

**MAHARSHI DAYANAND UNIVERSITY, ROHTAK
CENTRAL INSTRUMENTATION LABORATORY**

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**MAHARSHI DAYANAND UNIVERSITY, ROHTAK
CENTRAL INSTRUMENTATION LABORATORY**

E- TENDER NOTICE

E-tender on behalf of Director, Central Instrumentation Laboratory, is invited subscribed as “Tender for Instruments for CIL for the purchase of “(A) Zeta Sizer (01 no.s)” and (B) CHNS Analyzer(01 nos.)”, for CIL, latest by 02-11-2018, up to 05.00’ pm, as per details given on website, along with Earnest Money (EMD) equal to 2 % of the quoted rates (for each specific instrument) on the total amount, paid through online mode, and a fees of Rs. 3000/ through online mode, as Tender Fees, in the account of Finance Officer, M.D. University, Rohtak, through online mode only. Bidders shall have to pay the E-service fees of Rs. 1000/ through online mode, in favour of “Society for IT initiative fund for e-Governance”, payable at Chandigarh. The E-tender shall be opened on 03-11-2018, at 11.00’am. For more details, please visit website www.mdurohtak.ac.in / <https://haryanaeprocurement.gov.in>.

Last date of receipt of tender bids	:	02-11-2018 up to 05.00 pm
Tenders complete in all aspects be addressed to	:	Director Central Instrumentation Laboratory M.D. University, Rohtak.
Date of opening of technical bids	:	03-11-2018, at 11.00’am

Note: The tenders will be received only through e-tendering. Bidder have to submit the hard copy of technical bid in the office of the Director, Central Instrumentation Laboratory, M.D.U., Rohtak before 5.00 PM dated 02-11-2018. Bid received after due date and time will be instantly rejected.

**Director
Central Instrumentation Laboratory**

**MAHARSHI DAYANAND UNIVERSITY, ROHTAK
CENTRAL INSTRUMENTATION LABORATORY ,**

Phone:-01262-393224

Email: dir.cil@mdurohtak.ac.in

STANDARD BIDDING DOCUMENT FOR PURCHASE OF (A) Zeta Sizer (01 no.) AND (B) CHNS Analyzer (01 no.) FOR CENTRAL INSTRUMENTATION LABORATORY, M.D. UNIVERSITY, ROHTAK

PART 1: COMPLETE BIDDING DOCUMENT

Name of work: Purchase of (A) Zeta Sizer (01 no.) AND (B) CHNS Analyzer (01 no.), for CIL, MDU, Rohtak.

PRESS NOTICE

M. D. UNIVERSITY, ROHTAK Notice Inviting e - Tender	
Name of work:	Purchase of (A) Zeta Sizer (01 no.) AND (B) CHNS Analyzer (01 no.) for Central Instrumentation Laboratory, M.D.U., Rohtak.
Tender Docs Fees + E – service Fees	Rs. 3000/- + Rs. 1000/- = Rs. 4000/-
Earnest Money	Please see table below, for the name & quantity of instruments. Specifications are given separately. EMD to be deposited as 2 % of the quoted rate of instruments.
Time Limit	03 weeks
Tender to be received till: 05.00 pm on dated 02-11-2018	
1.	The tenders will be received only through E-tendering. For further details please visit website https://haryanaeprocurement.gov.in / www.mdurohtak.ac.in
2.	Tender Fees is (to be paid through online) Rs. 3000/- (non-refundable) in favour of “Finance Officer, M.D. University, Rohtak”, payable at Rohtak.
3.	Willing bidders shall have to pay Rs. 1000/- as e-Service Fees , to be deposited through online, in favour of “Society for IT initiative fund for e-governance”, payable at Chandigarh.
4.	The Earnest Money of the tender (to be paid through online) is 2 % of the rate quoted by the bidder, for each specific equipment.

