

**Government of Bihar**  
**Office of Director Agriculture**  
**Agriculture Department**

**LIST OF ANNEXURE FOR TENDER DOCUMENT**

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1	General Terms & Condition, EMD, PSD, After Sales Services, CMC, Terms & Condition, Detailing of Technical Bid Proforma, Quoting Rate, Detailing of Financial Bid Proforma, Opening of Offer date & address. Certificate by Bidder.	Main Body of the Document	1 - 4
2	List of Minimum Technical Specifications of AAS, Spectrophotometer, Digital Flame Photometer, Soil Sample Crusher, Electronic Balance,	I	5 - 7
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**Director of Agriculture**  
**Bihar, Patna**

**Invitation of Tender**

Sealed tenders in prescribed format are invited under two bid system only from ISO certified manufacturers or their authorized dealers who do business with ETHICAL and MORAL values. As per details below :-

1. Designation and address of Advertiser :- Director of Agriculture, Bihar
2. Date, Time and place of pre Bid Meeting :- Dated 20.03.2017 at 03:00 PM at the office of Director of Agriculture, Bihar
3. Last Date and Time for Submission of add tender paper :- Dated 10.04.2017 at 12:00 PM at the office of Joint Director (Chemistry) Soil Test Laboratory
4. Date, Time and Place of Opening of Bid :- Date 10.04.2017 at 03:00 PM at the office of Director of Agriculture, Bihar
5. Scope :- 22 Atomic Absorption Spectrophotometer with Assessorial and 30 Nitrogen analyser in different Soil Testing Laboratory under Directorate of Agriculture, Bihar, Patna
6. Bid validity period :- One year from date of opening of Bid
7. Tender detail can be formed on website :- [www.krishi.bih.nic.in](http://www.krishi.bih.nic.in)

**General Terms and Conditions**

1. Sealed tenders in prescribed format are invited only from bonafied and ISO certified manufacturer or their authorized dealers / registered suppliers who do business with ETHICAL and MORAL values, for the purchase of essential equipments / instruments only for the following items-

Group / Item No	Instruments/Equipments	Expected Nos.	EMD amount	Delivery Point/ Paying Authority
1	2	3	4	5
1	Atomic Absorption Spectro Photometer with accessories and Gas cylinder (Filled) (4 Nos.) with at least 5 year warranty	22	10 lakh	AD chem. DSTL
2	Nitrogen analyser	30	2 lakh	

**Note :-** The quantity may vary as per the actual requirements.

2. As per Bihar Financial Rules the tender should be submitted in two bid systems (Technical & Financial bids) in separate envelope in prescribed **Technical bid form-1** and **Financial Bid Form-2** as enclosed. The Technical Bid & Financial Bid should be submitted separately in **sealed cover** super-scribed as "***Bid for supply of instrument in Soil testing laboratory***" as applicable, addressed in manner given in **Para 23 of the general terms & conditions**. The name & address with email & Telephone/Mobile no. of the bidder should also be written/ printed on the cover of the envelopes containing Technical & Financial Bids.
- 2.1. Technical Bid should contain all the technical details along with proof of specification of the tendered items with original brochures, in case of AAS technical specification of quoted model should be on manufacturer company's website. ISO/BIS Registration Certificate, Earnest Money

Deposit (EMD) & other supporting papers except financial part of tendered item. All required details in the **Technical Bid Form-1** should be complete in itself and duly page numbers entered as per the column.

