Testing instrument& accessories shall be as under:

- i) 20% of the Testing instrument cost (ex-factory) may be paid as advance against confirmation of acceptance of the order
- ii) 20% payment will be paid on the delivery of the Testing instrument at designated consignee along with the release of Bank Guaranty of advance amount.
- iii) 50% payment will be paid on the successful Installation & Commissioning of the Testing instrument, within a period of 2 weeks after delivery at consignee's address, followed by

Imparting of training to WRA's technicians.

iv) Balance 10% payment' will be retained as performance security for 3 years. Alternatively Bank Guarantee (BG) of the equivalent amount (10%) valid for a period of Three years will have to be submitted by the tenderer/ supplier/ manufacturer as performance security (Please refer to Annexure II).

7 (b) In case of Imported Items, 100% Payment shall be made through irrevocable Letter of Credit. LC money will be released by our bank only after inspection and successful installation and commissioning of testing instrument at consignee's address, within a period of 2 weeks after delivery of the Testing instrument. The firm on whom order will be placed or his local supplier/agent will be responsible for installation, commissioning, demonstration of satisfactory performance of the Testing instrument and imparting training to the technical personnel of WRA. However, involvement of the respective principals will be preferable. An undertaking to this effect along with the bank guarantee form will be required from the supplier/agent to WRA.

7 (c). Earnest Money Deposit

Tender must be accompanied by Earnest Money Deposit (EMD) as indicated in **Annexure-I** for item being supplied in the form of Demand Draft or Banker's cheque in favour of "Wool Research Association" Payable at Thane, EMD shall be paid in Indian currency only. In case or receipt of EMD in Indian currency from abroad, same shall be refunded in Indian currency only.

WRA will not be responsible for refunding the EMD in foreign currency. The EMD by the successful bidders shall be held back towards the security deposit and will be refunded after successful installation, trial and training. EMD should remain valid for a period of forty-five days beyond the quotation validity period. The EMD of the unsuccessful bidder will be returned at the earliest of the final bid after expiry of final bid validity, latest on or before the 30th day after the award of the contract.

8. Delivery of the Testing instrument should be as per the commitment from the date of receipt of initial payment against acceptance of order in case of indigenous Testing instrument and should not be extended.

9. The Pre-installation requirements including space, nature of civil work, power point, power Requirement etc. are to be mentioned clearly in the technical bid.

10. Bid for the testing instrument should be submitted in an envelope super scribed with the name of the item at the top, NAME, ADDRESS OF THE BIDDER AND DATE OF SUBMISSION.

The sealed envelopes shall be marked in the name of “**Director, Wool Research Association Thane –400607.**”

11. The list of organizations (with full addresses, telephone / fax no., e-mail addresses etc.) in India and abroad to which the testing instrument were supplied is to be provided in the bid for our reference. Preference will be given if the supplies are made to internationally reputed test house both in India and other countries particularly for the bided equipment (evidence of such supplies to reputed test houses may be enclosed.)

