



EOI SCHEDULE – III

**FOR SUPPLY, INSTALLATION, COMMISSIONING,
VALIDATION OF EQUIPMENT TO STATE LEVEL
RESIDUE PESTICIDE TESTING LABS AT AMARAVATHI,
GUNTUR DISTRICT, A.P.**



**ANDHRA PRADESH STATE AGRO INDUSTRIES DEVELOPMENT
CORPORATION LIMITED**

Regd. Office: No.55-17-224, 5th floor, Stalin Corporate, 2nd cross road
Industrial Estate, Autonagar, Vijayawada-520007

Ph: 0866 – 2556803 : Fax : 0866 - 2556804

Email: apagrosdmae@gmail.com, Website: www.apagros.org



ANDHRA PRADESH STATE
AGRO INDUSTRIES DEVELOPMENT CORPORATION LTD

(A GOVT. UNDERTAKING)

#55-17-2 to 4, 5th Floor, Stalin Corporate, Industrial Estate, Autonagar, Vijayawada – 520007,
Ph.No.0866-2556803, FAX:0866-2556804

[E.Mail: apagrosdmae@gmail.com](mailto:apagrosdmae@gmail.com)

No. Agros/FMD/EOI/AP Seeds/2019-20

Dt: 21 -12-2019

SHORT EOI NOTICE INVITING SEALED QUOTATIONS

Sealed Quotations are invited from reputed manufacturers, Distributors, Dealers & Importers for the following items:

Description of Item	Cost of EOI schedule	Pre bid meeting,(at Registered office of the Corporation, Vijayawada)	Sale of EOI Schedules From – to	Last date for submission	Date of opening of Technical Quotations
Procurement, Installation and commissioning of Seed Processing Equipment	Rs.10,000	30-12-2019 at 3:00 PM	23 -12-2019 to 06-01-2020 up to 2.00 P.M.	06-01-2020 up to 2.30 P.M.	06-01-2020 at 03.30 P.M.
For Procurement , Installation and commissioning of Seed Testing Labs equipment	Rs.10,000		23 -12-2019 to 07-01-2020 up to 2.00 P.M.	07-01-2020 up to 2.30 P.M.	07-01-2020 at 03.00 P.M
For Supply, Installation commissioning, Validation of Lab equipment for Bio Products Testing Labs	Rs.10,000		23-12-2019 to 07-01-2020 up to 2.00 P.M.	07 -01-2020 up to 2.30 P.M.	07-01-2020 at 04.00 P.M

The EOI Schedules and terms and conditions can be downloaded from our website www.apagros.org

Vijayawada

Sd/-
Vice Chairman and
Managing Director

A.P.S. AGRO INDUSTRIES DEVELOPMENT CORPORATION LTD.

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EOI SCHEDULE-III

Name of work : FOR SUPPLY, INSTALLATION, COMMISSIONING, VALIDATION OF EQUIPMENT TO STATE LEVEL RESIDUE PESTICIDE TESTING LABS AT AMARAVATHI, GUNTUR DISTRICT, A.P.

Ref : Notice No.AGROS/FMD/PT Labs/2019-20, Dated. 21.12.2019

INSTRUCTIONS TO OFFERER(S)

A. PREAMBLE :

The Department of Agriculture, Government of Andhra Pradesh State are requiring various types of Lab equipment etc., to their State level pesticide residue testing labs in the State of Andhra Pradesh through the Nodal Agency A.P.S Agro Ind. Dev. Corp. Ltd. (APSAIDCL), a Government of Andhra Pradesh undertaking for procurement and commissioning of Bio product testing equipment.

B. ELIGIBLE CONDITIONS FOR TENDER SCHEDULE:

1. The manufacturers / importers should have minimum of 3 years experience in supply and commissioning of scientific equipment to the Government Departments / Institutes, such as Universities. Firms must furnish PO copies/ installation reports/ **performance certificate** from concerned Department / Institution in support of the above.
2. The firms shall have GST (TIN) Registration and PAN Number.
3. The firms shall have annual turnover of not less than Rupees One crore in last 3 years 2016-17, 2017-18 & 2018-19 and proof of same to be submitted.
4. The firm who are importing equipment must have importing license and they should produce authorization letter from the principal manufacturer.
5. If any Dealer participated they should produce dealership letter from the manufacturer.

C) INSTRUCTIONS FOR SUBMISSION OF TENDER SCHEDULE

1. The Offerer shall submit EOI Schedule with all documents along with Rs.10,000/- demand draft shall be paid in the favour of APSAIDC.Ltd, payable at Vijayawada., covering letter with EMD indicated in Annexure-I in a separate sealed cover duly superscribing "Technical quotation for EOI Schedule for Supply, Installation, Commissioning & Validation of lab equipment" and Price Quote as per Annexure-III in a separate sealed cover duly superscribing "Price quote for Supply,

- Installation, Commissioning & Validation of lab equipment” with name and address of the offerer. Both covers are to be placed in a third cover as stipulated under Item No.3 of the instructions for submission of EOI schedule duly superscribing “ EOI Schedule for Supply, Installation, Commissioning & Validation of lab equipment.”
2. The offerers who are supplying the scientific lab equipment, the Earnest Money Deposit (E.M.D.) will be an amount of **Rs.2,00,000/- (Rupees Two lakhs Only)** shall be paid in the form of Demand Draft drawn in favour of **A.P.S.A.I.D.C. Ltd., payable at Vijayawada** along with a covering letter. EOI Schedules without EMD will be rejected.
 3. The Earnest Money Deposit of successful firm shall be retained by the Corporation and refunded only after satisfactory completion of the contract. The EMD can be adjusted against performance guarantee deposit for successful offerer(s). The E.M.D. and performance guarantee deposit will not carry any interest.
 4. Performance guarantee deposit of scientific lab equipment @ **5% on the total value of equipment** shall be paid in favour of A.P.S.A.I.D.C. Ltd., payable at Vijayawada in the shape of Demand Draft from any Nationalized Bank. The performance guarantee shall be valid for 3 years.
 5. a) Performance guarantee produced by the successful offerer shall be forfeited and alternate arrangements shall be made, if the firm does not fulfill the obligation of supply of stocks as per orders / specification / quality and alternate arrangements will be made for procurement of such products and any additional cost incurred in this regard will be recovered from the concerned firm.

b) The responsibility of quality and quantity of the lab equipment supplied lies with supplier only.
 6. The Offerer shall submit duly notarized declaration along with EOI, as per the proforma furnished under Annexure-IV, hereto on Rs.100/- non-judicial stamp paper.
 7. The authorized person representing the firm who is signing in the EOI documents and also participating in the EOI opening shall invariably attach a copy of authorization from the competent authority of the firm as per the By-laws of the firm / Company.
 8. The last date for submission of EOI schedule is **upto 2.30 P.M. on 07-01-2020**, the EOI Schedule will be opened at 4.00 P.M. on the same day. The EOI Schedule will be downloaded our website: **www.apagros.org**.

D) GENERAL TERMS & CONDITIONS

1. The EOI price quote of only those offerer(s) whose Technical EOI Schedules are qualified will be opened with due intimation to them.

