BIHAR AGRICULTURAL UNIVERSITY

SABOUR-813210, (BHAGALPUR), BIHAR

Tender Notice No. -14

Sealed tenders/quotations are invited through registered / speed post / courier services, from Reputed / Registered, Supplier / Dealers / Firms / Company / Enterprises for the supply of Laboratory Equipments for establishment of Centre of Excellence on Quality Honey Production in Bihar at Nalanda College of Horticulture, Noorsarai. Sealed envelope containing full information along with supporting documents, must reach in the office of the undersigned on or before **17/10/2017 upto 4.00 P.M**. and the same will be opened on **18/10/2017 at 3.00 P.M.** Details are available on www.bausabour.ac.in

O/I Central Store (H.Q.)

BIHAR AGRICULTURAL UNIVERSITY

SABOUR, BHAGALPUR – 813 210 (BIHAR)

www.bausabour.ac.in

TENDER DOCUMENT
FOR

"Supply of Laboratory equipments for Establishment of Centre of Excellence on Quality Honey Production in Bihar at Nalanda College of Horticulture, Noorsarai."

O.O. No.14/CS (HQ)/BAU, Sabour Dated: 26/09/2017

BIHAR AGRICULTURAL UNIVERSITY
SABOUR (BHAGALPUR)
PIN: 813 210(BIHAR)
www.bausabour.ac.in

O.O. No.14/CS (HQ)/BAU, Sabour **Dated: 26/09/2017**

NOTICE INVITING TENDER/QUOTATION

Sealed tenders/quotations are invited in 2- Bid Systems (Technical Bid & Financial Bid) from Manufacturer/Authorized Distributors or Dealers for the supply of **"**Supply of Laboratory equipments for the different units of Bihar Agricultural University, Sabour"

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. Non-compliance with specifications/instructions in this document may disqualify the bidders from the tender exercise. BAU, Sabour reserves the right to select the item (in single or multiple units) or to reject any quotation wholly or partly without assigning any reason. Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

Terms and Conditions:

1. The technical and financial bids should be quoted separately and put in different sealed envelopes marked "Technical bid" and "Financial bid" as applicable. These separate bids envelopes are to be put in an outer envelope which should also be sealed and marked as **"Supply of Laboratory equipments for establishment of Centre of Excellence on Quality Honey Production in Bihar at Nalanda College of Horticulture, Noorsarai"**.

2. The bidder must submit the OEM or their Authorized Distributor Certificate on their letterhead in the name of tenderer duly mentioned tender reference number along with the technical bid. If not found with technical bid the tender will be summarily rejected.

3. The Vendors have executed same nature of work in the last 3 years. The details of such institutions and work order with name of equipments may also be enclosed with the bids.

4. The technical and financial bids should be submitted in original. The financial bid should include the cost of main equipments/items and its accessories. If there is any separate cost for installation etc. that should be quoted separately.

5. Each individual sealed envelope as well as the outer envelope should be marked with the following reference on the top left hand corner: **O.O. No.14/CS (HQ)/BAU, Sabour, Dated: 26/09/2017.**

6. The printed literature and catalogue/brochure giving full technical details should be included with the technical bid to verify the specifications quoted in the tender. The bidders should submit copies of suitable documents in support of their reputation, credential and past performance. All pages should be self attested with Co. Seal.

7. The rates should be quoted in figures (typed or printed) and cutting will not be accepted. The final amount should be in figures as well as in words. If there are cuttings, they should be duly initialled, failing which the bids are liable to be rejected.

8. Any bids received after **4:00 P.M. on 17/10/2017** shall not be considered. Offers received within the stipulated period only will be considered. University shall not be responsible for any postal delay. All tender documents should be sent through courier, speed post or registered post only.

The postal address for submitting the tenders is:

Officer-In-Charge,
Central Store (HQ)
Bihar Agricultural University
Sabour, Bhagalpur (Bihar), Pin-813210

9. The Technical Bids will be opened on **18/10/2017 at 3.00 P.M.** in the presence of representative of the firm duly authorized .The date & time for opening of Financial Bids will be informed later on to the technically qualified bidders. In case the date mentioned above is declared Government Holiday, the date shall automatically be shifted to next working day.

10. While quoting rates, the firm shall give an undertaking to the effect that "the terms/conditions mentioned in the Enquiry Letter/Tender Notice against which the rates are being quoted are acceptable to the firm". In case the firms do not give this undertaking, their rates will not be considered.

11. The quantity shown against the item is approximate and may vary as per demand of the University at the time of placing order.

12. All disputes shall be subject to Bhagalpur Jurisdiction only.

13. All tenders in which any of the prescribed conditions is not fulfilled or any condition is put forth by the tenderer shall be summarily rejected.

14. BAU, Sabour reserves the right to cancel the tender at any point of time without assigning any reason.

Note: Price bids of only those bidders will be opened whose technical bids are found suitable by the committee constituted for the purpose. Date and time of opening of price bids will be decided after technical bids have been evaluated by the committee. Information in this regard will be intimated to the technically qualified bidders. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

16. Tender Cost & Earnest Money Deposit (EMD)/Security Deposit:

Bidder needs to submit the non-refundable Tender Fee of **Rs. 500/- (five hundred Only)** in the form of a DD (Demand Draft) and **EMD as mentioned below for the items given** issued in favour of **Comptroller, Bihar Agricultural University, Sabour, Payable at Sabour**, from any Nationalized Bank, must be enclosed in the envelope containing the financial bid. None submission of EMD will lead to rejection of the tender. All the bidders are required to enclose self-addressed **Rs**. **35.00** stamped envelope.

17. The bidders shall keep their bid valid for minimum 90 days from the date of opening of the financial bid.

18. Manual and documentation: All the manuals necessary for operating and servicing the equipment (including details of electronic circuits) will have to be provided along with the instrument.

19. Bidders should go through the tender terms, conditions and specifications carefully and fill in the attached compliance statement accurately and unambiguously. They should ensure that all the required documents are furnished along with the bid.