12. Validity of the tender should be 180 days from the date of opening of tender. The tender may be rejected if the validity is not given accordingly.
13. The supplier should take responsibility for delivering, installing and commissioning of the Testing instrument inside the premises of WRA, Thane at designated site.
14. Annual Servicing / Maintenance charges for the next 3 years after the expiry of warranty period should be indicated separately in the tender.
15. Late / delayed tender offers will not be considered at all.
16. Any non-fulfilment of the stipulation given above will make the bid invalid.
17. If the tenders received are not scaled properly, they will not be considered at all.
18. Wool Research Association (WRA), Thane reserves the right to accept or reject any or all the bids without assigning any reason thereof.
19. The local supplier shall be entirely responsible for all taxes, duties, and license fees etc., incurred until delivery of the contracted goods (to the purchaser) up to place of delivery.
20. The Delivery, installation & commissioning period of the testing instrument as agreed should not be extended under normal conditions. Suitable penalty for non-execution of the order may be enforced refer – Appendix- TF.
21. The testing instrument & accessories should be delivered, installed and commissioned at the address specified in the order. Service / operation /instruction/ calibration manuals (in English) tool kit and gauges must also be supplied along with the Instruments and accessories.
22. During the guarantee /warranty period, servicing /maintenance should be undertaken regularly subsequently Servicing/maintenance should be undertaken by the manufacturer or authorized agency of the manufacturer.
23. **Warranty and performance guarantee period of three years (As per companies' standard warranty plus two years) as mentioned in Appendix TF (points 5 & 6) should be given in respect of instruments and accessories supplied. Terms for service contract after the expiry of said warranty period are to be quoted separately.**
24. The manufacturer /supplier may indicate the Status of the Manufactured Product /or of the performed services as regards to ISO quality system.
25. List of servicing centres in India has to be indicated with detailed address, telephone no. /fax no. / e-mail address etc.
26. All pre-installation requisites such as Cables, plugs etc. should be provided by the supplier along with the testing instrument. WRA, Thane concerned will provide adequate space, electricity & water, as the case may be, for the successful installation and commissioning of the testing instrument.

27. The Capacity statement of equipment, plant and past performance details should be provided.

28. In case of Imported Items, please quote Free On-Board value (at nearest foreign Airport / Sea port) & also CIF Value at Sahara International Airport, Mumbai or JNPT Nava Seva Seaport, MUMBAI (whatever applicable). Please specify the freight charges & Insurance Charges separately. Also specify the packing dimension, Nos. of Box/Cartoon & gross weight of each Box/Cartoon. Please specify the name of the port & country, from where the goods will be dispatched.

NOTE: The bidder has to specifically state that the clauses one to all as above have been read and understood and agree to comply all the above-mentioned clauses individual

Annexure I

Technical Specifications of the Testing Instruments

(Including EMD)

Sr. No.	Instruments	EMD to be paid (Rs.)	Page Nos
1	Gas Chromatography -Mass Spectrometer- Triple Quad (GCMS-MS)	4,00,000.00	15-18
2	Particle Size Analyser	1,40,000.00	19-21
3	Thermo gravimetric Analysis-TGA)	1,00,000.00	22-24

Name of Instrument	1. Gas Chromatography -Mass Spectrometer-Triple Quad (GCMS-MS)
Purpose of the Instrument	To determine the Textile Testing of RSL (Restricted Substances Limit) parameter as per GOTS, ZDHC and OEKO-TEX
EMD to be paid (in Rs.)	4,00,000.00

Technical Specifications for Gas Chromatography – Triple quadrupole Mass Spectrometer (GCMS-MS)

Gas Chromatography coupled with Triple Quadrupole Mass Spectrometer with Headspace & Auto liquid injector with following specifications.

Sr. No	Requirement	Specification
1	GC	- Retention time repeatability should be < 0.0008 min and Peak area repeatability between 0.5% to 1 % RSD - Integrated leak check function allows you to easily check for leaks and extensive self-diagnosis function with safety features. - Must be able to install up to 3 independently temperature-controlled injector and detector units. - Settings of flow rates of all the gases must be controllable & programmable by instrument software with standard features like constant flow, constant pressure and constant linear velocity. - GC must come with at least 7 inches of color touch-screen interface that allows users to check and set the method parameters.
2	Column Oven	- Should have provision to accommodate two or more capillary columns - Operating temperature range should be from near ambient +4°C to 450°C or better - Temperature ramp rate of oven should be up to a maximum of 120°C - Temperature ramps (steps) should be 20 or better - Oven cool down time from 450 to 50°C should be in 3.0 -4.5 min or less with multiple option of cooling rate should available - Temperature set point resolution must be 0.1°C or better - Should built with column back flush system with suitable additional pressure control device with union (Minimize the venting time required to change the column)
3	Inlet: 1No. SSL Inlet: 1No.MMI/PTV	- Inlet should have automated flow/pressure control modules with Pressure set points adjustable in increments of 0.001psi for pressure range up to 100psi or better - Inlet Split ratio should be 7000:1 or better and must be suitable for all capillary column from 0.25 µm-0.53 µm - Inlet maximum operating temperature should be 400°C or more. - Exhaust Duct