2. Negotiations will be held as per the decision of the Technical Committee at the address indicated in the data sheet. The aim is to reach agreement on all the points and sign a contract.
3. The **agreement period will be up to 31-03-2020**. No escalation charges will be paid for supply of items during the agreement period. The validity period of the final negotiated prices can be extended on mutual consent of the both the parties.
4. The supplies made shall be invoiced on Tax invoice with Serial No. of invoice printed on it. No invoice other than tax invoice will be accepted. GST applicable, if any, shall be clearly mentioned in the tax invoice.
5. The approved firm shall supply and install the ordered equipment as per terms and conditions within the stipulated time indicated in the Purchase Order.
6. In the case of Annexure-II, the items supplied must be covered with warranty for minimum of three years (or more as per manufacturer's terms & conditions) from the date of supply against any defective manufacturer / workmanship etc., repairs / replacements / servicing shall be attended free of cost within the warranty period.
7. The firm should submit the Utilization / Installation Certificate and delivery challan from the Assistant Director of Agriculture of concerned lab for effecting the payment.
8. The loading and unloading charges, if any, should be borne by the supplier only.
9. The firm shall provide detailed operational and maintenance manuals at the time of supply of the equipment.
10. The offerer has to quote the price only as per the technical specifications given in the EOI schedule.
11. Andhra Pradesh State Agro Industries Development Corporation Limited (APSAIDC Ltd) reserves the right to inspect the manufacturing / other premises of supplier and his principal/s during the EOI process or before supply or before payment in order to satisfy that the supply is as per the quality and specifications of equipment indicated in this EOI.
12. Andhra Pradesh State Agro Industries Development Corporation Limited reserves the right to award the EOI either in part or full or follow any other suitable procurement procedure. AP AGROS at its sole discretion and without assigning any reason thereof, reserves the right to accept / reject any or all schedules at any stage of the EOI process.
13. In case of any dispute or difference arising out of the Agreement between the two parties relating to any aspect of the agreement, the parties should attempt to settle the dispute through mutual and amicable discussions. If the dispute is not settled through such discussions, the matter shall be referred / settled as per provisions of Arbitration and Conciliation Act, 1996.

14. It is further to be agreed by both the parties that all differences and disputes if not resolved as above, shall be got remedied through the Court of Law of **Guntur** jurisdiction only.
15. EOI can be rejected if any stage of the procurement process, it comes to knowledge that any offerer is involved in any fraudulent practice or misrepresentation of the facts or tried to influence the selection process or indulged in any corrupt activities in competing with others.
16. The manufacturer/ importer shall be liable for blacklisting and further prosecution, if they fail to adhere to the above conditions.
17. The approved firm shall enter into an agreement with the Corporation duly incorporating all the above terms & conditions.
18. The equipment shall be supplied to Pesticides Testing labs of Department of Agriculture, Andhra Pradesh at required destinations. The offerer shall provide all information as per this EOI document. AP AGROS shall evaluate only those schedules that are received in the required format and are complete in all respects.

E) INSTALLATION, COMMISSIONING & VALIDATION

1. All tools, equipment and machinery required for the installation and commissioning work has to be arranged by the successful firm only.
2. The period stipulated for completion of supply, installation, commissioning, validation and training of personnel shall be 90 days from the date of receipt of Purchase Order.
3. Penalty for delay in work will be levied @ 0.5% of the total value of Work per week upto a minimum of 5% in case of default in work completion within the stipulated time.

F) INSURANCE

The contractor shall insure all goods for all risks to the extent of value of goods specially mentioning that the claim amount under the policy shall be payable to AP AGROS. The contractor shall borne the insurance charges for all risks for the goods for the period upto expiry of warranty.

G) WARRANTY

The performance guarantee period shall be 3 Years from the actual date of supply / commissioning of equipment in all respects. The same shall have to be communicated in writing to AP State Agro Industries Development Corporation Limited based on the actual date of completion of all works.

H) CERTIFICATION PROCESS FOR PAYMENT

a. EQUIPMENT / MATERIAL RECEIPT CERTIFICATE

Issue of material receipt note / goods receipt notes at site by Agricultural Officer and Assistant Director of Agriculture of concern Laboratory in charge stating that all the Equipment is received as per the specification. (List to be enclosed)

b. INSTALLATION & COMMISSIONING CERTIFICATE

Issue of installation and commissioning Certificate by Assistant Director of Agriculture of concern Laboratory Incharge.

c. COMPLETION CERTIFICATE

Completion Certificate will be issued by A.D.A. of Laboratory Incharge after complete validation and training to the personnel of Agriculture Department.

I) TERMS OF PAYMENT

Payment shall be released as indicated below, subject to receipt of funds from Commissioner & Director of Agriculture.

- a) The payment will be made against the submission of bills and delivery challans by the supplying firm duly signed and certified by the Assistant Director of Agriculture incharge of the concerned Laboratory stating that all the equipment is received, installed and commissioned as per the specifications and the work done by the firm is satisfactory.

J) SPECIAL INSTRUCTIONS TO THE FIRMS

1. The firms should submit technical specifications / brochures / information, users list etc. along with offer.
2. The supplier should conduct working demonstration of the equipment and train the working personnel of Department of Agriculture of concerned Lab.
3. List of fast moving spares and its selling price should also be enclosed. List of accessories which are recommended to be purchased separately for each item should be clearly mentioned in the offer.
4. The successful supplier will make a pre-delivery presentation about the details of equipment being supplied both to the Officers of AP AGROS and the A.D.A's incharge of concerned laboratory.

Place:
Date :

SIGNATURE OF THE OFFERER
WITH SEAL

SCHEDULE -VI
CONDITIONS OF ELIGIBILITY FOR APPLICANT
(Attested copies wherever relevant to be enclosed)

1	EOI Reference	:	No:Agros/FMD/EOI/ST Labs/2019-20 Date 21 -12-2019
2	a) Name of the Manufacturing/ supplying Company with its Regn. No. (copy of the manufacturing license to be enclosed) b) Name of the Importing company with its Regn. No. (copy of the Importing license to be enclosed)	:	
3	Status of Company		
	i) Registered Company	:	
	ii) Sole proprietorship firm (Name & address of the proprietor)	:	
	iii) Partnership firm (Partnership agreement, letter of consent as authorized by other partners to attend for this EOI)	:	
	iv) Private Limited Company (Certificate of incorporation and authorization from CEO if not represented by CEO)	:	
4	Registered Address of manufacturer/supplier	:	
5	Particulars of Demand draft enclosed towards cost of EOI schedule if the EOI schedule is downloaded from website		DD No. DD Date: for Rs.10,000/- Name of the Bank
6	Details of EMD paid DD No: Date: Bank Name: Amount:	:	
7	Brief Profile of the firm	:	
8	Import License No. (copy to be enclosed)	:	

9	Bank particulars for online transfer of amounts <ul style="list-style-type: none"> • Name of the Bank: • Branch of the Bank • Account Number • RTGS No 		
10.	Specific authorization letter from the Principal manufacturing company (if yes copy to be enclosed)	:	
11	Whether the Company is ISO certified or not (If 'yes' copy to be enclosed)	:	
12	Proof of having sufficient no. of experienced technical teams for training & operations management (Details: names of persons, qualifications and experience)	:	
13	Annual production capacity certificate / Annual import capacity certificate	:	
14	Turnover of the above machinery during last 3 years. a.2016-17 b.2017-18 c.2018-19	:	
15	Experience / performance certificate from clients / Govt. departments/ Organizations during last 3 years about supply of lab equipment, performance reports , PO copies , installation certificate from Govt. Institutes, if any.	:	
16	Details of dealers' net work and after sales service stations to be provided by firm in the area of operation.	:	
17	GST Regn. No. and their validity (copies to be enclosed)	:	
18	PAN No. (copy to be enclosed)	:	
19	Audited accounts balance sheet for the last 2 years. (attested copies to be enclosed)	:	
20	Income Tax assessment Certificate for the last 2 years (attested copies to be enclosed)	:	
21	Name of contact person with address & Phone no. Email:	:	

22	a) Detailed Technical specifications of all the equipment quoted in the Price bid. (List to be enclosed) as per annexure-II	:	
23	B.I.S. Certificate of principal manufacturer (copies to be enclosed)		

(Add additional sheets as required)

NOTE:

1. All the columns of the application form shall be duly, properly and exhaustively filled in.
2. All corrections if any must be signed by the Offerer before submission itself. For filing faulty information, the EOI is liable for rejection. The Offerer should sign on each and every page of EOI schedule and on all the additional documents submitted along with EOI schedule.
3. The applicant can enclose additional information, if any, relevant to the application separately
4. At the time of verification of EOI schedules, the original documents should be produced for verification.