- 2.2. Financial Bid should contain price of the quoted items in the prescribed **Financial Bid format Form-2** duly completed in all respect.
3. Bidders are required to be registered in the commercial Tax Department. To participate in tender bidders need not be registered in Bihar Sales Tax Department. Bidder succeeded in tender, must be registered in Bihar Sales Tax Department before getting Supply Order within prescribed time limit.
  - 3.1 Bidders have to enclose last 3 years audited report.
  - 3.2 Bidders should have annual turn over of more than Rs Two Crores of last three years successively.
  - 3.3 Bidders have to submit supply order of such laboratory items in Government/Semi-Government sectors for minimum amount of Rs. 25 Lacs during the last 2 years.
4. **Firms will have to deposit an Earnest Money Deposit (EMD) as mentioned in para column 4 in the shape of crossed DD/FDR/Banker's cheque in favor of Joint Director (Chemistry), Soil Testing Laboratory, Bihar, Patna payable at Patna.**
5. Except successful bidder, the EMD will be returned to all other Firms after completion of the tender formalities.
6. A pre appraisal presentation will have to be given before the technical committee the date of which will be communicated on the mail address of the Bidders. This will add to the technical performance of the manufacturer.
7. Performance Security Deposit (PSD) @ 5% of order Value of the contract will have to made within 7 days on receipt of the supply order to ensure due performance of the contract by the successful bidders. The amount *in shape of FD* should be deposited with the respective purchasing authority / payee authority.

After depositing the PSD the earnest money will be returned to successful bidder. Performance security deposit will be refunded when contract period expires *i.e. upto AMC / CMC period.* If the instrument supplied is/are not working satisfactorily during the contract period & the services provided is inadequate the expenses incurred for repairs & spares will be recovered from PSD or as the case, full deposit may be forfeited.
8. Conditional tender will not be accepted.
9. Tender must enclose Technical Brochure in original and dully attested by the firm for the quoted brand items so that required specifications may be confirmed. No photo copy of technical brochure is acceptable.
10. All taxes & duties must be indicated clearly and separately in the **Financial Bid Form 2**. L1 will be decided on basis of total price with 5 years CMC. All taxes including CST, Insurance, Entry Tax, VAT or any other Tax, if any, were calculated on existing rate and they are not be part of L-1 Price.
11. In case of any ambiguity & false information found, the tender is liable to be rejected. EMD will be forfeited and company will be blacklisted.
12. Quoted rates should be in INR & valid up to **one year** from the tender opening date.
13. Quoted equipments should carry minimum one-year warranty for all the items from date of Installation & additional 4(four) years CMC (Comprehensive Maintenance Contract – implies service & spares) for Atomic Absorption Spectrophotometer with accessories, N analyzer with complete installation on turnkey basis.

In case of authorized dealers/supplier the documents regarding CMC must be approved and supported by the manufacturer. After sale service should be directly through manufacturer company.

14. Tender will not be accepted after the last date & time.
15. Payment will be made only after check up of the product as per specification, proper installation, on turnkey basis, satisfactory demonstration & its operationalization.
16. Bidder will have to arrange training for operation of the instruments/equipments to the concerned technical officials free of cost.
17. Price quoted must include all concern essential accessories to the equipments/apparatus etc. including electric & furniture items.
18. Successful bidders will have to deliver the items within 60 days of supply order received, unless extended. In case of imported items, bidders are expected to mention at the earliest about the delivery period.
19. Bidders are at liberty to withdraw or amend their quotations till the prescribed date and time of the tender.
20. No separate intimation will be delivered to the bidders regarding attending the meeting of the Tender Opening Committee.
21. In case of delay or failure in supply, order may be cancelled & PSD forfeited.
22. Undersigned reserves the right of acceptance of the tender in part, or rejecting any one or all at any stage without assigning any reason.
23. The Sealed tender completed in all respects will be received at the office of the **Joint Director (Chemistry), Soil Testing Laboratory, Bihar, Mithapur Farm, Patna latest by 12:00 hours on 10.04.2017.**
24. Technical tenders will be opened at 15:00 hours on **10.04.2017** in the office of Director of Agriculture, Bihar, Vikash Bhawan, Patna.
25. Bidders may remain present in self or through representatives during opening of tenders. Tenders will be opened even if no bidders or their representatives are present.
26. In case of any dispute, the jurisdiction will rest with Patna High Courts only.