S. No.	Name of the item	Quantity (number)
1.	Zeta Sizer	01
2.	CHNS Analyzer	01

**Director, Central Instrumentation Laboratory,
M.D.University, Rohtak.**

**MAHARSHI DAYANAND UNIVERSITY, ROHTAK
CENTRAL INSTRUMENTATION LABORATORY.**

DETAILED NOTICE INVITING TENDER

E-Tender is invited for purchase of **Zeta Sizer (01 no.) and CHNS Analyzer(01 no.)** , in single state two cover system, i.e., Request for Technical Bid (Online BID under PQQ / Technical Envelope) and Request for Financial Bid (Comprising of price bid proposal under online available / Commercial Envelope):

S. No.	Name of work	EMD to be deposited	Tender Document Fees and E-service Fees (Rs.)	Start Date & time of Bid Preparation & Submission	Expiry Date & Time of Bid of EMD submission	Expiry Date & Time of Bid preparation and Submission
1.	Purchase of instruments for Central Instrumentation Laboratory, M.D.U., Rohtak.	Please see table below, for the name & quantity of instruments. Specifications are given separately. EMD to be deposited as 2 % of the quoted rate of each specific instrument.	Rs. 3000/- + Rs. 1000/- = Rs. 4000/-	11-10-2018 (11.00' am)	02-11-2018 (04.00'pm)	02-11-2018 (05.00'pm)

S. No.	Name of the item	Quantity (number)
01.	Zeta Sizer	01
02.	CHNS Analyzer	01

1. Detailed notice inviting tender can be seen in the office of the undersigned during office hours.
2. Bidding documents are available on website www.mdurohtak.ac.in / <http://haryanaprocurement.gov.in>
3. Newly enlisted supplier / manufacturer should bring proof of enlistment in appropriate class.
4. The bidders would submit bid through e-tendering only on the website <http://haryanaprocurement.gov.in>

Under the process, the Pre-qualification / Technical online bid application, as well as the Online Price Bid shall be invited at single stage, under two covers, i.e., PQQ / Technical & Commercial Envelope. Eligibility and qualifications of the applicant will be first examined, based on the details submitted online under first cover (PQQ or Technical) with respect to eligibility and qualifications criteria prescribe in the tender document. The Price Bid under the Second cover shall be opened only for those applicants, whose PQQ / Technical Bids are responsive to eligibility and qualifications requirements as per Tender documents.

1. The payment for Tender Document fees and E-Service Fees shall be made by eligible bidders online directly through Debit Cards & Internet Banking Accounts and the payment for EMD can be made online directly through Net Banking / RTGS / NEFT or OTC. Please refer to "Online Payment Guideline" available at the Single e-Procurement portal of GoH (Govt of Haryana) and also mentioned under the Tender Document..
2. Intending bidders will be mandatorily required to online sign – up (create user account) on the website <https://haryanaprocurement.gov.in> to be eligible to participate in the e-Tender. They will be required to make online payment of 2 % of the bid cost (2 % of the quoted rate of specific instrument) toward EMD fees under the stipulated time frame.
3. The interested bidders must remit the funds at least T + 1 working days (Transaction day + One working day) in advance, i.e., on or before 02-11-2018, up to 04.00'pm, and make payment via Net Banking / RTGS /NEFT or OTC to the beneficiary account number specified under the online generated challan. The intended bidder thereafter will be able to successfully verify their payment online and submit their bids on or before the expiry date & time of the respective events / Tenders at <https://haryanaprocurement.gov.in>

The interested bidders shall have to pay mandatorily e-Service Fees (Non- refundable) of Rs. 1000/- (Rupees one thousand only) online by using the service of secure electronic gateway

The bidders can submit their tender documents (Online) as per the dates mentioned in the key dates:

Key Dates

S. No.	Department stage	Bidder's stage	Start date & time	Expiry date & time
1.		Tender Document Download And Bid Preparation / Submission	11-10-2018 (11.00'am)	02-11-2018 (05.00'pm)
2.	Technical Bid Opening		03-11-2018 (11.00'am)	
3.	Financial Bid Opening		03-11-2018 (02.00'pm)	

NOTE: Hard copy of the Technical Documents should be submitted (sealed cover) in the office of the Director, Central Instrumentation Laboratory, M.D. University, Rohtak, before the specified date and time.