SIGNATURE OF OFFERER WITH SEAL

TECHNICAL QUOTATION

**LAB EQUIPMENT FOR STRENGTHENING OF PESTICIDE
TESTING LABORATORIES**

PESTICIDE LAB EQUIPMENTS

Sl. No.	Name of the Equipment with specification	Required No.
1	Analytical balance	1
2	Weighing Balances (2 to 3 kgs)	2
3	Homogenizer(High Volume)	1
4	Centrifuge(Low Volume, Refrigerated)	1
5	Centrifuge(High Volume, Refrigerated)	1
6	Deep Freezers	1
7	Refrigerator	2
8	Fume hood	1
9	Deionized water system	1
10	Water Distillation unit	1
11	Water Purification System	1
12	Rotary Vacuum Evaporator with chiller	1
13	Tarbo Vap Evaporator with Nitrogen Gas Cylinder	1
14	GLC with FID	1
15	HPLC with PPDA	1
16	GC-MS/MS	1
17	LC-MS/MS	1
18	Diesel Generator, 150KVA (Sound proof with AMF panel)	1
19	Gas Cylinders	
	Helium	3
	Nitrogen	5
	Argon	2
	Air	4
	Hydrogen	3
20	Gas Regulator and Gas panel along with tubing	2

1) Electronic balance-Analytical

Micro processor based Dual Scale Analytical Electronic balance with the following specifications.

Weighing capacity	160g /50g or above
Readability	0.1mg/0.01mg
Repeatability	0.1 mg/0.01
Linearity	± 0.2 mg/ 0.1mg
Calibration	Auto calibration
Other features	Overload protection should exist Piece counting, Percent weighing, Check weighing, Dynamic weighing, Statistics. Formulation, Totaling, Free factor, Memory Recall facilities should exist.
Calibration certificate	calibration certificate from an NABL accredited Laboratory under ISO 17025 in the name of Laboratory should be provided
Warranty	Two years warranty

2) Weighing balance (2 to 3 Kgs)

Readability 0.01 gm

Repeatability 0.01 gm

Linearity 0.02 gm

Calibration: External calibration

data interface for connecting the scale to a PC or printer

Overload Protection,

Calibration certificate from an accredited laboratory under ISO/IEC 17025

Warranty : 3 years.

3) Homogenizer -High volume

- Should work on 230V /50 Hz
- shock proof & vibration proof
- Leak proof and fire proof, sound proof/silent crusher
- With SS bowl capacity of 6.5 kg
- leak proof poly carbonated lid with facility to add the liquid or ingredient .
- Should be direct drive (without belt type)
- With 3000rpm or better
- Comply with international hygiene standards.
- With all necessary accessories.

4) Centrifuge machine with cooling facility (Low volume and high speed)

- Micro processor based bench top centrifuge
- With brush less motor and fire proof
- work on 220V/50Hz with digital display of time and speed
- Vibration and noise free
- Provided with safety locking system
- With Chemical resistant covers Accessories
- High speed variant with 20,000 rpm or better
- to reach and maintain 0⁰ C
- Interchangeable heads to accommodate different capacity of tubes and 2ml x 24 tubes.

5) Centrifuge machine with cooling facility (High volume) (6000rpm)

Bench top centrifuge to work on 220V/50Hz with digital display of time and speed

Angled head rotor with 50ml x 8 tubes

variable heads may be quoted as optional.

With brush less motor and fire proof

Vibration and noise free

With Chemical resistant covers accessories

interchangeable heads to accommodate different capacity of tubes.

Provided with safety locking system

6) Deep freezer (Horizontal) - 400L capacity

1. should work on 230V /50 Hz
2. shock proof &vibration proof
3. should work quietly
4. To regulate temperature up to -20° C or better
5. Hard top horizontal freezer with multiple baskets
6. with the facility to external temperature setting –digital read out
7. Meet the calibration requirements. (ISO-17025)

Deep freezer (Vertical/upright) frost free 400 Lt

- should work on 230V /50 Hz
- shock proof &vibration proof
- should work quietly
- adjustable SS shelves
- To regulate temperature up to -20o C or better
- with the facility to external temperature –digital read out
- Meet the calibration requirements. (ISO-17025)

7) Refrigerator -300L

1. Capacity 300Litres
2. Digital inverter compressor
3. Glass shelves
4. Multi storage basket
5. With suitable time relay stabilizer of a reputed brand.
6. Warranty : minimum 5 yrs.

8) Fume hood:

Wall mount canopy type baffle fume hood.
72” x 30” size
Material of construction shall be poly propylene.
Silent inbuilt blower of 1200 CFM
with adjustable speed regulator.
Fitted with LED lights for illumination.
Warranty : 3 years.

9) Deionized (RO) water systems

Wall mounted.
Should have Sediment filter.
Reverse osmosis membrane,
Carbon Block Filter.
UF and
Minimum Capacity of deionised water: 15 liters/ hour,
Should have Alarm for Filter Change/maintenance requirement.

Along with 50 L standard quality storage tank with outlet valve
And auto cut off system after the tank is full.
Warranty : 3 Years

10) Water Distillation unit

All glassvertical Water Distillation unit
Power Rating : 5.0 KW
Output: 4 Lt/hr
Should be equipped with PTS.
The unit should switch off in case of no sufficient water level in boiler.
With Safety devices
And SS stand

11) Water purification system to give type I & II quality:

Feed water may be sourced from Municipal water or Bore well water where the hardness is not certain. An additional RO system to supply soft feed water may also be supplied.
Single Integrated System should be capable of producing type II (10-15Megaohm resistivity) and type I (18.2 megaohm resistivity) water. with pretreatment cartridge,
Reverse Osmosis,
Electro Deionization,
Two UV lamps(one with 254 nm Wave length at stage I & other with both 185 and 254 nm Wave length at Stage II),
Inbuilt TOC monitor,
To deliver 1.8 to 2.0 L/min of Type 1 water.
Water storage tank
Automatic water flushing and recirculation in standby mode.
Ultrapure membrane filter.
Dispensing arm for ultrapure water.
Warranty : 3 years.
AMC/CMC: should quote for AMC/CMC for 5 years after the warranty period.

12) Rotary Vacuum Evaporator with chiller:

Microprocessor based RVE to work on 230 V/50 Hz.
With digital display of speed and setting
Programmable speed up to 270 rpm or better
Thermostatic water bath temp -adjustable up to 100o c with an accuracy of $\pm 1^{\circ}$ c
Temperature setting and read out with cutoff facility.
With hand lift and height & angle adjustment facility
With PTFE seals
Dry type vacuum pump with two stage diaphragm valve with a capacity to reach 9m bar or better (adjustable)
With an integrated programmable chiller (CFC free refrigerant).
Warranty : 3 years.

13) Tarbo Vap Evaporator along with nitrogen generator

- Bench top to accommodate 50 tubes of different capacity
- Micro processor based concentrator
- should work on 230V /50 Hz
- shock proof & vibration proof
- should have thermostatic water bath to maintain temperature from ambient to 90oC or better
- with the gas inlet pressure capacity up to 20psi or better
 - provide a gauge to monitor Nitrogen generator:
- should work on 230V /50 Hz and shock proof & vibration proof.
- Microprocessor based with integrated compressor, separate control and digital display of all functions conforming to the following specifications or better.
- Flow : 3L/min
- Purity : >99.99%
- Noise level : < 50dB.

14) Specifications for Gas Chromatograph with FID

The Gas Chromatograph must be a microprocessor controlled , dual channel with extensive self diagnostics and programmable pneumatic controls (EPCs) which can be operated by an external PC through chromatography software besides meeting the other specifications as follows.