20. Selected bidder will have to deposit 10% as the security deposit in the form of PBG (Performance Bank Guarantee) valid till the guarantee period/ defect liability period.

21. Guarantee/warranty period for 3(three) years.

22. Supply should be made within 3 (three) weeks from the receipt of the work order/supply order.

Sd./-

Officer-In-Charge,
Central Store (HQ)
Bihar Agricultural University,
Sabour, Bhagalpur- 813 210

Annexure I

EQUIPMENT DETAILS

"Supply of Laboratory equipments for establishment of Centre of Excellence on Quality Honey Production in Bihar at Nalanda College of Horticulture, Noorsarai"

Sl. No.	Item	Specification	Quantity Required	EMD Amount:
1	Bee colonies	Italian bees	1000 colonies	40000=00
2	Bottom board	Universal size for Italian bee (wooden made)	1000	6000=00
3	Brood chamber		1000	10,000=00
4	Super chamber		1000	10,000=00
5	Inner cover with steel net		1000	4000=00
6	Top cover with		1000	6000=00
7	Bee stand	Iron made for Italian bee box	1000	8000=00
8	Queen excluder	Iron or plastic made	1000	4000=00
9	Frame wooden made	Universal size for Italian bee	10000	4000=00
10	Shrink Tunnel- Standard	Standard	1	1000=00
11	Honey filter	Stainless steel made	20	2000=00
12	Honey tray	Stainless steel made	20	2000=00
13	Bee veil (simple)	Net, cloth	200	600=00
14	Hand glove	Rubber	200 pair	400=00
15	Uncapping knife	Iron made	100	200=00
16	Swarming bag	Cloth	100	300=00
17	Queen gate	Plastic or wooden iron made	200	80=00
18	Queen cage	Plastic	200	80=00
19	Smoker	S.S.	100	2000=00
20	Hive tool	Iron	100	160=00
21	Bee brush	Wood	100	200=00
22	Hand operated honey extractor with 4 frames	G.I.-S.S. made	50	8000=00
23	Automatic Honey Bottling Machine	• Stainless Steel 304 food grade, 5000bottles / Per day • Electric load 4.12K.W. with all accessories	1	60,000=00
24	Conveyor 6' for manual feeding of caps	• SS material	1	
25	GC-BL FILLER (Double Head)	• Suitable for filling viscous liquids like honey, ketchup, jam, • SS Material, meeting GMP standards • Filling range- 200-1000 ml, 16-18 Fills/min	1	
26	Horizontal Collection Tank:300LITR Pre filter and pump	• Made of SS 304 • Complete with inlet/outlet valve and split half cover • 4 Legs with ball feet and base plate arrangement	1	

27	INKJET PRINTING EQUIPMENT (Suitable for printing batch number /price/manufacturing date/ expiry date etc. automatically on the bottle/caps.)	• Up to four lines printing with variety of print formats. • The machine PLC controlled and can be interfaced with a PC. • Reputed international brand.	`1	
28	Semi-Automatic Honey processing Line (with moisture reduction unit)	• Automatic unit with complete line. • SS 304 material, inlet/outlet duct for honey, thermostat for hot air circulation, sampling cock, air dryer with compressor, Panel comprising control with temp scanner, with supporting geared motor with gear box, option for sample collection. • Complete with geared motor with inbuilt gear box. • Bushes SS304 grade, shaft SS 304 grade coupled type drive. Ducting SS 304 • Bearings SKF make, controls danfoss make. Castor wheels with stopper arrangement, hydraulic cylinders for lifting hinges SS 304 grade. • Unit comprise of air blower assembly with inbuilt heating arrangement with emersion make hermetic compressor. • With condensing unit with fans and controls with LP, HP, OP cut-outs with liquid level float controls, inbuilt control panel, ducting and sieve for fresh air intake blower for intake air for proper air flow to maintain 45 deg C temp during process.	1	
29	Screw Type Transfer Pump 500 LPH	• Field of application: Suitable to pump honey • For hygiene duty all contact parts will be in SS material. • Shaft sealing by soft Gland Packing/ Mechanical seal. • MS fabricated direct drive base frame with pin & bush coupling and guard	1	
30	Pneumatic filler (suitable for filling viscous liquids	• Accurate Filling precision. • Completely made of SS	1	

	like honey, double or triple head filler)	• The weight range is easily adjustable by metering device which indicates the exact weight being filled. • Can be operated in both manual (foot operated) and automatic dosing mode. • Easy to dismantle and install, easy to clean. • Filling range -200-1000 ml • Filling speed- 16-18 Fills/Min		
31	Transfer Pump	• Mono Block pump SS-304, Pump with Mechanical Seal, Complete with motor, SS Frame, Suitable to transfer free flowing liquid, meet sanitary design and adhere to food safety standards, • 1 HP single/three phase power	1	
32	PP Cap Sealer- (Suitable to apply pilfer proof caps on glass/PET bottles)	• It is equipped with threading and roller operation for hermetic sealing of the caps • The bottles are placed manually by hand on the base. The sealing operation is done by rotating the handle which conducts integrated operation of threading and rolling of cap onto the bottle neck. • Capacity 20 bottles/min	1	
33	Automatic comb foundation mill	Computerized fully automatic honey comb foundation sheets fabrication mill Machine capacity: 400 Kg (Length of rollers: 750mm ; Voltage: 380 V ; Cell size: 5.4 mm ; Dia.: 166mm) Accessories: Automatic Air Compressor (Capacity: 45 Lit. ; Power load: 1 HP ; RPM: 2880) Sheet dip in tank HxLxW 1.5'x3.0'x2,0' feet and wax tray capacity 50kgx2piece (2x2 feet) (Stainless steel 304 make) Storage rack (store the ready material) (Iron made and GI sheets)	1	5000=00
34	Bee venom extractor with accessories	Universal size for Italian bee	10	6000=00
35	Queen rearing equipment with accessories	Universal size for Italian bee	10	4000=00
36	Pollen trap	Wood made for Italian bee	100	200=00