Important Notice:

1. The Applicants / bidders will have to complete "Application / Bid Preparation & Submission" stage on scheduled time, as mentioned above. If any applicant / bidder failed to complete his

- / her aforesaid stage in the stipulated online time schedule for this stage, his / her application / bid status will be considered as "Application / Bids not submitted".
2. Applicant / bidder can rework on his / her bids even after completion of "Application / Bid Preparation & Submission Stage" (Application / bidder stage) subject to the condition that the rework must take place, during the stipulated time frame of the applicant / bidder stage.
 3. In the first instance, the online payment details of tender document fees + E-service fees and EMD & PQQ / Technical Envelope shall be opened. Henceforth, Financial Bid quoted against each of the item by the shortlisted bidder wherever required, shall be opened online, in the presence of such bidders, who either themselves or through their representatives, choose to be present. The bidders can submit bids online in two separate envelopes:
Envelope 1: Technical Bid
The bidders shall upload the required eligibility & technical documents online in the Technical Bid.
Envelope 2: Commercial Bid
The bidders shall quote the prices in the price bid format under Commercial Bid.

Conditions:

1. DNIT and related documents can be seen on any working day during office hours in the office of the undersigned.
2. Conditional tenders will not be entertained and are liable to be rejected.
3. In case the day of opening of tenders happens to be holiday, the tenders will be opened on the next working day. The time and place of receipt of tenders and other documents will remain unchanged.
4. The M.D. University, Rohtak, reserves the right to reject any tender or all of the tenders, without assigning any reasons.
5. The tender without earnest money / bid security will not be opened.
6. The jurisdiction of court will be at Rohtak.
7. The tender of the bidder who does not satisfy the qualifications criteria in the bid documents are liable to be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.
8. The bid for the work shall remain open for acceptance during the bid validity period, to be reckoned from the last date of submission of the tender. If any bidder / tenderer withdraws his bid / tender before the said period or makes any modifications in the terms and conditions of the bid, during the fixed validity period, the earnest money shall stand forfeited. **Bids shall be valid for the financial year 2018-19.** In case the last day to accept the tender happens to be holiday, validity to accept the tender will be the next working day.

**Director
Central Instrumentation Laboratory,
M.D. University, Rohtak.**

Instructions to bidder on Electronic Tendering System

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

1. Registration of bidders on e Procurement Portal:-

All the bidders intending to participate in the tenders processed online are required to get registered on the centralized e - Procurement Portal i.e. <https://haryanaeprocurement.gov.in>. Please visit the website for more details.

2. Obtaining a Digital Certificate:

2.1 The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

2.2 A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant 's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website – <https://haryanaeprocurement.gov.in>.

2.3 The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub - certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from:

M/s Nextenders (India) Pvt. Ltd. O/o. DS&D Haryana,
SCO – 09, IIInd Floor,
Sector – 16, Panchkula– 134108
E - mail: Chandigarh@nextenders.com
Help Desk: 1800-180-2097 (**Toll Free Number**)

Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).

In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney /lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.

In case of any change in the authorization, it shall be the responsibility of management /partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.

The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

3 Opening of an Electronic Payment Account:

For purchasing the tender documents online, bidders are required to pay the tender documents fees online using the electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually. For online payments guidelines, please refer to the Home page of the etendering Portal <https://haryanaeprocurement.gov.in>.

4 Pre-requisites for online bidding:

In order to bid online on the portal <https://haryanaeprocurement.gov.in> , the user machine must be updated with the latest Java & DC setup. The link for downloading latest java applet & DC setup are available on the Home page of the e-tendering Portal.

5 Online Viewing of Detailed Notice Inviting Tenders:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal e Procurement system on the Home Page at <https://haryanaeprocurement.gov.in>

6 Download of Tender Documents:

The tender documents can be downloaded free of cost from the eProcurement portal <https://haryanaeprocurement.gov.in>

7 Key Dates:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

8 Bid Preparation (Technical & Financial) Online/offline Payment of Tender Document Fee, eService fee, EMD fees.

8.1 The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic payment gateway. The Payment for Tender Document Fee and eService Fee can be made by eligible bidders/ contractors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD can be made online directly through RTGS / NEFT. The secure electronic payments gateway is an online interface between contractors and Debit card / online payment authorization networks.

The electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually.

Hence, the bidders have to provide information and credentials related to manual payment submission at single portal e - Procurement system, under Technical Envelope of the respective tenders

8.2 The bidders shall **upload** their technical offer containing documents, qualifying criteria, technical specification, schedule of deliveries, and all other terms and conditions except the rates (price bid). The bidders shall **quote** the prices in price bid format.

NOTE:- Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal <https://haryanaeprocurement.gov.in>.

For help manual please refer to the "Home Page" of the e Procurement website at <https://haryanaeprocurement.gov.in>, and click on the available link "How to...?" to download the file.

Director, Central Instrumentation Laboratory,
M.D.University, Rohtak

TERMS AND CONDITIONS :

1. Prices should be inclusive of all taxes, levies, etc.
2. Please quote the price of the instrument (as per demanded specifications) separately, and costs of all accessories separately. Please also specify the cost of warranty / guarantee / AMC yearwise as a separate head. The price of all items / accessories, offered as free of cost, should also be mentioned separately. The quoted price shall include free installation. Accessories / pre-requisites for the installation / smooth working of the instrument should be specifically mentioned before hand, by the bidder.
3. The e-tender shall be opened in the Office of the Director, CIL, M.D. University, Rohtak, on -3-11-2018, at 1100'am, by the Tender Committee, in the presence of the bidder / authorized representative and the Committee reserves the right for negotiation thereafter, at any stage, if considered necessary.
4. Rates should be carefully filled up, both in words and figures, without any cutting, erasing or overwriting.
5. **Rates should be quoted in Indian Rupees** . The payment would be made in INR. Price should be quoted FOR CIL, MDU, Rohtak. All clearing / packaging / transportation / insurance charges, etc., shall be borne by the bidder (to be quoted in the bid).
6. In case the bidder quoting the lowest rates declines to accept the offer, the EMD of such bidder shall be forfeited and the bidder shall be blacklisted by the University for any kind of dealing in future.
7. The bidder shall have to submit compliance report, as per ANNEXURE "A", "B" AND "C". In case of non compliance, the bid will be rejected.
8. The EMD of the unsuccessful bidder shall be returned on the completion of all the process.
9. Demonstration of the instrument, along with "USER SATISFACTION REPORT", may be demanded by the Tender Committee, before finalizing the supply order.
10. The price quoted should be valid for the financial year 2018-19. (March 31, 2019)
11. The instrument will be accepted subject to the approval of the Inspection Committee.
12. The supply shall be executed within the time specified in the supply order, which may be extended by the Registrar, on an application of the supplier, explaining the reasons / circumstances due to which time limit could not be adhered to. In the event of the supplier failing to supply the material within the specified time, he shall be liable to pay as compensation an amount equal to one percent or such amount, as the Registrar may decide, on the said amount of the contract, for every day that the quantity remains incomplete, provided that the entire amount of compensation will not exceed 10 percent of the total amount of contract. An appeal against these orders shall however lie with the Vice Chancellor, whose decision shall be final.
13. The University stands exempted from the payment of Central Excise Duty / Customs Duty, and shall provide the necessary certificates to this effect, as applicable. The bidder shall quote the rates accordingly.
14. Goods which do not fulfill the specifications or which are rejected by the Inspection Committee shall be lifted by the supplier at his own cost, and no payments shall be made in lieu of the same.
15. The quantity / number of the instruments may be increased / decreased, within the financial year 2018-19.

16. Bidder must specify the guarantee / warrantee / AMC, along with the break up of the costs of guarantee / warrantee / AMC yearwise. The University shall prefer instruments offered with the maximum guarantee / warrantee / AMC.
17. Payment will be made after delivery. **No advance payments will be made.** Full payment will be made only upon the "Acceptance report" of the Inspection Committee.
18. The University reserves the right to retain part of the payment as "Performance Guarantee", and the same shall be finalized by the Tender Committee, in the course of negotiations.
19. Other terms and conditions are as per the Terms & Conditions specified in the Notice Inviting Tender.
20. Submission of the bid shall be deemed to have prior acceptance of all the terms & conditions, as specified above, by the bidder.