Column Oven: : **GLC oven should have been calibrated by NABL / ISO 17025-2005 accredited laboratory**

Operating temp.range : Ambient to 450⁰ C
Temperature set resolution : should be 0.1°C
Heating rate : Ambient to 250⁰ C in 2 minutes or less
Cooling rate : 450⁰ C to ambient in 4 minutes
Oven ramps : Oven must support 20 oven ramps
Column overheat protection : user defined up to 450⁰ C

Electronic pneumatic controls for inlets and detectors :

Pneumatics must be electronic and programmable. Each EPC unit is optimized for its intended use with a specific inlets and detector option.

Inlet pneumatics : Inlet must have electronic pneumatic control of carrier, split and septum purge gas, including electronic ON/OFF

Pressure set point precision : Pressure set points must be able to be adjusted by increments of 0.001psi, with typical control ± 0.001 for the range of 0.0 to 99.99

Pressure/flow ramps : user must be able to set up to a maximum of three pressure/flow ramps in addition to injecting at a different (pulsed) pressure.

Inlets

Type : i) Packed column injection port with EPC and ii) second port will be a capillary column injection port.
Pressure sensor accuracy : must have $\pm 2\%$ full scale pressure accuracy or better.
Flow sensor accuracy : must have a minimum of $\pm 5\%$ accuracy with $\pm 0.5\%$ repeatability.
Temperature range : ambient to 450°C
Maintenance : must have the facility for injector port maintenance during analysis

Auto Sampler

An integrated autosampler controlled through the Chromatography software of the system with the following specifications.

Sample tray capacity : more than 150.
Injection range : 0.05 to 100 μl .
Injection speed : selectable fast/medium/slow.
Sample pre washes : should be programmable.
Sample delivery precision : less than $\pm 0.3\%$ RSD

Detector:

Flame Ionization Detectors (2 no's) with a temp. Range up to 450°C

Minimum detect ability : must have a minimum detect ability of 1.8 pg C/s or better.
Linear Dynamic range : must have greater than 10^7
Column adoptability : should be able to accommodate either capillary column or packed columns

Data Handling Software and PC

- The personal computer with latest processor/configuration with LED monitor and Laser jet Printer should be supplied along with the instrument. The latest software which is compatible with the chromatography software should be supplied. A Original windows latest software which is compatible with the chromatography software be supplied with the system.
- The PC should be connected to the GC with an SIM to be able to communicate with the system for its operation as well as process the data.
- The chromatography software should be of latest of its version and be able to collect the data from two Detectors simultaneously.
- The software should facilitate easy method building, data integration and custom report generation.
- The software should facilitate manual as well as auto integration of the data.
- The software should have all the features required for audit trail under GLP/GMP with a password locking facility.

- The software should have a real time display of the chromatogram and the process sample details.

Gas cylinders: One time filled in gas cylinders of Nitrogen, Hydrogen and Zero air. Along with double stage gas regulators made of brass and filtration panel should be supplied.

UPS: An uninterruptable power supply system (of reputed brand with proven performance record) of 10 KV capacity with 2 hours backup supported by maintenance free sealed batteries should be supplied along with the system.

The UPS will work on 3phase and will consistently give single phase 230 V fluctuation and purge free output with microprocessor controlled, self-diagnostics for monitoring the functions of the UPS including the batteries and easily accessible for, operation, maintenance of the system and batteries, with the following features.

Output

Output Power Capacity	: 8000 Watts / 10KVA
Nominal Output Voltage	: 230 V single phase
Output Voltage Distortion	: Less than 5% at full load
Output Frequency (sync to mains)	: 47 - 53 Hz for 50 Hz nominal
Waveform Type	: Sine wave
Bypass	: Built-in Maintenance
Bypass, Built-in Static Bypass	

Input

Input voltage range for main operations: should work between 300 - 480V	
Nominal Input Voltage	: 3 phase
Input Frequency	: 47 - 70 Hz

Batteries & Runtime

Battery Type	: Maintenance free Sealed external batteries (of 65 AH or better) from a reputed manufacturer
Back up	: 2 hrs. with full load
Supplier should give 3 years warranty on entire system	

Other conditions:

- The specifications are only a guide line and the supplier is at liberty to quote the better options also, but the Instrument model should have been brought in to the market recently with a proven record whose working demonstration can be arranged within the town in a short notice.
- The manufacturer should have supplied at least three units of the same model in India during the last three years with a good track record of performance and provide the references.
- The Supplier shall warrant that the Goods supplied under this Contract are new, unused, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrant that all Goods supplied under this Contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in conditions prevailing in the country of consignee destination.

- The warranty period shall be 3 years from the date of completion of supply, installation and completion of all incidental services. Warranty should include all spares parts, electronic parts & boards, hardware consumables like PM kits, generator, UPS, Batteries etc. except accessories listed at consumables. Conditional warranty will not be acceptable.
- The Consignee shall promptly notify the Supplier in writing of any claims arising under this warranty.
- Upon receipt of such notice as per point 3 above, the Supplier shall within one-week repair or replace the defective goods or parts thereof, free of cost at the Consignee's premises. The maximum response time for a maintenance complaint from any of the destination specified in the schedule of requirements shall not exceed 48 hours. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter.
- In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be continued till the end of warranty of the equipment.
- Software Upgrades / Updates: Any software upgrades / updates / revisions / new-versions will be provided free of cost by the supplier during the warranty period.
- If the Supplier, having been notified, fails to remedy the defect(s) within one week of such notice the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- should be willing to undertake AMC for five years after warranty period. Quotation for AMC (for five years with and without spares separately) should be shown under a separate head in the price bid.
- The cost of the maintenance kit(s) required for PM after the warranty period may be quoted along with main bid.
- The manufacturer/supplier preferably provides support with required spares and services for a minimum period of ten years of the model of the instrument quoted. All the required accessories should be supplied along with the instruments for its optimum performance. The manufacturer/ supplier should have their presence in India by way of supplying and providing after sales service of their instrument including the annual maintenance after the guarantee period.
- Sufficient onsite training of the analysts should be provided and additional training once after every 6 months during the warranty period shall also be organised.
- The manufacturer/supplier should arrange the training program in India for at least two analysts for each of the equipment, in operation of the instrument, its simple maintenance as well as thoroughness in application of software at their manufacturing site or any of their centralized laboratory/application centre/learning school.

NOTES:

1. **Equipment, materials and workmanship that meet other authoritative standards and which ensure at least substantially equal quality than the standards mentioned below will also be acceptable.**
2. Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested the provisions of the latest current edition or revision of the relevant standards or codes in effect shall apply, unless otherwise expressly stated in the contract. Where such standards or codes are national or relate to a particular country or region, other

- authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.
3. The **claim** of the technical specifications made by the company should be available on the principle's website and printed brochure.
 4. Please provide all the relevant document, catalogues/brochures etc. of the above technical specifications and technical compliance statement.

15) Specifications for High Performance Liquid Chromatograph (HPLC) (With Photodiode Array Detector)

The HPLC must be a microprocessor controlled , with extensive self-diagnostics and can be operated by an external PC through chromatography software besides the following configuration and specifications.