37	BOD Incubator	Capacity: preferably 100-150 litres • No of shelves: 2 (two) or more PE coated steel wire or stainless steel with facilities for adjusting height. • Temperature Range :5°C or less to 70°C or more • Controller Accuracy: ±0.5 °C or less of set value for Temp. • Uniformity : ±1°C or less throughout chamber • Air Heater with appropriate diffuser mechanism. • Evaporator/cooler: Fin and tube, forced circulation • Compressor : Hermetically Sealed • Condenser: wire and tube type , natural air cooling system • Controller: Digital Display Electronic Controller (Microprocessor based with LCD/LED display). • Internal Chamber: Stainless Steel (AISI 304). • Heating system and Air circulation: Convection with forced air circulation for temperature equilibrium. • PID Control: Microprocessor based PID Controller. • Programmable on-off cycle with different built in programs. • Should have door operated illumination lamp to work on 220/230V AC. • Should be supplied with Stabilizer of sufficient capacity. • Defrosting system: selectable manual start or timer defrost • Should have on-site service facility. • Should provide a list of users in India. **Warranty** : Two Years minimum, important accessaries if any,	3	9000=00

		Instruction manual		
38	Colony Counter (Digital)	Digital Colony Counter with 4 digit LED display Range: 0-9999 with pen for Colony counter	10	1000=00
39	Hot air oven with digital temperature display	- Digital temperature display and control - Fan for air circulation. - No. of Trays : 12 - Tray chamber size : 18" x 34" x 36" - Tray size : 32" x 16" x 1.1/4" - Tray made of stainless steel (AISI 304), - **Construction:**. The dryer should be double walled in construction The inner chamber should be - made of stainless steel (AISI 304) and outer should be made of C.R.C. steel sheet with hammer - ton grey paint. It should be fabricated by rigid iron frame. The joints of the inner chamber should. The space between two walls should be adequately insulated with best quality fibre glass wool to promote efficiency as well as to minimize heat losses during the operation of the dryer. - **Insulation: Door:**. The door of the dryer should also be double walled and insulated as well with fibre glass wool. The inner side of the door should be made of stainless steel. The outer side of the door should be made of C.R.C. steel sheet with hammer ton grey paint. - **Heating element & temperature control:-** - A grade, 'U' shaped tubular heaters to attain high temperature should be fixed on the two side of working chamber. The temperature should range from 50 plus ambient to 2500c ± 5 0c, controlled - by thermostat. The functioning of thermostatic control will be indicated by	1	2000=00

		lamp. - **Air circulation: fitted fan for uniform air circulation** - The dryer may be fixed with 1 No. of ½ H.P. motor, pulley/coupling driven blowers to - **Electric load and control unit:** - Electric load : 9 KW (approx), 1 Hp motor - Electric power: 220 Volts, 1 Phase, Control Power: 50 Cycle Ac supply.		
40	Hot air oven with digital temperature display	- Digital temperature display and control - Fan for air circulation. - No. of Shelves : 2 (Adjustable) - Inner size : 75 x 50 x 40 cm - Tray made of stainless steel (AISI 304), - **Construction:**. The dryer should be double walled in construction The inner chamber should be - made of stainless steel (AISI 304) and outer should be made of C.R.C. steel sheet with hammer ton grey paint. - It should be fabricated by rigid iron frame. The joints of the inner chamber should. The space between two walls should be adequately insulated with best quality fibre glass wool to promote efficiency as well as to minimize heat losses during the operation of the dryer. - **Insulation: Door:**. The door of the dryer should also be double walled and insulated as well with fibre glass wool. The inner side of the door should be made of stainless steel. The outer side of the door should be made of C.R.C. steel sheet with hammer ton grey paint. - **Heating element & temperature control:-** - A grade, 'U' shaped tubular heaters to attain high temperature should be fixed	1	2000=00

		on the two side of working chamber. The temperature should range from 50 plus ambient to 2500c ± 5 0c, controlled - by thermostat. The functioning of thermostatic control will be indicated by lamp. **- Electric panel PID system**		
41	Digital Autoclave Vertical X 02	Outer and inner chamber of Stainless Steel 304 qlty. fitted with automatic cut off device and end Foss auto pressure control Size: 400 X 600 mm	2	8000=00
42	Hygrometer	Digital Max.-Min. memory for temp. & humidity; Imported	2	40=00
43	Laminar air flow	User Friendly Ergonomic Design. Controlled Environment Particulate Free Product Protection. Work area surrounded by negative pressure, double wall plenums for protection. Aerodynamic designed airflow grills maintains safety by preventing blockage. Free Blower ensure noiseless operation. 70% of the air is re-circulated through the HEPA filter. 30% of the air is exhausted from work area. Filtered Exhaust - protects ambient environment, and avoids build up, air borne particles. The exhaust of Safety Cabinet is connected to the Virus Burn out Unit for product and personnel protection. Basic material is Galvanized Iron Sheet With Epoxy Polyester Thermosetting Powder Coating OR Stainless Steel grade 304 Working table is made of Stainless Steel Sheet (SS-304 grade). Built in U.V. Germicidal light Facilitates sterilization of	1	4000=00

		working area before and after use. Cock - for gas, air or vacuum, (only 1 no.) is provided. Working area is illuminated by fluorescent lighting fitted to the unit. The blower and motor assembly is statically and dynamically balanced of 1/5 H.P. capacity operates with minimum noise level. Supplied complete with 5 amp. power cord & plug to work on Single Phase 220 / 230 volts A.C. supply.		
44	Digital Bacteriological Incubator X 02 no's	Temperature Range: ambient to 70^{o}C Accuracy ±0.5^{o}C Size: 455 X 455 X 455 mm	1	1000=00
45	Four door refrigerator	Good Quality compressor. Self defrost system. Digital temperature displayer and controller. High cooling efficiency, energy-saving. Specially designed structure, ensuring even temperature. Entirely SS 304 construction.	1	800=00
46	Refractometer (Digital)	• Range: 0-85% brix, 0-80 C temp • Resolution: 0.1% brix, 0.1 C • Accuracy: 0.2% brix, 0.3 C • Temperature compensation: auto, 10-40 C • Sampling time: 1.5 seconds • Auto off Battery operated.	1	200=00
47	Refractometer (Portable digital)	Measurement Range Brix 0.0 to 45.0% Minimum Iindication Brix 0.1% Measurement Accuracy Brix ± 0.1% Measurement Temperature 5 to 40°C (Automatic Temperature Compensation) Ambient Temperature 5 to 40°C Power Supply 006P dry battery (9V)	1	200=00
48	Sieve shaker, with multi sieves	Type: RO-TAP Sieve Shaker or Gyratory Driver Motor Capacity: 0.25H.P., 220V AC, Carry up-to 5 to 8 sieves of 8" diameter, Timer attachment	1	700=00