**Director, Central Instrumentation Laboratory,
M.D.University, Rohtak**

ELIGIBILITY CRITERIA

The following criteria must strictly be fulfilled by the bidder. The bidder must submit the documentary evidence in support of their claim for fulfilling the criteria and they should also submit an undertaking on their letterheads to the fairness of these documents while submitting the bid. The bids received without the documentary evidence will be rejected outright.

1. MDU invites bid from the authentic manufacturers / authorized dealers / authorized representatives. The bidder must fill & submit Annexures "A", "B" and "C". Incomplete annexures as specified may result in rejection of the bid.
2. The bidder should be a company / firm / organization, registered in India. In case of foreign manufacturers, the bid must include name & address of its authorized Indian entity, as per Annexure "A", "B", and "C".
3. The bidder shall also append the following declaration with the tender:

DECLARATION

I / We (Name & address of the firm / organization, etc) _____ do hereby solemnly affirm and declare that the facts stated in the technical bid and annexures A, B & C are correct and true to the best of my / our knowledge and belief and nothing has been concealed therein. In case of any concealment or misrepresentation detected at any stage, I / We shall be liable for legal action under Section 182 and Section 415, read with Section 417 and 420 of the Indian Penal Code, as the case may be.

Place:
Dated:

(Signature of the tenderer)
with full name, address, seal & stamp.

ANNEXURE "A"

Manufacturer's Authorization Certificate

Ref. No. _____

Dated: _____

To

(Name of the supplier / authorized dealer)

Whereas _____ (Name & address of the manufacturer) who are official manufacturer of _____ (Name of the instrument) having factory at _____ (Address of the factory) do hereby authorize _____ (name of the supplier / authorized dealer) indicated above, the purpose of which is to provide the following instrument , viz., _____ manufactured by us _____ and to subsequently negotiate and sign the contract.

Name : _____

In the capacity of : _____

Signed & stamped : _____

Duly authorized to sign the authorization for and on behalf of : _____

Date : _____

ANNEXURE "B"**Undertaking (on official letterhead)**

This is to certify that M/s _____ address _____

has not ever been blacklisted from / any / by University / Organization / Government Agency, etc., for any reason, at any point of time and no legal case / proceedings against the bidder / agency / supplier / manufacturer, etc., is pending, as on date.

(Dated, signed and stamped by the authorized person)

ANNEXURE "C"

Technical details for providing the Instruments

1.	Name and address of the agency / bidder / manufacturer / supplier, etc.	
2.	Contact person, with phone number, mobile number, and e-mail id	
3.	Year and month of establishment	
4.	Type of firm / organization (Proprietary / Private / Public / Govt.)	
5.	Copy of registration if applicable	
6.	Total annual financial turnover in the last three financial years (attach audited copy)	
7.	GST / sales tax registration number	
8.	Income tax number (PAN / TIN)	
9.	Quality certification number / licence, if any	
10.	Since when engaged in providing / manufacturing scientific instruments	
11.	Experience in domain expertise	
12.	Name and address of the Universities / organizations etc. where the said instruments have been supplied and installed (Satisfactory User Report may be demanded by the University)	

Certified that all the terms and conditions of this TENDER are acceptable by us.

(Authorized signatory)

with full name, designation and stamp, contact numbers, e mail id, etc.