4	Auto Injector	- Automated liquid sampler with 100 Vials capacity or better - Should have capacity to inject 80% volume of the syringe capacity
5	Triple Quadruple Mass Spectrometer	- Ionization modes: EI System should have dual filament with automatic filament switching. - Ion Source temperature: up to 350°C or above and should be programmable. - Transfer line Temperature 50 to 350°C - Electron energy range up to 200eV or better - Mass Range: 10 to 1050 amu or better. - Mass analyzer: Quadruple Analyzers should be of quartz/Metals quadrupoles with/without pre-rods/ pre-filter - Vacuum pump: Dual inlet/stage Turbomolecular pump (>250 L/s) Ionization - Mass axis stability: ± 0.1 amu over 48 hours - Mass resolution: 0.7 Da or better/unit mass - Linear Dynamic range : minimum 6th order of magnitude - Detector: Secondary electron multiplier with overdrive lens and conversion dynode - Scan rate (electronic) of 20,000 u/sec or better with retaining sensitivity at higher scan rate using suitable instrument protocol - Collision cell gas pressure must be electronically/Software controllable. Collision energy must be variable. - Should be able to do Scan, SIM, MRM/SRM, Parent ion scan, Product ion Scan, and Neutral loss scan-time segment based. - Self-cleaning ion source will be preferred. - Simultaneous Full Scan -SIM or Full Scan/MRM or SRM whenever required. - SRM/MRM Speed: minimum of 800 MRM/sec. Minimum MRM dwell time of 0.5 milliseconds or better - Installation checkout sensitivity must be better than –Instrument detection limit: 0.5 fg or less octafluoronaphthalene (OFN) - EI Scan sensitivity: 1 μl of 1 pg/μl Octafluoronaphthalene (OFN) should give S/N greater than 1500:1 in scan mode 1 μl injection from m/z 50 to 300 for m/z 272 on 30 m. column. - EI MRM Sensitivity: 1 μL of 100 fg/μL Octafluoronaphthalene (OFN) should produce the following minimum signal - to -noise for the transition from m/z 272 to m/z 222: 30,000:1 or better on 30 mt. column. - Should have automatic Startup and Shutdown, Auto or manual tuning of instrument and Automated tuning check result.
6	Headspace Sampler	- Headspace Sampling Method must be standard full electronically control through PC. It must contain Min 45 or above Vials sampler. For safety measures, it must have leak inspection capacity - Precise Temperature control of every sample throughout its equilibration time. - Static Headspace (loop based) with direct interface with GC - Vials temperature and Transfer line Temperature up to 300°C - Oven Temperature Min 200°C or above