Dy. Director (Chemistry),  
Soil Testing Laboratory,  
Bihar, Patna

Joint Director (Chemistry),  
Soil Testing Laboratory,  
Bihar, Patna.

**CERTIFICATE:**

Certified that the information furnished above are true and correct to the best of our/my knowledge and belief. In case, any or all the information given above is found to be incorrect at any time I undertake the liability to be proceeded with any manner, (Any change or changes in regard to the furnished information will be intimated to you as and when such changes occur).

Place & Date.

Signature of Bidder

Name & Address in Block Letters

**TECHNICAL SPECIFICATIONS FOR INSTRUMENTS**

**(MINIMUM SPECIFICATION)**

Item No.	Specification Required	
	Item	Specification
1	2	3
1	AAS	<p>Fully PC-controlled True Double Beam system AAS. The system should be capable of analyzing multiple elements in a single analysis of each sample with fast sequence.</p> <p><b>Monochromator:</b></p> <ol style="list-style-type: none"> <li><b>Should be based on Ebert or Czerny Turner diffraction grating</b> or should be based on Echelle Grating and/or better technology and optimized for both UV and Visible energy or better technology.</li> <li><b>Wavelength range 185-900 nm or wider</b> <ul style="list-style-type: none"> <li>Slits: Automated slit selection.</li> <li>Grating: line density of not less than 1800 lines/mm</li> <li><b>Dispersion: better than 1.5 nm/mm</b></li> <li>Detector: Photomultiplier Tube covering full wavelength range of Solid state (preferable).</li> <li>Deuterium background corrector/Zeeman.</li> </ul> </li> <li><b>Lamp system: Fully software controlled 5 or more lamp fixed positions.</b> Suitable for Hollow Cathode Lamps or Electrode discharge lamps. Lamp selection must be computer controlled. Fast selection and operation of all hollow cathode lamps in single sample analysis and aspiration through Software.                     <ul style="list-style-type: none"> <li>Following lamps must be included in the quote :- Coded lamp for analysis of Cu (Copper), Zn (Zinc), Fe (Iron), Mn (Magnize), &amp; B (Boron).</li> </ul> </li> <li><b>Gas control: Fully automated gas control system</b> with regulation. Automatic oxidant changeover facility should be there.</li> <li><b>Safety system:</b> The safety system shall automatically stop gas and flame. Shields and protection against heat and UV radiation                     <ul style="list-style-type: none"> <li>Various safety interlocks like burner head, gas pressure, nebulizer, drain full condition etc. should be integrated inside the system</li> <li>Nebulizer: high-precision Adjustable nebulizer, corrosion resistance.</li> <li>Advance design flame atomizer with high sensitivity</li> <li>Burners with corrosion shield, external burner rotation, <b>software controlled burner adjuster with auto setting of burner height.</b> Size of burner should be clearly mentioned in bid .</li> <li>Performance &gt;0.9 absorbance with precision of &lt;0.5% RSD from ten 5 sec. integrations for 5 mg/L Cu solution.</li> <li>NIST standard of Cu (Copper) Zn (Zinc), Fe (Iron), Mn (Magnize), &amp; B (Boron) should be quoted.</li> </ul> </li> </ol> <p><b>Software:</b> Software should CFR-21 Part-II Certified Windows 7/10 and higher version based 'worksheet' layout running on external PC with the software or keyboard control.</p> <p>The software shall</p> <ul style="list-style-type: none"> <li>Save the data/results more than 15 replicates,</li> <li>Support Data import/export: Facility,</li> <li>Control over flame, furnace and vapor operation</li> <li>Provide help for calibration and wavelengths</li> <li>Provide good data handling</li> <li>All the method parameters related with lamp selection, calibration, control,</li> </ul>