1.	CHNS Analyser	<table border="1"> <thead> <tr> <th data-bbox="495 268 617 304">Sr. No.</th> <th data-bbox="617 268 1325 304">REQUIRED SPECIFICATIONS</th> </tr> </thead> <tbody> <tr> <td data-bbox="495 304 617 340">1.</td> <td data-bbox="617 304 1325 340">Measuring range: 0.01 to 100% for all elements</td> </tr> <tr> <td data-bbox="495 340 617 375">2.</td> <td data-bbox="617 340 1325 375">Electronic Auto sampler: 34 samples or more</td> </tr> <tr> <td data-bbox="495 375 617 411">3</td> <td data-bbox="617 375 1325 411">Analysis time: ≤10min/sample</td> </tr> <tr> <td data-bbox="495 411 617 447">4.</td> <td data-bbox="617 411 1325 447">Analytical range: 0.01 to 7mg or better</td> </tr> <tr> <td data-bbox="495 447 617 525">5.</td> <td data-bbox="617 447 1325 525">Temperature & Furnace: Dual vertical furnace with temperature ≥1000 °C</td> </tr> <tr> <td data-bbox="495 525 617 560">6.</td> <td data-bbox="617 525 1325 560">Combustion temperature:1800 °c</td> </tr> <tr> <td data-bbox="495 560 617 596">7.</td> <td data-bbox="617 560 1325 596">Sample weight: 0.02 to 400mg or better</td> </tr> <tr> <td data-bbox="495 596 617 674">7</td> <td data-bbox="617 596 1325 674">Combustion-Supporting Gas: Oxygen purity ≥ 99095% with pressure ≥ 1MPa</td> </tr> <tr> <td data-bbox="495 674 617 751">8.</td> <td data-bbox="617 674 1325 751">Carrier Gas: Argon and Helium with purity ≥ 99099% & ≥1MPa</td> </tr> <tr> <td data-bbox="495 751 617 829">9.</td> <td data-bbox="617 751 1325 829">Cylinder and Gas regulator: For Helium, Oxgen and Argon (1 No. for each gas)</td> </tr> <tr> <td data-bbox="495 829 617 865">10.</td> <td data-bbox="617 829 1325 865">Ash and residual removal device</td> </tr> <tr> <td data-bbox="495 865 617 942">11.</td> <td data-bbox="617 865 1325 942">Power usage: Should work in single phase with voltage 220 V& frequency 50 Hz</td> </tr> <tr> <td data-bbox="495 942 617 978">12.</td> <td data-bbox="617 942 1325 978">Detector: Thermal Conductivity Detector</td> </tr> <tr> <td data-bbox="495 978 617 1014">13.</td> <td data-bbox="617 978 1325 1014">Precision: ≤0.2%</td> </tr> <tr> <td data-bbox="495 1014 617 1050">14.</td> <td data-bbox="617 1014 1325 1050">Accuracy: ≤0.3%</td> </tr> <tr> <td data-bbox="495 1050 617 1413"></td> <td data-bbox="617 1050 1325 1413"> <p>Software results: Advanced Calculation: Elemental Ratio, simple Empirical Formula, % Polymer, Solvent of Crystallization, Dry Basis and Heating Value Record of Analysis; Sample; optimize combustion conditions background (blank) and calibration (Kfactor) values Statistical analysis: average, Standard Deviation, Variance and Relative Standard Deviation</p> </td> </tr> <tr> <td data-bbox="495 1413 617 1627"></td> <td data-bbox="617 1413 1325 1627"> <p>Allied instrumentation: Electronic balance with 0.01mg resolution and Weighing range: upto 50 g or better PC (Intel Core i3 or better, RAM-At least 4GB RAM, Hard drive- 512 GB or more, DVD Drive, 5 KVA online UPS with 30 min backup</p> </td> </tr> </tbody> </table>	Sr. No.	REQUIRED SPECIFICATIONS	1.	Measuring range: 0.01 to 100% for all elements	2.	Electronic Auto sampler: 34 samples or more	3	Analysis time: ≤10min/sample	4.	Analytical range: 0.01 to 7mg or better	5.	Temperature & Furnace: Dual vertical furnace with temperature ≥1000 °C	6.	Combustion temperature: 1800 °c	7.	Sample weight: 0.02 to 400mg or better	7	Combustion-Supporting Gas: Oxygen purity ≥ 99095% with pressure ≥ 1MPa	8.	Carrier Gas: Argon and Helium with purity ≥ 99099% & ≥1MPa	9.	Cylinder and Gas regulator: For Helium, Oxgen and Argon (1 No. for each gas)	10.	Ash and residual removal device	11.	Power usage: Should work in single phase with voltage 220 V& frequency 50 Hz	12.	Detector: Thermal Conductivity Detector	13.	Precision: ≤0.2%	14.	Accuracy: ≤0.3%		<p>Software results: Advanced Calculation: Elemental Ratio, simple Empirical Formula, % Polymer, Solvent of Crystallization, Dry Basis and Heating Value Record of Analysis; Sample; optimize combustion conditions background (blank) and calibration (Kfactor) values Statistical analysis: average, Standard Deviation, Variance and Relative Standard Deviation</p>		<p>Allied instrumentation: Electronic balance with 0.01mg resolution and Weighing range: upto 50 g or better PC (Intel Core i3 or better, RAM-At least 4GB RAM, Hard drive- 512 GB or more, DVD Drive, 5 KVA online UPS with 30 min backup</p>
Sr. No.	REQUIRED SPECIFICATIONS																																					
1.	Measuring range: 0.01 to 100% for all elements																																					
2.	Electronic Auto sampler: 34 samples or more																																					
3	Analysis time: ≤10min/sample																																					
4.	Analytical range: 0.01 to 7mg or better																																					
5.	Temperature & Furnace: Dual vertical furnace with temperature ≥1000 °C																																					
6.	Combustion temperature: 1800 °c																																					
7.	Sample weight: 0.02 to 400mg or better																																					
7	Combustion-Supporting Gas: Oxygen purity ≥ 99095% with pressure ≥ 1MPa																																					
8.	Carrier Gas: Argon and Helium with purity ≥ 99099% & ≥1MPa																																					
9.	Cylinder and Gas regulator: For Helium, Oxgen and Argon (1 No. for each gas)																																					
10.	Ash and residual removal device																																					
11.	Power usage: Should work in single phase with voltage 220 V& frequency 50 Hz																																					
12.	Detector: Thermal Conductivity Detector																																					
13.	Precision: ≤0.2%																																					
14.	Accuracy: ≤0.3%																																					
	<p>Software results: Advanced Calculation: Elemental Ratio, simple Empirical Formula, % Polymer, Solvent of Crystallization, Dry Basis and Heating Value Record of Analysis; Sample; optimize combustion conditions background (blank) and calibration (Kfactor) values Statistical analysis: average, Standard Deviation, Variance and Relative Standard Deviation</p>																																					
	<p>Allied instrumentation: Electronic balance with 0.01mg resolution and Weighing range: upto 50 g or better PC (Intel Core i3 or better, RAM-At least 4GB RAM, Hard drive- 512 GB or more, DVD Drive, 5 KVA online UPS with 30 min backup</p>																																					