7	Compatibility	- Offered GCMS should also be compatible and working with using Helium gas with purity (99.999%) as a carrier gas. - System must have a capacity to use Argon / Nitrogen as a collision cell gas.
8	Database and software	- NIST 2023 library with license (updated version), Library data base in CD ROM plus one next updated version should be free. - Suitable software for instrument control and data analysis for qualitative & quantitative workflow. - Should have automatic adjustment of retention time feature that generate flexible analytical method not depend on pre-programmed column oven temperature ramping, carrier gas flow and analytical run time.
9	Computer & Printer	- Compatible PC with Windows and monitor with suitable operating system with Licensed MS office - Laser jet printer (Eco Friendly)
10	Warranty	Three Years Warranty (Standard Company warranty plus two years) from the date of installation or supply.
11	CMC	Compressive Maintenance charges including (PM Kit) calibration of two years after completion of three years warranty shall be provided. (Supplier should provide Quote Separately)
12	UPS	Supplier to provide detail requirements
13	Consumables & Column	- Deactivated Insert with wool for Split - 5No.s - Deactivated Insert with wool for Spitless - 5No.s - Inert Quartz Wool, 2gm - Capillary column ferrule set, 0.5mm – 10 No.s - Vespel Ferrule for 0.25mm ID Column - 10No.s - Vespel Ferrule for 0.32mm ID Column - 10No.s - Nut, SS, - 5 No.s - EI Ion Source Box & repeller Assy - Oil Mist Filter – 1No. - Septum for injector, 100 No.s - O-ring for Injector Liner-2 No. - Filament, high temperature EI for GCMS – 3 Nos - Vacuum Fluid -1L - No. of Syringes(10µl)- 2 Nos - No. of Syringes(5µl)- 2 Nos - Tuning Solution 1.5ml Screw thread clear and Amber vials PTFE/White Silicone septa 500pcs each 25 ml Amber colored storage bottle for Standards- 2 Box 5MS or equivalent column: (0.25 mm id, 0.25µm film thickness and 30m length) – 2 No 35 MS or equivalent column: (0.25 mm id, 0.25µm film thickness and 30m length) – 2 No - Column for VOC analysis -624 MS (30 Mx0.320mmX1.80 µm) or equivalent column- 2 No. and - Column for VOC analysis -WAX column (0.25 mm id, 0.25µm film

		thickness and 30m length) – 2 No • 20ml pressure release crimp clear vial kit with septa (500pcs) • Decapper and Hand Crimper for 20mm Top Headspace Vials
14	Installation, Demonstration & Training	• Should perform IQ Instrument qualification and OQ Operational qualification at the time of installation. • Should provide instrument operation and application training for 10 days and also provide technical support during development of the testing parameters.
15	User List	• Vendor should have a minimum install base of 50 units in India for GCMS along with three Installation and performance certificate
16	Demonstration	• During technical evaluation the vendor should be able to provide demonstration of the quoted instrument on demand. • Instrument model should be strictly complying with the tender specification during demonstration of the instrument
17	Training & Application Support	• Vendor should have an application lab/Expert in Mumbai for immediate technical support for Dyes, Pigments, Pharmaceutical and Textiles Application on GCMS especially for Restricted Substances Limit (RSL Parameters) as per GOTS, ZDHC and OEKO-TEX. Technical support should be provided for all sample matrix. • Phase I: Training at the Principals' Lab: - All expenses of the Two trainees viz Travel (domestic or abroad), Boarding, Lodging, Local Conveyance etc. shall be provided by the equipment manufacturer/Supplier/tenderer. • Phase II : Training at site : Hands on training at the time of installation and commissioning of the machinery inside the WRA, Thane premises

Conformance to test methods of standard, such as - ISO, OEKO-TEX, ASTM, GOTS Standards and regulations as per ZDHC.

Name of the Instrument	2. Particle Size Analyser
Purpose of the Instrument	For analysis of samples, to characterize the sediment particles based on diffraction of a laser light source. The analyser is used to determine the size distribution of a powder, a suspension or an emulsion, based on light diffraction.
EMD to be paid (in Rs.)	1,40,000.00