		<p>of flow gases should be through integrated software in the system.</p> <p><b>Utilities:</b> (a) Suitable Non corrosive exhaust hood (b) Suitable online UPS industrial grade with 45 minutes back-up (c) UHP grade Acetylene gas filled cylinder no. 2 required (d) Regulators for Acetylene &amp; Nitrous Oxide (e) Nitrous Oxide gas filled cylinder no.-2 required (f) exhaust hood compressor (g) Suitable gas pipe line for Acetylene &amp; Nitrous Oxide for each 20 meters. (h) PC workstation with Printer (i) Split Ac 1.5 ton with 4 star rating (j) Suitable reagent for AAS (k) Minimum 10 year availability of accessories consumables and spare parts of instrument are required.</p> <ul style="list-style-type: none"> <li>• Maximum Warranty + Maximum years of AMC.</li> <li>• <b>Training</b> - Training for two faculty (in-campus/off-campus)</li> </ul> <p><b>Provide at least five User list of quoted model</b></p> <p>Provide operational manual (soft &amp; hard copy)</p> <p>Note- Matching specification shall be properly mentioned as yes/no or partially matching with appropriate remarks.</p>
2	<p><b>Nitrogen analyser</b></p>	<p><b><u>Automatic Nitrogen Analyser</u></b></p> <p><b>A. <u>Automatic Macro Block PC Compatible Digestion System with Auto lift facility and Touch Screen Display</u></b></p> <ul style="list-style-type: none"> <li>• Six Place 250 ml capacity PC Compatible Block Digestion System with direct USB Port.</li> <li>• Autosequencing time/temperature domain of 70 programs and 12 sequencing steps,</li> <li>• Live graphical representation of time / temperature gradient,</li> <li>• Live schematic process flow feature,</li> <li>• Communication to optional Remote Control Module,</li> <li>• TFT Graphic Touch Screen Display. Supports all available Windows fonts and characters.</li> <li>• Unique wireless mouse to operate touch screen directly without PC at a distance of 2 mtrs from equipment.</li> <li>• Auto lift to enable automatic loading of samples tubes before digestion and for automatic lifting of hot digestion tubes after completion of digestion</li> <li>• The main digestion unit mother board controls the auto lift mechanism</li> <li>• Upgradeable to Remote Control Module for wireless data monitoring, control and transfer to PC at a distance of 30 mtrs from equipment</li> <li>• Unit should be upgradeable to Data Logger Module.</li> <li>• The mother board should be compatible for integration with scrubber system for future upgradation</li> <li>• All essential accessories, ISO 9001:2008 and CE Certified</li> </ul> <p><b>B. <u>Automatic Distillation System</u></b></p> <ul style="list-style-type: none"> <li>• Fully Auto Run completely Programmable Microprocessor based Distillation System with in-built software</li> <li>• 100 Predefinable User Storage Programmes. Automatic Boric Acid Addition, Dilution, KMNO4 Addition for Available Nitrogen, Alkali Addition, Steam Processing, Automatic Residue Removal with delay time features, Process over indication with alarm, Aspiration of Receiver Residue, Microbrilliant distillate control, Titration Connectivity feature for future upgradation,</li> <li>• Two line Alpha numeric Digital LCD Display,</li> <li>• Inbuilt safety features with CE Certification to fulfill all statutory requirement of Good laboratory Practice,</li> <li>• Automatic sensing of no water condition in the condenser</li> <li>• Auto deactivation of operation</li> <li>• Automatic measuring and monitoring of high temperature in distillate</li> <li>• Digital display of temperature</li> <li>• Auto door open warning indication,</li> </ul>

- Auto tube insert error indication.
- Auto deactivation of System on error diagnosis,
- Adjustable steam power, Auto online water saving mechanism.
- Auto reagent Level Sensor with Alarm,
- Stainless steel non corrosive steam Generator,
- Automatic water level monitoring
- Peristaltic pump for reagents addition, ISO 9001: 2008 Certified.
- Electrical Requirement - 220 - 230V/50Hz.