2.	Zeta Sizer	<p>TECHNICAL SPECIFICATIONS FOR PARTICLE SIZE ANALYZER WITH ZETA POTENTIAL</p> <p>PC controlled system for measurement of Particle size, Zeta Potential and Molecular weight of dispersed particles/molecules in solution. Should have high sensitive correlator with minimum 1024 physical size channels or above. The optics must be fully pre-aligned with no user adjustment required. The particle size range measurement should be 1nm to 8.0 microns (hydrodynamic dia.) or better with sample Conc. Range: 0.00001% to 40% (% volume) or better. The accuracy, precision /repeatability must be better than +/-2% of NIST traceable latex standards. The sample volume should be minimum 20 microlitre. Molecular Weight measurement range should be 10,000 Da to 2×10^7 Da with minimum sample volume of 20 microlitre by back scattering method. Zeta Potential measurement must include measurement of aqueous/Polar Solvents and Oils, High Salts/ Non-Polar solvents based systems. The range should be +/- 500mV with size Range of 5 nm to 50 microns or above. The minimum sample volume should be 30 μL (minimum) with maximum sample conductivity of 200 mS/cm along with disposable cells to remove any cross contamination. The light Source should be 4 mW power or lower along with detector for high sensitivity measurements. The system should use minimum 4 variable positions for measuring samples from various positions within the cell to minimize multiple scattering effects. It should work at Measurement time of 1-2 minutes or less. The sampling Cell must be Cuvette cell. The output of result must be provided differential/cumulative distributions; values for sizes at given percentages, fits to distribution models for particle size. For zeta potential – plot of zeta potential distribution, mean zeta value and for molecular weight – mean molecular weight value.</p>
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