The Pump:

- with binary solvent pump
- should deliver constant and pulse free solvent ranging from 0.01ml to 10.0ml/min with a precision of 0.075% RSD or better.
- The effective delay volume should be less than 700 micro liter independent of back pressure.
- Should meet a flow accuracy of $\pm 1\%$ or 10 ul/min, whichever is greater.
- should have a pressure range of 0 to 5000 psi or more for entire flow range
- the solvent delivery should provide a retention time reproducibility of less than 0.3 RSD
- should have the ability to maintain the custom defined/programmed solvent com
- should have a minimum of Eleven (11) gradient curves (including position at all flow rates/pressure ranges, in increments of 0.1% linear, step (2), concave (4), and convex (4)
- should have a composition accuracy of $\pm 0.5\%$ absolute, independent of backpressure.
- Should have the facility to calibrate the flow and readjust the real time flow values.
- Should have the mechanism for auto purging
- Should have the facility to monitor the pump status like flow, pressure etc.,

In line degasser:

An integrated degasser to de gas in line of all the four solvents be supplied which works continuously and efficiently

Column Oven:

Thermostatically controlled Column oven to accommodate up to 30 cm Column, preferably a microprocessor based, conforming to ISO 17025 preferable with the NABL accredited lab certificate.

- should have a range of ambient to 65⁰ C or better
- should have an accuracy of 1⁰ C
- should have indicators/monitor to know the status of the instrument.

The Detector:

The integrated Photodiode Array Optical Detector

- should have a wave length range of 190 – 800 nm
- should have a band width of 2 nm or better
- should have a wave length accuracy of 1 nm
- should have a very good reproducibility of absorbance at least 0.0001 or better
- should have a linearity of 5% at 1.5 AU propylparaben, at 257 nm.
- should have a base line Noise less than 5.0×10^5 AU, 230 nm.
- should have a drift less than $\pm 5 \times 10^4$ AU/hr/ °C, 230 nm.
- should have self diagnostics to check the system function and calibration

Columns: The following columns may be supplied along with the instrument

1.	Silica column	250mm X 4-6mm id, 5 mic	1no.
2.	C ₁₈ column	250mm X 4.6mm id, 5mic	4nos.
3.	C ₁₈ column	250mm X 4.6mm id, 10mic	2 no.
4.	C ₈ Column	250mm X 4.6mm id, 5mic	1 no.

Guard Column: Suitable guard column s(20 no's) for each type of above columns should be supplied along with the instrument.

Injector Port:

Integrated auto injector with following specifications

- Should have a sample holder to accommodate more than 150 samples and preferably with an expansion facility in future.
- Should have the facility to inject multiple injections per sample , (1-99)
- Should have a sample injection range from 0.5 ul to 50 ul with an increments of 0.1ul and different standard size sample loops also be supplied.
- Should have a sample delivery precision of less than 0.3% RSD ,full loop.
- Should not have a sample carryover more than 0.005.% or 2 nl, whichever is greater.

Solvent filtration kit:All glass solvent filtration apparatus with suitable filter membranes to filter aqueous and organic solvents should be supplied.

Vacuum pump: Vacuum pump must be a dry/PTFE coated diaphragm based, operational under 220V/50Hz and constructed with chemical resistant materials.

Should have an output of vacuum of 800 mm Hg , or better

Should have pressure gauge/ monitor

Ultrasonic bath: The Ultra sonic bath must accommodate up to 3 liter flask with a thermostatic controlled heater facility .

Data Handling Software and PC :

- The personal computer with latest processor/configuration with LED monitor and Laser jet Printer should be supplied along with the instrument. The Original latest windows operating software along with licensed CD which is compatible with the chromatography software should be supplied

- The chromatography software should be of latest of its version and be able to collect the data from two Detectors simultaneously .
- The software should facilitate easy method building, data integration and custom report generation.
- The software should facilitate manual as well as auto integration of the data.
- The software should have all the features required for audit trail under GLP/GMP with a password locking facility.
- The software should have a real time display of the chromatogram and the process sample details.

UPS: An uninterruptable power supply system (of reputed brand with proven performance record) of 5 KV capacity with 2 hours backup supported by maintenance free sealed batteries should be supplied along with the system.

The UPS will work on 3phase and will consistently give single phase 230 V fluctuation and surge free output with microprocessor controlled, self-diagnostics for monitoring the functions of the UPS including the batteries and easily accessible for, operation, maintenance of the system and batteries, with the following features.

Output

Output Power Capacity	: 4000 Watts / 5KVA
Nominal Output Voltage	: 230 V single phase
Output Voltage Distortion	: Less than 5% at full load
Output Frequency (sync to mains)	: 47 - 53 Hz for 50 Hz nominal
Waveform Type	: Sine wave
Bypass	: Built-in Maintenance
Bypass, Built-in Static Bypass	

Input

Input voltage range for main operations: should work between 300 - 480V	
Nominal Input Voltage	: 3 phase
Input Frequency	: 47 - 70 Hz

Batteries & Runtime

Battery Type	: Maintenance free Sealed external
batteries (of 65 AH or better)from a reputed manufacturer	
Back up	: 2 hrs. with full load
Supplier should give 3 years warranty on entire system	

Other conditions:

- The specifications are only a guide line and the supplier is at liberty to quote the better options also, but the Instrument model should have been brought in to the market recently with a proven record whose working demonstration can be arranged within the town in a short notice.
- The manufacturer should have supplied at least three units of the same model in India during the last three years with a good track record of performance and provide the references.

- The Supplier shall warrant that the Goods supplied under this Contract are new, unused, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrant that all Goods supplied under this Contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in conditions prevailing in the country of consignee destination.
- The warranty period shall be 3 years from the date of completion of supply, installation and completion of all incidental services. Warranty should include all spares parts, electronic parts & boards, hardware consumables like PM kits, generator, UPS, Batteries etc. except accessories listed at consumables. Conditional warranty will not be acceptable.
- The Consignee shall promptly notify the Supplier in writing of any claims arising under this warranty.
- Upon receipt of such notice as per point 3 above, the Supplier shall within one-week repair or replace the defective goods or parts thereof, free of cost at the Consignee's premises. The maximum response time for a maintenance complaint from any of the destination specified in the schedule of requirements shall not exceed 48 hours. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter.
- In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be continued till the end of warranty of the equipment.
- Software Upgrades / Updates: Any software upgrades / updates / revisions / new-versions will be provided free of cost by the supplier during the warranty period.
- If the Supplier, having been notified, fails to remedy the defect(s) within one week of such notice the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- Should be willing to undertake AMC for five years after warranty period. Quotation for AMC (for five years with and without spares separately) should be shown under a separate head in the price bid.
- The cost of the maintenance kit(s) required for PM after the warranty period may be quoted along with main bid.
- The manufacturer/supplier preferably provides support with required spares and services for a minimum period of ten years of the model of the instrument quoted. All the required accessories should be supplied along with the instruments for its optimum performance. The manufacturer/ supplier should have their presence in India by way of supplying and providing after sales service of their instrument including the annual maintenance after the guarantee period.
- The manufacturer/supplier should arrange the training program in India for at least two analysts for each of the equipment, in operation of the instrument, its simple maintenance as well as thoroughness in application of software at their manufacturing site or any of their centralized laboratory/application centre/learning school.

NOTES:

1. **Equipment, materials and workmanship that meet other authoritative standards and which ensure at least substantially equal quality than the standards mentioned below will also be acceptable.**

2. Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested the provisions of the latest current edition or revision of the relevant standards or codes in effect shall apply, unless otherwise expressly stated in the contract. Where such standards or codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.
3. The **claim** of the technical specifications made by the company should be available on the principle's website and printed brochure.
4. Please provide all the relevant document, catalogues/brochures etc. of the above technical specifications and technical compliance statement.

16) Specification for Triple Tandem Quadrupole Gas Chromatographs - Mass Spectrometer/ Mass Spectrometer (GC-MS/MS)

The Gas Chromatograph with MS/MS detector must be a bench top tandem quadrupole mass spectrometer configured for integrated GC/MS/MS analysis. The GC will have dual channel capillary columns, with extensive self diagnostics and advanced electronic pneumatic control unit for detector gases, pressure, temperature and flow rates, which can be operated by an external PC through MS-chromatography software besides meeting the other specifications as follows.