		Sieves made from Brass Material of Diameter 8" Aperture Size: 500 Micron, 425 Micron, 300 Micron, 250 Micron, 150 Micron, 125 Micron, 106 Micron, 75 Micron, 53 Micron, 45 Micron, Lid and Pan set		
49	Rotary shaker with conical flask holder	• Compact counter balanced drive mechanism ensuring high stability and reliability even in continuous operation and uneven load distribution. • Step less electronic frequency control ensures gentle start and maintains preset speed. • Brushless Induction drive motor practically maintenance free. • Speed is controlled through a SMPS based DC drive unit by a speed control knob or a variable speed range from 20 RPM to 300 RPM. • Digital display of speed with presetting facility. • Fitted with Off/On timer for shaking time control. • Shaking amplitude 30 mm. • Universal Platform to accommodate interchangeable clamps (49/56/60 no's) of assorted sizes for different capacity of flasks (100ml, 250ml). Automatic restart at preset speed in case of power failure.	1	2400=00
50	Microscope with digital Image Sensor	Digital Microscope with built in LCD screen, LCD camera fixed one occulartube. 3.5" tftscreen , built in memory storage slot, usb output on board capture etc.	1	40,000=00
51	Kjeldhal Distillation & Digestion Unit Fully automatic Inbuilt colorimetric titration (Measurement of nitrogen and protein according to Kjeldahl method in all type of	– The Analyzer system shall be fully compliant with the Kjeldahl method and shall consist of a distillation unit with built in Titration, Digester and Scrubber. – The detail Specification of the required system is as under:	1	32,000=00

	food samples High protein content analysis Additional Accessories require 1. Universal Copper Tablet, Kjeldhal, Cu 9%, 5g – 1000 pcs 2. Maintenance Kit Analyzer for two years Tank Level sensors – 4 nos)	**Digester** – Automatic programs, with multiple pre-set heating levels, programmable temperature, time and alarm sounds. – Auto lifting with automatic Motor Rack in 3-step with heating-, cooling- and load positions. – Tube holding capacity – 20 – Temperature – from 20˚C to 450˚C within 45 minutes. – An automatic self test to warn the operator in case of instrument failure and lock instrument until Service has been performed. – Indicator light to warn if block is above 60˚C – Must supply with Exhaust, rack, Stand, Lid, Digestion tubes 250 ml x 40, and any other accessories suitable for the operation. **Scrubber system:** – Digestors and Scrubbers built with high endurance materials. From high quality Borosilicate Glass to high quality, EN 1.4404 Stainless steel. – Reagent containers with a volume of 2 liters each, to minimize the need for frequent change of scrubber reagents. – Easy access to exchange containers made of high quality Borosilicate Glass. – Accessible 6-step suction control to regulate suction power to achieve a good and efficient digestion. **Automatic Distillation Unit:** – Programs for automatic control of cooling water, dilution water, sodium hydroxide and receiver solution as well as automatic emptying of tube and titration vessel. – Selectable delay times and cleaning program. – Colorimetric Titration,		

		system must base on three RGB color sensors that allow use of a wide range of indicators. – It should have Predictive Titration system automatically adjust titration speed on the actual distance from the end point. – PTFE tubing should be used to eliminate formation of air bubbles between burette-titration vessel. – Graphics Display : 7" 800x480 color touch screen – Measuring Range w/o burette refill : 0.1 - 225 mg N – Recovery : > 99.5% (1-225 mg N) – Burette volume : Interchangeable burette 50 ml (automatic refill during analysis) – Dosing accuracy : 1.95 µl/step – Accuracy/Precision %rsd : 0.75% at N levels 1 - 225 mg – Distillation Speed : 40 ml/min at 230V, Distillation Time : 3.5 - 4 min (10 mgN) and 5 - 5.5 min (225 mgN) – Safety : Safety sensors (Tube in Place-, Protection- and Service door), Steam Generator, sensors, Cooling Water Measurement, Drip, Tray, Tank level detectors, Maintenance warning systems – Manual Control : Possibility to bypass automatic titration system to allow for manual titration. – Electronic Steam Regulation : 10-100% – Distillation Head : Easily exchangeable Splashhead with only one tube connector made of glass to reduce carry-over effects. – Data Handling : □ It shall be possible to retrieve data in mobile devices and on standard laptops in the lab without any cables		

		– It shall be possible to send weights and retrieve results wireless without any additional software (all necessary software shall be included)		
52	Texture analyzer	• Force Range ±2500 N (562 lbf, 255 kgf) • Force Resolution 0.015% of load cell - 15 gf (0.5 ozf) for a 1000 Newton load cell • Crosshead Travel Range 320 mm (12.5 in) • Position Resolution 32 cm (12.5 in.) of travel with 2.5 micron resolution • Speed Range: 1 - 1000 mm/min • Speed Accuracy Better than 0.1% • Data Acquisition Rate 16000 readings/sec, filtered to 1000 readings/sec • Data Display/Output Rate: Selectable from 1000, 500, 100, 50, 10 Hz • Capacities Available 2, 5, 10, 25, 50, 100, 250, 500, 1000, 2500 N (0.45 - 562 lbf, 0.2 - 255 kgf) • Weight 18 kg (40 lbs) • Power Supply 120/220 V AC 50/60 Hz, selectable •	1	24,000=00
53	Laboratory type baking oven	CAPACITY: 4.9 cubic feet INTERIOR DIMENSIONS: (WxDxH) 23” x 20” x 18.5” EXTERIOR DIMENSIONS: (WxDxH) 33" x 27" x 37.25" TEMPERATURE RANGE: Ambient +5°C to 300°C (With Standard Gasket) TEMPERATURE UNIFORMITY: +/-3°C at 150°C TEMPERATURE TIME TO: 150°C 20 minutes TEMPERATURE RECOVERY: TIME 6 minutes (after door open 30 seconds) AIR FLOW: 145 feet per minute CONTROLS: Watlow EZ programmable control with ramp & soak capabilities. Built-in, independent over	1	700=00

