

**REQUEST FOR PROPOSAL FOR PROCUREMENT OF MINOR
EQUIPMENTS BY FOOD SAFETY AND STANDARDS**

AUTHORITY OF INDIA
(Open Tender enquiry)

Request for Proposal (RFP) No. 05/2017-18

File No. 12015/02/2017-QA(Minor Equipments)

Food Safety and Standards Authority of India
(A statutory Authority established under the Food Safety and Standards Act, 2006)
FDA Bhawan, Kotla Road, New Delhi-110002

Dated the 07th December, 2017

The Food Safety and Standards Authority of India (hereinafter called "The Authority" invites tender on Two-Bid system for procurement of **MINOR EQUIPMENTS** for Central Food Laboratory, 3, Kyd Street, Kolkata-700016.

2. Bids under Two bid system (Technical Bid and Commercial Bid) in sealed covers are invited for "**PROCUREMENT OF MINOR EQUIPMENTS By FSSAI**". Please super scribe the above mentioned title, RFP No. and date of opening of the bids on the sealed covers to avoid the bid being declared invalid. Please also super scribe 'Technical Bid and 'Commercial Bid' on the respective covers:

3. General information about the tender is as follows: -

- | | | |
|---|---|--|
| (a) Queries to be addressed to | : | nilesh.ojha@nic.in |
| (b) Postal Address for sending the Bids | : | Joint Director (Quality Assurance)
Food Safety and Standards
Authority of India, FDA Bhawan,
Kotla Road, New Delhi-110002 |
| (c) Name/designation of contact person | : | Nilesh Kumar Ojha
Asstt. Director (Quality Assurance) |
| (d) Telephone No. | : | 011- 23237417 |
| (e) Last Date and Time for Receipt of Tenders | : | 08 Jan 2018 at 1500 Hrs |
| (f) Date and Time of Opening of Tenders | : | 08 Jan 2018 at 1530 Hrs |

4. This RFP is divided into five Parts as follows: -

- (a) **Part I** Contains General Information and Instructions for the Bidders about the RFP such as the time, place of submission and opening of tenders, Validity period of tenders, etc.
- (b) **Part II** Contains Essential Details of the Items/Services required, such as the Schedule of Requirements (SOR), Technical Details, Delivery Period, Mode of Delivery and Consignee details and Technical Bid Format.
- (c) **Part III** Contains Standard Conditions of RFP, which will form part of the Contract with the successful Bidder, besides other conditions contained in this RFP.

(d) **Part IV** Contains Special Conditions of RFP, which will also form part of the Contract with the successful Bidder.

(e) **Part V** Contains Evaluation Criteria and Format for Price Bids/Commercial Bids.

5. **Each page of this tender enquiry should be signed by the bidder or authorised representative and following certificate be given in the offer letter under the seal of the bidder:-**

' I/WE HEREBY DECLARE THAT ALL THE TERMS AND CONDITIONS GIVEN IN THE TENDER ENQUIRY ARE ACCEPTED BY ME/US ON BEHALF OF MY/OUR FIRM AS PER ANNEXURE I'

6. **This RFP is being issued with no financial commitment and this office reserves the right to change or vary any part thereof at any stage. This office also reserves the right to withdraw the RFP, should it become necessary at any stage.**

-Sd-

(Umesh Kumar Jain)
Jt. Director (Quality Assurance)
Food Safety and Standards
Authority of India, FDA Bhawan,
Kotla Road, New Delhi-110002

PART I – GENERAL INFORMATION AND INSTUTIONS

1. **Last date and time for depositing the Bids:** **08 Jan 2018 by 1500 Hrs.** The sealed quotations under two bid system (i.e. Technical Bid & Commercial Bid) in sealed covers should be deposited/reached by the due date and time. The responsibility to ensure this lies with the Bidder.
2. **Manner of depositing the Bids:** Sealed quotations should be dropped in the Tender Box marked for the said purpose by the due date and time. Late tenders will not be considered. No responsibility will be taken for postal delay or non-delivery/non receipt of Bid documents. Bids sent by FAX or e-mail will not be considered.
3. **Location of the Tender Box:** Reception Office, Food Safety and Standards Authority of India, FDA Bhawan, Kotla Road, New Delhi-110002. Only those Bids that are found in the tender box will be opened. Bids dropped in the wrong Tender Box will be rendered invalid.
4. **Time and date for opening of Bids:** The tender box will be opened on **08 Jan 2018 at 1530 hrs.** (If due to any exigency, the due date for opening of the Technical-Bid is declared a closed holiday, then it will be opened on the next working day at the same time or on any other day/time, as intimated by this office).
5. **Place of Opening of the Bids:** Conference Hall of Food Safety and Standards Authority of India, FDA Bhawan, Kotla Road, New Delhi-110002. The Bidders may depute their representatives, duly authorized in writing, to attend the opening of Bids on the due date and time. Rates and important commercial/technical clauses quoted by all Bidders will be read out in the presence of the representatives of all the Bidders. This event will not be postponed due to non-presence of your representative.
6. **Two-Bid System:** In case of the Two-Bid System, only the Technical Bid would be opened on the time and date mentioned above. Date of opening of the Commercial Bid will be intimated after acceptance of the Technical Bids. Commercial Bids of only those firms will be opened, whose Technical Bids are found compliant/suitable after Technical evaluation is done.
7. **Forwarding of Bids:** Bids should be forwarded by Bidders under their original memo/letter pad inter alia furnishing details like PAN, GST number, Bank address with EFT Account, if applicable, etc. and complete postal & e-mail address of their office.
8. **Clarification regarding contents of the RFP:** A prospective bidder who requires clarification regarding the contents of the bidding documents shall notify to the Tender Inviting Authority in writing about the clarifications sought not later than 14 (~~fourteen~~) days prior to the date of opening of the Bids. Clarifications to specific requests shall be responded through e-mail and general clarifications, affecting all the bidders shall be published in the official website of the Tender Inviting Authority (www.fssai.gov.in). However, it shall be the duty of the prospective bidder to ensure that the clarifications sought for have been properly received in time by the Tender Inviting Authority.
9. **Pre-Bid Conference:** All clarifications are to be resolved in the Pre-Bid Conference on **21 Dec 2017 at 1100hrs** in **Conference Hall of Food Safety and Standards Authority of India, FDA Bhawan, Kotla Road, New Delhi-110002** prior to submission of bids.