Column Oven:

Operating temp.range	:	Ambient to 450 ⁰ C
Temperature set resolution	:	should be 0.1°C
Heating rate	:	Ambient to 250 ⁰ C in 2 minutes or less
Cooling rate	:	450 ⁰ C to ambient in 4 minutes
Oven ramps	:	Oven must support 20 oven ramps
Column overheat protection	:	user defined up to 450 ⁰ C
GC-MS/MS oven	:	should have been calibrated by NABL/ ISO 17025 – 2005 accredited laboratory

Electronic pneumatic controls for inlets and detectors :

Pneumatics must be electronic and programmable. Each EPC unit is optimized for its intended use with a specific inlets and detector option.

Inlet pneumatics	:	Inlet must have electronic pneumatic control of carrier, split and septum purge gas, including electronic ON/OFF
Pressure set point precision	:	Pressure set points must be able to be adjusted by increments of 0.001psi, with typical control ± 0.001 for the range of 0.0 to 99.99
Pressure/flow ramps	:	user must be able to set up to a maximum of three pressure/flow ramps in addition to injecting at a different (pulsed) pressure.
Additional features	:	i) the system should have the provision to back flush the unwanted components/contaminants/high boilers. ii) splitting of column outlet as per requirement to send all components to multiple detectors, to obtain more information during each run.

Inlets

Multi mode inlet	:	Large volume injector able to inject up to 100 ul sample with programmable temperature vaporizer (PTV) must provide the split / split less with temperature programmable capabilities.
Suitability	:	system should be capable to accommodate narrow bore (0.1mm ID) to wide bore capillary columns (0.53 mm ID).
Pressure sensor accuracy	:	must have $\pm 2\%$ full scale pressure accuracy or better.
Flow sensor accuracy	:	must have a minimum of $\pm 5\%$ accuracy with $\pm 0.5\%$ repeatability.
Injection modes	:	must have hot or cold split / split less , pulsed split/split less, solvent and direct injection modes.
Temperature range	:	ambient to 450 °C
Temperature control	:	must have temperature programming facility of up to 10 ramps
Maintenance during analysis	:	must have the facility for injector maintenance
PTV	:	Programmable Temperature Vaporizer

Auto Sampler

An integrated auto sampler controlled through the same MS-Chrom software of the system & Large Volume Injector (LVI) with the following specifications.

Sample tray capacity	:	more than 150.
Injection range	:	0.05 to 100 ul.
Injection speed	:	selectable fast/medium/slow.
Sample pre washes	:	should be programmable.
Sample delivery precision	:	less than $\pm 0.3\%$ RSD
Detector:		Should be electron multiplier tube (EMT) detector or photomultiplier tube (PMT) or Discreet dynamo detector (DDD).
Ion source	:	EI and CI modes with isolation valve must be fitted to allow change of ionization mode.
Quadrupole Analyser	:	High performance tandem quadrupole mass analyser with enter-element beam focusing, having a quadrupole-hexapole geometry with independent digitally controlled heaters.
Mass range	:	10 to 1000 amu or better
Mass stability	:	less than ± 0.1 m/z mass accuracy over 48 hours.
Scan rate	:	5000 amu/s or better
Ionisation	:	Electron ionization, Positive and Negative Chemical Ionisation
Detector	:	Should be electron multiplier tube (EMT) detector or photomultiplier tube (PMT) or Discreet dynamo detector (DDD).

Dwell time	:	1ms.
Vacuum system.	:	Turbo molecular pump with digital monitor and controlled through software .
Ionisation energy	:	10-240 eV or more
Linear dynamic range	:	10 ⁶ or better
EI sensitivity	:	10fg OFN standard must be S/N greater than 1500:1
PCI scan sensitivity	:	0.1pg of BZP standard scanning must be S/N greater than 50:1
NCI scan sensitivity	:	0.1pg of OFN standard scanning must be S/N greater than 1000:1
Resolution	:	Unit Mass Resolution in both Q1 and Q3
Tune	:	The mass spectrometer must have an automatic tune algorithm for tuning to optimal EI & CI conditions.

Data Handling Software and PC:

- The personal computer with latest processor/configuration with 32" LED monitor and LaserJet Printer with back to back printing capacity should be supplied along with the instrument. The latest software which is compatible with the chromatography/MS/MS software preferably with oracle data base should be supplied.
- The MS/MS-chromatography software should be of latest of its version and comply with the GMP/GLP
- The software should facilitate easy method building, data integration and custom report generation.
- The software should be able to acquire spectral data in a multi channel analysis data mode and should be possible to acquire spectral data by MS SIR, MS-MS precursor scanning, product scanning, neutral loss and neutral gain and MRMs.
- The system should come with latest pesticide mass library and have the facility to append new molecules., Wiley Library, NIST Library.

Should be supplied an additional set of columns as given under apart from standard supply:

1. **DB-5 30m x 0.2mm 5no's**
2. **DB-1 30m x 0.2mm 5no's**
3. **DB-17 30m x 0.2mm 2 no's**

Digital Flow meter with ISO 17025 – 2005 accredited laboratory certificate.

Should be supplied GC-MS/MS calibration standards with traceability certificate.

Helium gas cylinders, should be supplied 3 Helium Gas cylinders duly filled with gas.

double stage gas regulators made of brass and filtration panel to meet the requirement

UPS: An uninterruptable power supply system (of reputed brand with proven performance record) of 10 KVA capacity with 2 hours backup supported by maintenance free sealed batteries should be supplied along with the system.

The UPS will work on 3phase and will consistently give single phase 230 V fluctuation and purge free output with microprocessor controlled, self-diagnostics

for monitoring the functions of the UPS including the batteries and easily accessible for, operation, maintenance of the system and batteries, with the following features.

Output

Output Power Capacity : 8000 Watts / 10KVA
 Nominal Output Voltage : 230 V single phase
 Output Voltage Distortion : Less than 5% at full load
 Output Frequency (sync to mains) : 47 - 53 Hz for 50 Hz nominal
 Waveform Type : Sine wave
 Bypass : Built-in Maintenance
 Bypass, Built-in Static Bypass

Input

Input voltage range for main operations: should work between 300 - 480V
 Nominal Input Voltage : 3 phase
 Input Frequency : 47 - 70 Hz

Batteries & Runtime

Battery Type : Maintenance free Sealed external
 batteries (of 65 AH or better)from
 a reputed manufacturer (Amaron brand)
 Back up : 2 hrs. **with full load**
 Supplier should give **3 years warranty on entire system**

Other conditions:

- The specifications are only a guide line and the supplier is at liberty to quote the better options also, but the Instrument model should have been brought in to the market recently with a proven record whose working demonstration can be arranged within the town in a short notice.
- The manufacturer should have supplied at least three units of the same model in India during the last three years with a good track record of performance and provide the references.
- The Supplier shall warrant that the Goods supplied under this Contract are new, unused, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrant that all Goods supplied under this Contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in conditions prevailing in the country of consignee destination.
- The warranty period shall be 3 years from the date of completion of supply, installation and completion of all incidental services. Warranty should include all spares parts, electronic parts & boards, hardware consumables like PM kits, generator, UPS, Batteries etc. except accessories listed at consumables. Conditional warranty will not be acceptable.
- The Consignee shall promptly notify the Supplier in writing of any claims arising under this warranty.
- Upon receipt of such notice as per point 3 above, the Supplier shall within one-week repair or replace the defective goods or parts thereof, free of cost at the Consignee's premises. The maximum response time for a maintenance complaint

from any of the destination specified in the schedule of requirements shall not exceed 48 hours. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter.