		temperature controller. DB25 pin RS-485 serial comm port. POWER: 208-230V / 1Ph / 50/60Hz / 9 Amps HEATER WATTAGE: 2000 Watts STANDARD DOOR GASKET: Silicone 235°C Max WARRANTY: 100% 1 year		
54	Water activity meter	The instrument should be capable to measure water activity in all kinds of food products Sensor : chilled mirror dew point technology Temperature control : 25 deg C Measurement time : less than 10 minutes The instrument should have accuracy of +/- 0.01aw and resolution of +/- 0.001aw The instrument should have water activity measurement range of 0.05 to 1.000aw Sample temperature accuracy : +/- 0.2 degree C Operating environment : 4 to 50 degree C and 0-90 % RH The instrument should be supplied with sample cups and lids The instrument should also be supplied NIST traceable verification standards of different values to calibrate the instrument The instrument should also be supplied with a cleaning kit Warranty : one year	1	5000=00
55	Conductivity meter	Display-3.5 digital LED, Measurement- conductivity, Ranges- 0-2 mS/cm, 0-20 mS/cm, 0-200 mS/cm, and 0-1000 mS/cm, Accuracy- ±1%FS ±1 digit, temperature compensation- Auto and Manual (0-50^{0}C), Cell constant- adjustable on digital display, Measuring cell- platinum DIP type, Resolution-0.1uS/cm, Power- 230 V±10% AC, 50 Hz, Dimensions- 76x275x175mm, Accessories- conductivity cell, temperature probe, operation manual, dust cover.	1	240=00

56	Digital Polari meter (Determination of sugar content by angle of rotation)	Measurement Scales : Angle of Rotation: +180 º to -179.95 º. International standard sugar Scale : +130 ºZ to -130 ºZ Minimum Unit Displayed : Angle of Rotation : 0.05 º International Sugar Scale : 0.1 ºZ Measurement Accuracy : Angle of Rotation: +/- 0.10 º	1	5000=00
57	pH meter (Portable)	• Resolution: 0.1pH • Accuracy(@20C/68F): 0.1 pH • Calibration: manual, 1 or 2 point • Battery operated	2	400=00
58	pH meter (Digital)	Range: 0 – 14, Accuracy: ± 0.01, 3.5 digit LED display with auto temperature compensation, gel filled epoxy body combination, pH electrodes and RTD probe with recorder output and slope control facility.	1	300=00
59	Electrical Conductivity (EC) Meter	3 – ½ digit LED display, auto temp. compensation measuring range conductance 0.01 us/cm to1000 mS/cm in 5 range 200uS, 2M, 20M, 200M, !000M, measuring range resistance 0.1 ohm to 2 mega ohm in 5 range; Accuracy ± 1 % FSD, Cell constant value 1.0	1	300=00
60	Muffle Furnace (Microprocessor Controlled) X 03 no's	Temperature Range: Working Temperature upto 1000°C Size: 200 X 200 x 300 mm 6 KW	1	2000=00
61	Thermometer with probe (Digital)	• Range: - 50 to 30°C • Unit: C/F change-able • Resolution: 0.1°C • Accuracy: 1°C • Temperature sensing time: 1 s • Probe with 4 m cable • Probe length: 150 mm • Data-hold function • Power-supply: battery or power operated • Auto shut-off: 15 minutes Low battery indicator	1	200=00
62	Ultra-pure Water purification System with type 1 and type 2 ultrapure water 2 stage system (Ultra-Pure Water is must for running highly sophisticated analytical	Prefiltration System: Three stage pre-treatment system with 10, 5 & 1 micron spun filters for removal of suspended particles and to take care of F.I. in water. Should produce Ultra-Pure	1	5000=00

	systems like Nutrient analyzer, trace metal analyzer, etc.)	water (Type- 1) from tap water for different applications It should be single stage system with the filter at the tap with bacteria <1CFU/ml Should have R.O; D.I; and UV in a single unit It should have an integrated docking vessel of 25L made up of HDPE with level sensor for storing the water to save space It should have recirculation facility to maintain consistent peak water purity. Instrument should show water volume in reservoir graphically and in percentage. It should have cartridge change indicator. The production rate of the unit should be minimum 5-7 L/Hr. and the dispense rate should be minimum 1.0L/min. It should have dual wavelength UV (185/254 nm) Three years warranty for RO cartridges Output Water Quality should be: 1. Flow Rate: >5-7 Ltrs./Hr. @ 25deg. C 2. Dispensing Rate: >1 L / min. 3. Inorganics: 18.2 MΩ- cm @ 25 Deg Celsius 4. TOC: 1-3 ppb 5. Bacteria: <1 CFU/ml 6 pH: Effectively Neutral		
63	UV-Vis Spectrophotometer	Optical system: Double beam; Wavelength range:190 to 1,100nm; Spectral bandpass:1.5nm; Display: colour LCD with backlight (26.4cm); Printer I/F: Centronics interface Serial I/F RS-232C (exclusive for UV Solutions program) Size (main unit): 500 (W) × 605 (D) × 283 (H)mm (with LCD lowered) or 500 (W) × 605 (D) × 241 (H)mm (without PC and printer); Weight (main unit): 31kg or 29kg; Power supply: 100, 115, 22	1	25000=00
64	GC-MS Triple Quadrapole System	The Triple Quadrapole GCMS should have the following features to deliver high	1	2000=00