Technical Specifications: Particle Size Analyser

Sr. No.	Requirement	Specification
1	Principle & Algorithm	- Particle Size Analyzer must be based on the Principle of Laser Diffraction. - Both Mie theory and Fraunhofer algorithm should be available.
2	Size Range	10 nm to 3000 µm or better.
3	Light Source	- Analyzer must be having two light sources for both nano and Microns particle detections. - For Microns - Laser Diffraction light source (Wavelength 785 nm or 632.8 nm) - For Nano-particles detection – Blue LED (470 nm, 10 mW) or Polarized Intensity Differential Scattering (PIDS) light Source.
4	Detectors	Must be having minimum 60 detectors or above.
5	Angular range & Number of Size Classes / channels	- Must be covering 0.01 to 130 degree or above. - Minimum 100 or high.
6	Mode of Analysis	Analyzer should be compatible with both Wet and Dry Module
7	Wet Module	- Tank Volume must be maximum 150 ml or lower to 100 ml. - Should be compatible with Aqueous and wide range of solvent. - Should be having feature of automatic filling, automatic drain and rinsing. - Should have inbuilt autofill pump. - Should have Stirrer (Software control speed) to allow full dispersion of particles. - Inbuilt Sonicator with Minimum power 40 W or high.
8	Dry Module	- Automatic sample introduction by Venturi or Tornado principle. - If Venturi (Both General purpose and High Energy Venturi must be quoted). - Required accessories like Air Compressor (Oil Free), Vacuum cleaner etc. for successful operation of Dry module must be quoted.
9	Standard samples	- Below NIST traceable standards for the validation of wet and dry module must be quoted. 100 nm or lower size NIST traceable standard for Wet Module.

		- Any NIST traceable Monomodal Size standard from mean size 200 nm to 500 nm, for Wet Module. 1 µm NIST traceable standard for Wet Module - Any Dry Powder / Glass bead polydisperse standard for Dry Module.
10	Repeatability Criteria	- Repeatability check of our internal in-house samples shall be conducted during installation - Analyzer must show repeatability less than 3%.
11	Cleaning	For Cleaning of Dry and Wet Module cells, necessary cleaning agents, cotton swabs etc. shall be provided.
12	Computer Specification	Compatible PC with Windows and monitor with suitable operating system - Required Windows 10, 64 bit, US English - Processor – i7 Quad-core - RAM Memory – 16GB or better - Hard Drive Space – Solid-State Drive 500GB or better - USB Port – Total 6 ports required and at least 2 ports should be 3.0 USB Regional Format – U.S. English
13	Software	Latest Suitable Software for instrument control and data analysis should have below features: - Allow users to create SOP for samples in Wet and dry modules. - Sample analysis results parameters like D10, D50, D90, D99, D100, mean. - Volume based size distribution graph along with table. - Customize report generation. - Automatic check for errors.
14	Warranty	Three Years Warranty (Standard Company warranty plus two years) from the date of installation or supply.
15	AMC	- AMC charges including (PM KIT) calibration of two years after completion of three years warranty shall be provided. (Supplier should provide Quote Separately)
16	UPS	Supplier to provide detail requirements
17	Consumables	- Cotton Swabs - 5 Nos. - Cleaning agent for Dry module – 2 Nos. - Cleaning agent for Wet module – 2 Nos. - Sample Cup (if tornado) – 10 Nos.
18	User List	Vendor should have a minimum install base of 25 units in India for Particle Size Analyser along with three Installation and performance certificate.
19	Demonstration	- During technical evaluation the vendor should be able to provide demonstration of the quoted instrument on demand - Instrument model should be strictly complying with the tender specification during demonstration of the instrument
20	Training & Application	- Vendor should have application lab in India for immediate support - For all kinds of sample matrix (Pharmaceutical, Dyes, Pigments,