- In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be continued till the end of warranty of the equipment.
- Software Upgrades / Updates: Any software upgrades / updates / revisions / new-versions will be provided free of cost by the supplier during the warranty period.
- If the Supplier, having been notified, fails to remedy the defect(s) within one week of such notice the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- should be willing to undertake AMC for five years after warranty period. Quotation for AMC (for five years with and without spares separately) should be shown under a separate head in the price bid.
- The cost of the maintenance kit(s) required for PM after the warranty period may be quoted along with main bid.
- The manufacturer/supplier preferably provides support with required spares and services for a minimum period of ten years of the model of the instrument quoted. All the required accessories should be supplied along with the instruments for its optimum performance. The manufacturer/ supplier should have their presence in India by way of supplying and providing after sales service of their instrument including the annual maintenance after the guarantee period.
- Sufficient onsite training of the analysts should be provided and additional training once after every 6 months during the warranty period shall also be organised.
- The manufacturer/supplier should arrange the training program in India for at least two analysts for each of the equipment, in operation of the instrument, its simple maintenance as well as thoroughness in application of software at their manufacturing site or any of their centralized laboratory/application centre/learning school.

NOTES:

1. **Equipment, materials and workmanship that meet other authoritative standards and which ensure at least substantially equal quality than the standards mentioned below will also be acceptable.**
2. Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested the provisions of the latest current edition or revision of the relevant standards or codes in effect shall apply, unless otherwise expressly stated in the contract. Where such standards or codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.
3. The **claim** of the technical specifications made by the company should be available on the principle's website and printed brochure.
4. Please provide all the relevant document, catalogues/brochures etc. of the above technical specifications and technical compliance statement.

17) Liquid Chromatography (UPLC) with Tandem Mass Spectrometer with Triple Quadrupole System:

General information	A Bench Top High Sensitive Triple/Tandem Quadrupole LC-MS/MS system with all accessories, consumables & equipment for Pesticides residues analysis with software to meet global food regulations.
Solvent Delivery System	System should have ultra-high performance Quaternary Pump with inbuilt on-line vacuum degasser. Flow Range: 0.01 – 2.0 ml/min or better Operating Pressure: 0-15000 Psi at 1 ml/min Flow Rate Precision: 0.08% RSD.
Autosampler	Standard Sample Capacity: Minimum 80 vials of 1.5 ml or 2 ml capacity of better Temperature Control Range: 4 – 40 °C Standard Injection Range: 1 – 50 ul or better Carry over should be less than 0.005%
Column Heater	Range: Column Heater: Ambient plus 5 °C to 80 °C or better
MS/MS System	Should be Quadrupole based system with ESI and APCI ionization sources as standard part of the system capable of carrying out MS and MS/MS experiment. Mass Range: 16 amu to 2000 amu or better.
System tuning	Should have auto tune or manual tune system and orifice design for low maintenance
Detector	Should be electron multiplier tube (EMT) detector or photomultiplier tube (PMT) or Discreet dynamo detector (DDD).
Resolution	Unit Mass Resolution in both Q1 and Q3
Electronics	Polarity switching switch from positive to negative polarity should be 50 milli second or less
Mass Stability	0.1 Da over a period of 24 hours
Scan Speed	15000 amu/sec or better
MS interface	Should have Orifice with heated desolvation gas more than 400 °C
Collision Cell	Should be capable of doing MRM/ SRM analysis for optimal high data acquisition rate with no cross talk in collision cell. Dwell time not more than 1 milli second.
Sensitivity	<ul style="list-style-type: none"> • Should have positive Electron Spray ionization (ESI) multiple reaction monitoring (MRM) and minimum S/N ratio of 1,50,000: 1 for 1 pg on column injection of reserpine. The sensitivity specifications must be available on the website of the manufacturer and official specification sheet of the principal company. Performance specifications will not be entertained. The performance as quoted must be demonstrated during installation. • The negative Electron Spray ionization (ESI) mode should also give the minimum S/N ratio of 1,00,000: 1 for 1 pg on column injection of chloramphenicol.

Scan Modes	<ul style="list-style-type: none"> • Should be capable of performing MS Scan, MS/MS Product Ion Scan, SIM, MRM, SRM, Neutral loss/gain scan, Precursor Ion Scan. • Should also be capable of advanced scan mode with simultaneous/ sequential Full Scan MS and MRM for non-target screening
Syringe pump	Should have a syringe pump.
Computer and Software	<ul style="list-style-type: none"> • Branded and compatible desktop PC with minimum 32 inches screen, original software and compatible antivirus along with original licensed CD and laser printer having back to back printing facility, networking, 32 pages per minute (ppm). The software shall comply with the 21 CFR requirements. • Quote database for minimum 1000 contaminants including pesticide, antibiotics, mycotoxins etc. pertaining to their Molecular formula, mono isotopic mass, parent ion, collision energy, product ion, Rt, Sensitivity, ion ratio etc. • Original company licensed latest software having capabilities to perform the following functions. <ul style="list-style-type: none"> A) Automated calibration and quantitative optimization. B) Perform alternating Positive/Negative scans in one run. C) Automated quantitation and reporting of acquired samples. • During the warranty period, the supplier shall provide the original version of any updates to the system software / new software launched at no extra cost.
Gas Generator/ Gas Cylinder	<p>A suitable extremely low noise and vibration free imported gas N2 generator with built in air compressor</p> <p>One-time supply of filled cylinder of any other required gas, with regulator required for functioning of Mass Spectrometer</p>
UPS	Suitable On-Line 10 KVA UPS, 26 numbers, 100 AH batteries with 2 hr back up with full load
Consumables	<p>5000 vials for Auto-sampler</p> <ol style="list-style-type: none"> 1. RP C-18 columns: 100 mm x 2.1mm, sub 2 microns (6 nos.) 2. Mix mode RP C-18 columns: 100 mm x 2.1mm, sub 2 microns (6 nos.) for polar pesticides 3. Guard cartridge and guard columns for the above columns (20 each)
Warranty	<ol style="list-style-type: none"> 1. The Supplier shall warrant that the Goods supplied under this Contract are new, unused, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier shall further warrant that all Goods supplied under this Contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in conditions prevailing in the country of consignee destination. 2. The warranty period shall be 3 years from the date of completion of supply, installation and completion of all incidental services. Warranty should include all spares parts, electronic parts & boards, hardware consumables like PM kits, generator, UPS, Batteries etc. except accessories listed at consumables. Conditional warranty will not be acceptable. 3. The Consignee shall promptly notify the Supplier in writing of any claims arising under this warranty. 4. Upon receipt of such notice as per point 3 above, the Supplier shall within one-week repair or ³⁰replace the defective goods or parts thereof, free of cost at the Consignee's premises. The maximum response time for a maintenance complaint from any of the destination specified in the

NOTES:

1. **Equipment, materials and workmanship that meet other authoritative standards and which ensure at least substantially equal quality than the standards mentioned below will also be acceptable.**
2. Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested the provisions of the latest current edition or revision of the relevant standards or codes in effect shall apply, unless otherwise expressly stated in the contract. Where such standards or codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.
3. The **claim** of the technical specifications made by the company should be available on the principle's website and printed brochure.
4. Please provide all the relevant document, catalogues/brochures etc. of the above technical specifications and technical compliance statement.

18) Power Generator

1. Silent Diesel Generator set
2. 125 KVA/100KW rating
3. Powerful engine with 6 cylinders or better
4. An efficient alternator to give 3phase AC power within $\pm 1\%$ voltage regulation
5. To have control panel with Programmable Auto start switch
6. To have SMF battery of 130AH of reputed company
7. 2 years warranty on the entire system
8. Should submit the AMC/CMC charges after warranty for next 5 years.

19) Gas cylinders He,N₂,Ar, Air and Hydrogen:

47L (7 CuM) capacity SS cylinders to fill ultrapure gasses for analytical purpose.

To with stand 300 bar pressure

as per the regulations of Indian standards.