		performance operation, maximum sensitivity, maximum uptime, and maximum productivity. ➢ The Gas Chromatography system supporting the MS should have the following features for enhanced quantification/qualification capabilities. ➢ The system should have a Autosampler/injector with vial capacity of 15 vials or more. The system should be upgradable to 150 vial capacity ➢ Autosampler should be capable of handling large volume injection with syringe size from 0.5 microlitre to 250 microlitre ➢ of 0.001 psi, with typical control ± 0.001 for the range0.000 to 99.999 psi ➢ GC oven temperature +4 °C to 450 °C. ➢ capillary columns of 50, 100, 250, 320 microns ➢ Triple Quadrapole Mass Spectrometer with EI, Quadrapole should be made up of inert material Mass range (m/z) upto 1,000 amu, Resolution Unit mass adjustable by tune, 0.7 to 2.5 Daltons ➢ Scan rate (electronic) of 6,250 u/s or better, Ion source temperature 106 to 350 °C. Should provide the latest version of NIST library ➢ Software Control System, **Headspace Analyser, COMPUTER & UPS , Gas Cylinders and all accessories** ➢		
65	Liquid Chromatography Triple Quadrupole Mass Spectrometer System (LC/MS)	**Mass Spectrophotometer** • **Ion Source-** Must have separate ESI, APCI and APPI source and facility of changing source without interrupting vacuum. • **Mass Range-** 10-2,000 amu or better.	1	2000=00

		• **Analyser Type-** Triple Quadrupole Geometry. • **Scan Speed-** The scan speed should be at least 12,000 units/sec or more. • **Mass acquisition mode-** Must be capable to do all analysis including MS, MSMS, Precursor ion scan, Product Ion Scans, Neutral Scans, MRM scans. • **Sensitivity-**Positive MRM sensitivityshould be S/N 30,000:1 based on 1pg on column reserpine injection and for negative MRM sensitivity should be S/N 2,000:1 based on 1pg on column Chloramphenicol. • **Linear Dynamic Range-** Must have 6 orders of linear dynamic range • **Polarity Switching Time-** Should be 30ms or better • **Dwell time and Inter channel delay time-** It should have 1ms or better dwell time and Inter channel delay of 1ms or better • **Vacuum System-** Highly efficient vacuum systems consist of Turbo molecular pumps followed by rotary mechanical pumps must be provided • **Liquid Chromatograph Specifications** • **Pump** - Must be quaternary gradient pump capable of high pressure mixing and delivering solvents at a min 1000bar pressure • **Flow Rate-** Must be 0.001-2ml/min in 0.001ml increment • **Flow Precision-** Must be less than 0.07% RSD • **Flow & Composition Accuracy-** Must be better than 1% & 0.4% respectively • **Composition Range-** Settable range should be 0-100%		

		• **Auto Sampler-** Must be capable of holding at least 96 samples or better. Must be having cooler to control till 4deg centigrade. • **Column Oven-** Column oven should go till 90deg **Accessories to be supplied with the instruments** • Computer and Printer to be supplied along with instrument • **Integrated software to control MS and LC together-** The Software should be capable to do all quantifications work flow, Need a Pesticide database to do quick method development • **The Software** shall be capable of Auto calibration and all quantitative work flow. • **UPS 20KVA** with built and of capable to take load for 1hr to be supplied • **Warranty**- Both the Liquid Chromatography and Mass Spectrometer must be fully supported by the supplier to provide a seamless instrument diagnostics between the LC and MS. At least **7years spares support need to be provided**. • **Training of faculty members specially deputed for work on LC/MS** **Note:** Both the Liquid Chromatography and Mass spectrometer if manufactured supplied and installed by a single vendor to provide a seamless integration between the LC and MS at competitive cost may be given preference. Therefore, quote your price on single as well as combined.		
66	Planetary Dough Mixer	Capacity: 8 to 10 Kg with three blade i.e spiral, leaf, etc. Electrically Operated, Attached	1	400=00

		with speed regulator, Better efficiency. Manufactured using high-grade raw material. Complete with S.S. removable bowl, S.S. blade having variable 3 different speeds and one neutral speed suitable. Easy operation and running is noiseless. Resistance to corrosion.		
67	Vaccum Oven	Temperature range 4-300^{o}C Automatic thermostat Temperature control	1	700=00
68	Viscometer (Brook's field)	Min Viscosity range 15 Cp, Maxim- 20 Lac Cps Speed- 0.3-100rpm, accuracy- ±1.0% of range, Repeatablity- ±0.2%	1	3400=00
69	Hot plate	7.5" x 7.5" (191 mm x 191 mm) chemical-resistant, ceramic-coated, stainless steel tops; Rugged die cast 24luminium body with small footprint 8W x 9D x 4.5"H (203 mm x 229 mm x 114 mm)Speed range for stirring models 60 to 1500 rpm; Temperature range for heating models: from ambient +5°C to 380°C	1	200=00
70	Magnetic Stirrer With Hot Plate (For smooth stirring with heat application)	Stirring Volume up to 2000mL Stirring Speed up to 1250 RPM op Plate Size135 mm x 135 mm Temperature----up to 300 ° C Timer 999 minutes	1	100=00
71	Hot plate with stainless steel top	- 45 cm x 30 cm - Stainless steel top - Electrically operated - Temperature control and automatic cut off	1	300=00
72	Water purification Unit (Double Stage II)	Borosilicate Glass; capacity: 4 LPH	1	4000=00
73	Weighing balance (Digital) up to 200 g	-least count 0.01g -Max capacity – 200g	1	100=00
74	Weighing balance (Capacity: 300 g)	2 digit after decimal II Capacity: 300 g; Accuracy: 0.01 g	1	100=00
75	Weighing balance up to 600g (Digital)	Capacity 600 g; Readability 0.1 g; Pan size 120 mm x 120 mm	1	140=00
76	Weighing balance up to 1 Kg (Digital)	Capacity 1000 g; Readability 0.5 g; Pan size 217 mm x 168 mm	1	160=00
77	Weighing (Digital) up to 150 Kg (Platform weighing scale)	Capacity – 150 kg; Accuracy – 20 g; Platter size – 600 x 600 mm; LED display, Inbuilt rechargeable battery, stainless	1	200