C. **Titration System**

- Motor driven Digital Burette titration system with Programming facility
- High Accuracy, Continuous operation
- No refilling required
- Titrate mode and dosing mode
- Individual calibration to user specified adaptation
- Valveless dosing system
- Interface RS 485/232
- Power supply : 9 V DC
- Direct printing option,
- Minimum flow rate 3-30 ml per minute, increments of 20 $\mu$ l
- Should have ASTM & DIN Standards
- List of installations in FTL, STL, MSTL in Bihar to be enclosed.
- Proof of installations of similar equipments in India to be enclosed.
- Company should have good performance track record with good after sales service facility.
- Company should have at least Rs. 1 crore per annum turnover in the past 3 years.



# Form -1

## Technical Bid Form

### Enclosures on Page No.

- |  |                  |       |
|--|------------------|-------|
| 1. Tender No. -  | : Due Date ..... | ..... |
| 2. Tendered Article (Item No.)<br>(For which bid is submitted)   | : .....          | ..... |
| 3. Name and Address of Bidding Firm  | : .....          | ..... |
| 4. ISO/BIS Certificate of Mnf. firm<br>(Certificate enclosed)  | : .....          | ..... |
| 5. Name and Designation of the person signing<br>the bid (Authorization letter as applicable)  | : .....          | ..... |
| 6. Mobile/Land Line Telephone Number   | : .....          | ..... |
| 7. Earnest Money Deposit Details   | : .....          | ..... |
| 8. CST/VAT Registration Certificate No.<br>of the tenderer (Copy enclose) (if applicable)  | : .....          | ..... |
| 9. PAN Number (Copy enclosed)  | : .....          | ..... |
| 10. Authorized dealer/Distributor<br>(Copy of certificate issued by<br>manufacturing company enclosed)   | : .....          | ..... |
| 11. Audited Annual last 3 yr. turnover<br>(Copy enclosed)  | : .....          | ..... |
| 12. Details about Service Centre -<br>Manufacturing Company Letter No.<br>Address - Location   | : .....          | ..... |
| 13. Year-wise amount of supply order executed<br>in last three years (with 5 user list in case of AAS)<br>(copy of supply orders/invoices enclosed for each) | : .....          | ..... |
| 14. Terms and Condition of contract mentioned<br>in the invitation bid are ACCEPTABLE/<br>NON-ACCEPTABLE   | : .....          | ..... |
| 15. Deviation in Terms and conditions/specifications   | : .....          | ..... |
| 16. Details of Brochure Attached   | : .....          | ..... |
| 17. Details for each quoted items  | : .....          | ..... |

Item No.	Make/Model	Specification as per tender	Offered Specification (Detailed)	Offered Specification (at par / above par)
1	2	3	4	5

.....  
Place & Date.

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Signature of Bidder  
Name & Address in Block Letters

# Form -2

## Financial Bid Form

1. Tender No. - : Due Date - .....
2. Tendered Article (Item No.) : .....
3. Name and Address of Bidding Firm : .....
4. Financial Details for each quoted items : .....

Item No.	Details of Item Quoted Price & Taxes							Charges for CMC with taxes - year wise breakup				Remarks	
	Name of the Items	Brand Name	Model/Make No.	Basic Price of Item with all accessories and installation on turen Key basis without VAT	Bihar Sales Taxes (Vat)	Other Taxes if any	All Price including VAT (5+6+7)	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	4 <sup>th</sup> yr	5 <sup>th</sup> yr		
1	2	3	4	5	6	7	8	9				10	
1	AAS with accessories all installation												
2	Nitrogen analyser												

Note :- Lowest Bid (L1) will be decided on total quoted price added with AMC/CMC for five years.  
 All taxes including CST, Insurance, Entry Tax, VAT were on Existing rate and were not basis for calculated for determination of L-1.

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 Place & Date.

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 Signature of Bidder  
 Name & Address in Block Letters