Should be supplied along with safety and NOC certificate from Chief controller of explosives

And Test certificate from BIS

20) Gas regulators and Gas Panel along with tubing:

Double stage Stainless steel gas regulators for with diaphragm with the following specs and 3 years warranty.

Gas	Cylinder max pressure	Out let pressure
Hydrogen	230 kg cm ²	0 to 14 kg/cm ²
Air	230 kg cm ²	0 to 14 kg/cm ²
Nitrogen	230 kg cm ²	0 to 14 kg/cm ²
Helium	230 kg cm ²	0 to 14 kg/cm ²

Gas Panel with pressure gauge capacity of 10bar,

Regulators and

Toggle valves (Inlet and outlets)

With twin outlets

Along with Moisture, Hydrocarbon and Oxy trap filters with suitable SS pipeline for Gas chromatographs of standard suppliers.

Powder coated wall mounted SS panel.

Supplier shall install the panels and pipelines of 1/8" with all fittings.

Warranty for regulators/valves : 3 years.

PRICE QUOTE

ANNEXURE- III**PRICE QUOTE****(as per specifications mentioned in Annexure-II)****SCHEDULE**

Lab Equipment for strengthening of Pesticide testing labs

Sl. No.	Description of equipment	Quantity each no. (in Nos.)	Rate quoted per each		
			Rs.in figures (in words)		
			Basic price per each piece (including FOL/deliver/ Training/ commissioning)	Taxes	Total
	LAB EQUIPMENTS				
1	Analytical balance	1			
2	Weighing Balances (2 to 3 kgs)	1			
3	Homogenizer(High Volume)	1			
4	Centrifuge(Low Volume, Refrigerated)	1			
5	Centrifuge(High Volume, Refrigerated)	1			
6	Deep Freezers	1			
7	Refrigerator	2			
8	Fume hood	1			
9	Deionized water system	1			
10	Water Distillation unit	1			
11	Water Purification System	1			
12	Rotary Vacuum Evaporator with chiller	1			
13	Tarbo Vap Evaporator with Nitrogen Gas Cylinder	1			
14	GLC with FID	1			
15	HPLC with PPDA	1			
16	GC-MS/MS	1			
17	LC-MS/MS	1			
18	Diesel Generator, 150KVA (Sound proof with AMF panel)	1			
19	Gas Cylinders				
	Helium	1			
	Nitrogen	1			
	Argon	1			
	Air	1			
	Hydrogen	1			
20	Gas Regulator and Gas panel along with tubing	1			

1. The basic rates quoted should be inclusive of all Taxes / Duties on FOL delivery to the concerned lab & inclusive of loading, unloading, training to concerned officials with machine operation etc. GST shall be shown separately
2. The rates quoted in the Price quote should be firm and valid up to 31.03.2020. The APSAIDC Ltd. will not entertain any upward price revisions during the agreement period. The validity period can be extended on mutual consent of both the parties.
3. The rates and units shall not be over written. The rates and units shall always be in both figures and words.

Place :

Date

SIGNATURE OF OFFERER WITH SEAL

ANNEXURE - IV
DECLARATION ON Rs.100/- NON JUDICIAL STAMP PAPER

1. I/We have read and understood the terms and conditions of EOI schedule relevant to “EOI notice” dated: 21-12-2019 and I/we have submitted the Annexures in accordance with the terms and conditions of above EOI schedule.
2. I/We shall not sell the products being quoted through this EOI schedule, at a lower price either to Government / Private parties in the State of Andhra Pradesh by way of giving any additional trade discount or incentives. If any such incident is noticed the A.P.S.A.I.D.C. Ltd. has the right to restrict all payments to such a lower rate apart from initiating penal action.
3. The information furnished in the Annexure-I is true and factual I clearly understand that our EOI schedule is liable for rejection, if any information furnished is found not true and factual, at any point of time.
4. The product/s offered by us is not copied or duplicated from any product design. In case the Corporation authorities find at any Time our products are an imitation or duplicate, we are bound for any legal action to be taken on us including blacklisting our firm.
5. I/We declare that I/we do not violate any patent/trade mark rights of any other manufacturer.

Place :
Date :

SIGNATURE OF THE OFFERER
WITH SEAL

DATA SHEET

Information to TENDER applicant(s)

Clause Ref.	Description								
1	<p>The name of the Client is :</p> <p>Vice Chairman & Managing Director APS Agro Industries Development Corporation Limited Regd. Office: No.55-17-224, 5th floor, Stalin Corporate, 2nd cross road Industrial Estate, Autonagar, Vijayawada-520007</p> <p>Ph: 0866 – 2556803 : Fax : 0866 - 2556804 Email: apagrosdmae@gmail.com, Website: www.apagros.org</p>								
2	<p>The Method of selection is :</p> <p>Quality-and Cost-Based Selection (QCBS)</p>								
3	<p>The Edition of the Guidelines is :</p> <p>As furnished in the EOI schedule</p>								
4	<p>TENDER and Financial Schedules are requested Separately: Yes</p>								
5	<p>Particulars of materials to be supplied: Supply, installation, commissioning, validation of Pesticide Lab Equipment.</p>								
6	<p>The addresses and Telephone numbers of client's Regional offices are</p>								
	<table border="1"> <tr> <td style="text-align: center;">1</td> <td> District Manager. APS AGRO IND. DEV. CORP. LTD. Thotapalem road, Opp. RTC Bus stand, Vizianagaram 531202, Andhra Pradesh, Phone No: 08922-224256. Mobile No. 9133460123 </td> </tr> <tr> <td style="text-align: center;">2</td> <td> Manager(AE), APS AGRO IND. DEV. CORP. LTD. Pension office lane, Maidan grounds, Eluru 534 005, Andhra Pradesh, phone No. 08812-230731 Mobile: 9848076866 </td> </tr> <tr> <td style="text-align: center;">3</td> <td> Regional Manager APS AGRO IND. DEV. CORP. LTD. Besides IMFL Godown, Nallapadu Guntur 522006, Andhra Pradesh Phone No.0863-2290299, Mobile: 9948099876 </td> </tr> <tr> <td style="text-align: center;">4</td> <td> Regional Manager, APS AGRO IND. DEV. CORP. LTD. Industrial Estate, Bellary road, Anantapur- 515 001, Andhra Pradesh. Phone No.08554-270815, Mobile: 9948076847 </td> </tr> </table>	1	District Manager. APS AGRO IND. DEV. CORP. LTD. Thotapalem road, Opp. RTC Bus stand, Vizianagaram 531202, Andhra Pradesh, Phone No: 08922-224256. Mobile No. 9133460123	2	Manager(AE), APS AGRO IND. DEV. CORP. LTD. Pension office lane, Maidan grounds, Eluru 534 005, Andhra Pradesh, phone No. 08812-230731 Mobile: 9848076866	3	Regional Manager APS AGRO IND. DEV. CORP. LTD. Besides IMFL Godown, Nallapadu Guntur 522006, Andhra Pradesh Phone No.0863-2290299, Mobile: 9948099876	4	Regional Manager, APS AGRO IND. DEV. CORP. LTD. Industrial Estate, Bellary road, Anantapur- 515 001, Andhra Pradesh. Phone No.08554-270815, Mobile: 9948076847
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5	Regional Manager APS AGRO IND. DEV. CORPN. LTD. Vellore Road Chittoor- Andhra Pradesh Mobile : 9948076847
6	The client will provide the following: Technical specifications of the pesticide lab equipment,.
7	The EOI submission address is: Vice Chairman & Managing Director APS Agro Industries Development Corporation Limited Regd. Office: No.55-17-224, 5 th floor, Stalin Corporate, 2 nd cross road Industrial Estate, Autonagar, Vijayawada-520007
8	The information on the outer envelope should also include: EOI for Supply and installation, commissioning, validation of State level pesticide residue testing labs. Validity of EOI shall be 90 days from the date of submission.