		steel		
78	Binocular microscope	Body-Inter changeable, inclined Binocular body, 360º rotatable head Eyepieces-Highest quality 10 X wide angle anti fungus field eyepiece. Objectives-Parfocal, antifungus coated 4x, 10x, 40 x and 100x (oil immersion) with plan achromatic correction Optical system-Infinity corrected Stage --Horizontal mechanical stage preferably 100 x 140 mm with fine vernier graduations designed with convenient coaxial adjust ment for slide manipulation preferably through 30 x 70 mm Sub stage-Abbe condenser focusable, continuously variable iris diaphragm Illuminator-Built-in LED light source with white light. Finish-A durable textured acid resistant finish. Other Features: Should provide with wooden storage box, dust cover, immersion oil. Electrical safety certification. Should work with input 200 to 240Vac 50 Hz supply.	2	600=00
79	Digital SLR Camera	Item Weight: 3 Kg Dimensions: 33.8 x 26.6 x 22 cm Resolution: 24.1 megapixels Additional Features: 3.2 inch TFT Monitor with 170° Viewing Angle, CMOS Image Sensor, Full HD Recording Included Components: Digital SLR Body, EN-EL15 Rechargeable Li-ion Battery (with terminal Cover), MH-25 Battery Charger, DK-5 Eyepiece Cap, AN-DC1 Strap, UC-E6 USB Cable, BS-1 Accessory Shoe Cover, DK-23 Rubber Eyecup, BF-1B Body Cap, View NX 2 CD, User's Manual, 8GB Card and Camera Bag, AF-S 18-105mm VR Lens. Display Technology: LCD Screen Size: 3.20 Inches		2000=00

		Image Stabilization: Yes Optical Zoom: 5.8 X Display Resolution Maximum: 1080p Full HD Optical Sensor Resolution: 24.1 Megapixels Max Shutter Speed: 1/250 Seconds Min Shutter Speed: 30 Seconds Min Aperture: 5.60 f_stop Min Focal Length: 18 Millimeters Video Capture Resolution: 1920x1080 Battery Cell Composition: Lithium Ion Connector Type: usb Flash Modes Description: Auto Viewfinder Type: Optical		

TENDER FORM

To,

1. The Comptroller
   Bihar Agricultural University
   Sabour, Bhagalpur (Bihar), Pin-813 210

2. Officer-In-Charge
   Central Store(HQ)
   Bihar Agricultural University
   Sabour, Bhagalpur (Bihar), Pin-813 210

Subject: Tender Enquiry No.: 14/ CS(HQ)/BAU, Sabour Dated: 26/09/2017

Sir,

I have gone through the terms and conditions laid down in the tender documents and accept the same.

I am hereby submitting the technical bid and enclosing the documents as per details given below:

CHECK LIST

S.No. *Name of documents*

1. Cost of Tender documents (It downloaded the tender …….. (Document) from University website within NIT schedule)

(DD No/Pay Order_____date_____Issuing Bank_____

_____ for Rs. 500.00 (Enclosed along with the technical bid).

2. Details of EMD-TDR/FDR No._____ date of issue_____

Name & address of Bank issuing DR/FDR_____ amounting to Rs_____ This EMD is being Encl (along with the technical bid).

3. List of procurement agencies of repute to whom the tendered_____ products have been supplied during last twelve month with proof i.e. work order/supply order.

4. Authorized dealership/agency/distributor certificate issued by original manufacturer of the equipment/item for preceding two years to show financial status of the tenderer.

5. Self attested copies of GST registration _____

6. Self attested copies to PAN (Permanent Account Number) _____

7. Self attested Registration certificate of the firm

8. Self attested Audited balance sheet of the firm of the last three years

9. Self attested Income tax return copy of the last three years

10. Self attested Experience certificate of the last three years.

11. Enclosure of detail technical specification and other required documents

12. Tender Documents duly signed on all pages _____

Certified that each and every page of the tender documents are serially numbered and signed by me.

Yours faithfully,

Nature and Name of the authorized Signatory with seal

Designation

Name of the company (Tenderer)

DETAILS ABOUT TENDERER

(General & Financial)

1. (a) Name of the Tenderer: …….

   (b) Status of the Tenderer: …….

   (i) Manufacturer/Importer: …….

   (ii) Proprietorship: .....

2. Partnership/Company

   Full Postal Address .....

   .....

   .....

   .....

3. Telephone No.: .....
4. Mobile No.: .....
5. Fax No.: .....
6. E-mail Address: .....
7. Name of the persons who are responsible for conduct of business

8. (a) Names of procurement agencies with whom: ……..the tenderer is registered.

   (b) Names of procurement agencies to whom: …….....

   Items have been supplied during last 12 months:…….....

   (Copies of supply order not to be enclosed)

DETAILS ON FINANCIAL ASPECTS

9. Furnish the following information with documents:-

(i) Income Tax PAN: …….....

(ii) GST Registration: .....…….....

10. Name and address of the Billing Agency/Distributor/Dealer, if any

FORMAT OF PRICE BIDS

S.N.	Tender items Sl. No.	Name of the items & Brand	MRP	Offered Rate per unit/each	Tax	Total Rate offered with tax
						(e + f)

Please Note: -

1. Price bids should be typed in the prescribed format only. Photo copy/Xerox Copy/ Duplicate Copy would not be accepted in any condition.

2. Authorized dealership/agency/distributor certificate issued by original manufacturer of the equipment/item should be enclosed

3. Rate of CMC/AMC should be quoted by the vender in a separate format (if applicable) after two years.

DECLARATION

I _____Prop/Partner/Director of

M/s_____hereby declare that the information given in this

Tender is true and correct to the best of my knowledge and belief.

Signature and Name of the
Authorized Signatory

Designation

Date

Place

Seal of the Tenderer

WARNING: Subsequently, if information furnished in this tender found incorrect, tenderer is liable to be penalized and the Blacklisting.