	Support	inks and Food colours.) • Application training (Operational & maintenance training) shall be provided by trained application scientist in two phases: • Phase I: Three days Training at principal's lab: All Expenses of the Two trainees viz Travel (Within Mumbai or outstation) , Boarding, Lodging, local conveyance etc shall be provided by equipment manufacturer/Supplier/tenderer • Phase II: Training at Site: Three days Hands on training at the time of installation and commissioning of the machinery inside the WRA, Thane premises and One or Two day Twice in year during warranty period.
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Name of the Instrument	3. Thermo gravimetric Analysis- (TGA)	
Purpose of the Instrument	For analysis of samples for Decomposition and thermal stability, Component identification and quantification, Moisture/solvent evolution and identification and Reaction kinetics and modeling	
EMD to be paid (in Rs.)	1,00,000.00	
<u>Technical Specifications for Thermo Gravimetric Analyser (TGA)</u>		
Thermo Gravimetric Analyser with following specifications:		
Sr. No	Requirement	Specification
1.	TGA balance type	Top-loading/Bottom loading or horizontal balance, (only TGA, not combined with any other instrument)
2.	Temperature range	Ambient to 1000 °C
3.	Calibration	- Temp. calibration ASTM E 1582 & - Weight calibration as per ASTM E 2040
4.	Heating rates	0.1 to 200 °C/min or better
5.	Scanning temperature accuracy	±1 °C or better
6.	Iso- thermal temperature accuracy	±1 °C or better
7.	Balance sensitivity	+/- 1 µg or better
8.	Balance precision	±0.01% or better
9.	Balance capacity	400 mg or more
10.	DTG curve	The derivative peaks should be pointed downward direction.
11.	Sample pans	- Ceramic – As per company Standard Supply - Platinum- As per company Standard Supply
12.	Cooling time	1000 °C to 50 °C within 20 mins (with or without chiller, if chiller is required, chiller cost shall be included)
13.	Gas switching	Fast & through software control
14.	Mass flow controller	Shall have dual mass flow controller for automatic switching for inert or oxidative gas & purge gas
15.	Data collection Device	Software to provide a means of acquiring, storing and displaying measured or calculated signals or both. The minimum output signals required for mass, temperature and time.

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16.	Certificates/Compliance	- Designed and tested to be in compliance with the legal requirements for laboratory - Quality Assurance - Compatible with following standards: ASTM E 1131, ASTM D 6370, ISO 9924
17.	Warranty	- Three Years Warranty (Standard Company warranty plus two years) from the date of installation or supply. - Supplier should provide warranty on TGA furnace minimum 5yrs.
18.	UPS	Supplier to provide detail requirements
19.	AMC	- AMC charges including calibration of two years after completion of three years warranty shall be provided. (Supplier should provide Quote Separately)
20.	Instrument shall have	Auto analysis software, TGA decomposition software (kinetics), Arrhenius plots & shelf-life determination software
21.	Accessories	- Computer, printer, chiller (if required), sample holders (2 nos at least), Thermocouple with sensor (1 at least) - System should be onsite upgradable in future.
22.	Consumables	- Ceramic -45 - Platinum-02
23.	Complete tool kit	For maintenance & operation
24.	Certified reference material	Traceable to NIST covering full range of temp.to be provided
25.	Technical support in India	For method development & maintenance
26.	Compliance statement/declaration	Should be provided on company's letter head
27.	Installation, Demonstration & Training	Should provide instrument operation and application training for 05 days onsite (3 days operational training/2 days application training in two phases) and also provide technical support during development of the testing parameters.
28.	User List	Vendor should have a minimum install base of 50 units in India for TGA along with three Installation and performance certificate
29.	Demonstration	- During technical evaluation the vendor should be able to provide demonstration of the quoted instrument on demand. - Instrument model should be strictly complying with the tender specification during demonstration of the instrument

30.	Training & Application Support	- Phase I: Training at the Principals' Lab: - All expenses of the Two trainees viz Travel (domestic or abroad), Boarding, Lodging, Local Conveyance etc. shall be provided by the equipment manufacturer/Supplier/tenderer. - Phase II : Training at site : Hands on training at the time of installation and commissioning of the machinery inside the WRA, Thane premises
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Annexure II

FORMAT OF BANK GUARANTEE OF 10% OF CONTRACT VALUE

(ON NON JUDICIAL STAMP PAPER OF RS.100/-)

Bank guarantee No.----- Date: -----This deed of guarantee made this----- day of----- 2024 (Two Thousand Twenty four only) (Name and address of the bank) herein after referred to as (The bank) which expression shall where successors and assignees of the Bank and the Wool Research Association (WRA) , Thane which expression shall unless repugnant to the context of the meaning thereof include it's legal representatives, successors and assignees.