SPECIAL TERMS AND CONDITIONS FOR TENDERERS

The following terms and conditions should be complied with during submitting tender:-

1. Sealed Quotation/Tenders are invited in two bid systems.
2. Tenders should be submitted to the O/I Central Store, Bihar Agricultural University, Sabour, Bhagalpur, Bihar, Pin- 813 210 under the sealed envelopes.
3. The tenderer should quote typed rates in figures as well as in words. The tender should be signed by the tenderer himself/themselves or their authorized agent on his/her/their behalf. In case the tender is signed by the agent the authority letter in favour shall be enclosed with tender documents.
4. The tenderers should take care that the rate and amount are written in such a way that interpolation is not possible. No blank space should be left, which would otherwise make the tender liable for rejection.
5. Delivery schedule with definite date of delivery at destination (BAU, Sabour) taking into cognizance of transit facility must be indicated. This contractual delivery date/ period should be inclusive of all the lead time.
6. The tenderer submitting his tender would be deemed to be considered and accepted all the terms and conditions. No enquiries, verbal or written shall be entertained in respect of acceptance or rejection of the tender.
7. The quantity shown in the schedule may increased or decreased depending upon the actual requirement.
8. This University reserves the right to cancel/ reject in or any part of the tender, which generally do not fulfill the condition stipulated in the tender without assigning any reason.
9. Any action on the part of tenderer to influence anybody of the University will make his/ their tender liable for rejection.
10. The tenderers shall submit the offer in original copy of the tender documents duly signed on each page. Item wise rate indicating units can be offered on letter head of the firm, in case, space printed on financial form is not sufficient.
11. In case of placement of purchase order, the vendor (the tenderer whose tender is accepted) may comment on the purchase order within 10 days from the date of dispatch of purchase order otherwise it will be deemed that offer is acceptable to the vendor. Notwithstanding any other provision, the terms and conditions and any other provision included, in the purchase order will be treated as binding with "Errors & Omissions Expected". However, if the vendor notices of the order, he must bring the same in to the notice of tender/ quotation and seek clarifications within the above stipulated time. Vendor will have to bear the responsibility for failure to take this action.
12. In University may in writing make any revision or change in the purchase order, including additions or deletions from the quantities originally ordered or in the specifications or drawing. If any such revisions/ changes affect the price or delivery, the same shall be subject to the adjustment of price/ delivery, wherever required on a reasonable basis by mutual agreement in writing which should be communicated.

13. The University reserves the right to cancel the purchase order or any part thereof shall be entitled to revise the contract wholly or in a part by written notice the vendor if:-
    (a) The vendor fails to comply with the terms and conditions of the purchase order including specifications and other technical requirement.
    (b) The vendor becomes bankrupt or goes into liquidation.
    (c) The vendor fails to deliver the goods in time and or does not replace the rejected goods promptly.
    (d) A receiver is appointed for any of the property owned by the vendor.
14. Upon the receipt of the said cancellation notice, the University shall discontinue all works of the purchase order and matters connected with it.
15. Supply order will be issued as per the requirement of the University. The supplier will have to supply ordered materials within the delivery time mentioned in the supply order.
16. Unless otherwise specified in the order, the order price shall remain firm and will not be subject to escalation of any description during the dependency of the order, notwithstanding the change in the cost of material and components he/they may take clearance while the order is under execution even if the execution of the order for any reason whatsoever.
17. The offer of the tenderers shall remain valid for a period of 90 days from the date of opening of bid.
18. The University may its option, reject such defective materials at the vendor's expense in which event the vendor shall, without any cost to the University and as promptly as possible, remove such materials and furnish and install proper and acceptable material.
19. In the event of delay delivery and/or unsatisfactory manufacturing progress and supply, the University has the right to cancel the purchase order as whole or in part without liability for cancellation charges.
20. Timely delivery as mentioned in purchase order shall be in the essence of the order and no variation shall be permitted except with prior authorization in writing from the University.
21. In the event of delay in making delivery on the part of the vendor, it will be at University discretion to receive delivery with a reduction in price of the article/or equipment.
22. Forced measure shall mean and be limited to the following: -
    (a) Any war/hostilities
    (b) Any riot or civil communication
    (c) Any earthquake, flood, tempest, lighting or other natural physical disaster.
    (d) Any strike or lock up (Only those exceeding ten continuous days duration) affecting the performance of the vendor's obligation.

    The seller shall advise the University by Registered Letter duly certified by local chamber of commerce of statuary authorities the beginning and end of the above caused of delay within 7 days of occurrence and cessation of such forced measure concern. In the event of delay lasting over one month, if arising our caused of force measure, the University reserves the right to cancel the order.
23. No payment shall be made for rejected materials not the tenderer would be entitled to claim for such items.

24. Rejected materials would be removed by the tenderer from the site within two weeks or the date of rejection at their own cost. In case they are not removed they will be auctioned at the risk and responsibility of the suppliers without any further notice.
25. In case of not honoring the supply order, the University will have the right to impose penalty as deemed fit and to resort to make purchase at the suppliers cost and risk and his security deposit may be forfeited in favour of the University cost and risk.
26. Rte should be qualified as basic rate plus tax applied.
27. In the case of non-supply order stores within stipulated time, it will be at the discretion of the University to accept delivery with late delivery clause @ 1% per week maximum to the extent of 10 % of the ordered value for delayed supply.
28. Tenderer hereby agree to all terms and conditions stipulated in tender and undertakes to sign the rate contract or supply order within the given days from the date of order failing which security shall be liable to be forfeited.
29. Disputes, if any, arising between the University and the bidder out of or in connection with the terms and conditions contained herein shall be referred for arbitration to the Bhagalpur jurisdiction. Disputes shall be decided keeping in view of the terms and conditions of the tender and Bihar financial rules applicable to the University.
30. Warranty 3 years from the date of installation will be provided.
31. PBG-The vendor shall furnish unconditional Performance Bank Guarantee issued by the nationalized bank in the shape of TDR/FDR in favour of Comptroller, BAU, Sabour @10% of the order value valid for 3years and 2 months from the date of installation & commissioning.