WHEREAS the Wool Research Association (WRA), has placed its Purchase Order bearing No.-----dated-----on (name and address of the party) (here in after called 'the supplier' for the supply of ----- (name of the testing instrument).AND WHEREAS the Wool Research Association (WRA), Thane has agreed to pay to the supplier final 10% of the value of the equipment on submission of a Bank Guarantee of equal amount, which will be kept valid upto ----- being the period of 36 calendar months from the date of Bank Guarantee.

In consideration of the Wool Research Association (WRA) ,Thane having agreed to pay to the supplier Rs.----- Rupees ----- only)being the last 10% of the value of the equipment, we (name of the Bank) hereby undertake and guarantee to make repayment to the of the said 10% amount or any part thereof which does not become payable to the supplier by the **Wool Research Association (WRA) , Thane** in accordance with the subject to the terms and conditions of the said order within ----- days from the date of dispatch / from the date of receipt of the material at site. The Bank further undertakes not to revoke this guarantee during its currency except with the previous consent of the **Wool Research Association (WRA), Thane** in writing and this guarantee shall be a continuous and irrevocable guarantee up to a sum of Rs. ----- (Rupees----- only)

The Bank shall, not be discharged or released from this guarantee by any arrangement between the supplier and the **Wool Research Association (WRA) , Thane** with or without the consent of the Bank or any alterations in the obligation of the parties or by any indulgence, forbearance shown by the **Wool Research Association (WRA), Thane** to the supplier and the same shall not prejudice or restrict remedies against the Bank nor shall the same in any event be a ground of defence by the Bank against the **Wool Research Association (WRA), Thane**.

We (name of the Bank) do hereby undertake to pay an amount equal to 10% of the order value being the amount due and payable under this guarantee without any demur, merely on demand from the **Wool Research Association (WRA)** stating that the amount claimed is due to the **Wool Research Association (WRA)**. In case the **Wool Research Association (WRA)** puts forth a demand in writing on the Bank for the payment of the amount in full or in part against this Bank guarantee, the Bank shall considered that such demand by itself a conclusive evidence and proof that the supplier has failed in complying with the terms and conditions stipulated by the **Wool Research Association (WRA)** in the purchase order and

payment shall be made to the **Wool Research Association (WRA)** without raising any dispute regarding the reasons for any such lapse/failure on the part of the supplier.

This guarantee shall be in addition to and without prejudice to any other securities or remedies which the **Wool Research Association (WRA)** may have to hereinafter possess against the supplier and the **Wool Research Association (WRA)** shall be under no obligation to marshal in favour of the Bank any such securities or fund or assets that the **Director, WRA** may be entitled to receiving or have a claim upon and the **Wool Research Association (WRA)** at its absolute discretion may vary, exchange renew, modify or refuse to complete or enforce or assign any security or instrument.

The Bank agrees that the amount hereby guaranteed shall be due and payable to the **Wool Research Association (WRA)** on the Director, WRA serving with a notice requiring the payment of the amount and such notice shall be deemed to have been served on the bank either by actual delivery thereof to the Bank or by dispatch thereof to the Bank by Registered Post shall be deemed to have been duly served on the Bank notwithstanding that the notice may not in fact have been delivered to the Bank.

In order to give full effect to the provisions of this guarantee, the Bank hereby waives all inconsistent with the above provisions and which the Bank might otherwise as guarantor be entitled to claim and enforce.

NOTWITHSTANDING anything contained herein before, the liability under this guarantee is restricted to Rs. -----(Rupees-----only). The guarantee shall remain in force till the -----(Rupees only). and unless the guarantee is renewed or a claim is preferred against the Bank within three months from the said date all rights of the **Wool Research Association (WRA)** under the guarantee shall cease and Bank shall be released and discharged from all liability hereunder.

(SIGNATURE)

PLACE:

DATE:

SEAL

NOTE: SUPPLIERS SHOULD ENSURE THAT SEAL OF THE SIGNATORY IS PUT BY BANKER, BEFORE SUBMISSION OF THE BANK GUARANTEES.