10. **Modification and Withdrawal of Bids:** A bidder may modify or withdraw his bid after submission provided that the written notice of modification or withdrawal is received by the Tender Inviting Authority prior to deadline prescribed for submission of bids. No bid shall be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and expiration of the period of bid validity specified. Withdrawal of a bid during this period will result in forfeiture of Bidder's EMD.

11. **Clarification regarding contents of the Bids:** During evaluation and comparison of bids, the Tender Inviting Authority may, at its discretion, ask or call the bidder for seeking clarification on his bid. The request for clarification will be given in writing/through email and no change in prices or substance of the bid will be sought, offered or permitted. No post-bid clarification on the initiative of the bidder will be entertained.

12. **Rejection of Bids:** Canvassing by the Bidder in any form, unsolicited letter and post-tender correction may invoke summary rejection with forfeiture of EMD. **Conditional tenders will also be rejected.**

13. **Validity of Bids:** The Bids should remain valid till **06 Months** from the last date of submission of the Bids.

14. **Earnest Money Deposit.** Bidders are required to submit Earnest Money Deposit (EMD) in favour of **Senior Accounts Officer, FSSAI** for an amount of **7,50,000/- (Rupees Seven Lakh Fifty Thousand only)** along with their bids. The EMD may be submitted in the form of an Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the public sector banks or a private sector bank authorized to conduct government business. EMD should remain valid for a period of forty-five days beyond the final bid validity period. EMD of the unsuccessful bidders will be returned to them, without any interest whatsoever, at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract. The Bid Security of the successful bidder would be returned, without any interest whatsoever, after the receipt of Performance Security from them as called for in the contract. EMD is not required to be submitted by those Bidders who are registered with the Central Purchase Organization (e.g. DGS&D) or National Small Industries Corporation (NSIC). The EMD will be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity period of their tender.

PART II – ESSENTIAL DETAILS OF ITEMS/SERVICES REQUIRED

1. **Schedule of Requirements** – List of items/services required is as follow :-

Sl. No	Items	Qty (Nos)	Purpose
1.	Atomic Absorption Spectrophotometer [GTA /FLAME / VGA]	01	for trace metal analysis in food and water
2.	Lovibond Tintometer (Digital)	01	For sesame oil / Color in oil tests
3.	Flame photometer	01	For minerals viz. Na, K, Ca.
4.	Muffle furnace	02	For determination of Ash
5.	Gas Chromatograph with FID and ECD Detectors	01	For analysis of Pesticides residues and other Food & Water related applications as per FSSAI requirements
6.	Gas Chromatograph with NPD and Thermal Conductivity Detector(TCD) Detectors	01	
7.	Microwave Digestion System	01	For sample preparation prior to metal analysis by AAS
8.	Digital BUTRYO Refractometer	01	For BR, RI, Brix measurements in Oils and Fats
9.	Flash point apparatus	01	For flash point determination in refined Oils
10.	Water Purification System	01	For lab. HPLC Grade / AAS grade water generation

The bidders has to quote for all the items mentioned above. In Case bidder fails to quote for all the items mentioned above his bid will not be considered for evaluation. Consortium is allowed as a single entity or a subsidiary.

2. **Technical Details:**

SPECIFICATIONS

Sl.No	Item	Specifications
1.	ATOMIC ABSORPTION SPECTROPHOTMETER [GTA /FLAME / VGA]	<ul style="list-style-type: none"> • Atomic Absorption Spectrophotometer (GTA/FLAME/VGA), Computer Controlled with built-in flame emission mode, Unit for Flame (Air Acetylene and nitrous oxide- acetylene), Graphite Tube Atomizer (GTA), Chiller / Water circulating unit, Auto samplers for GTA and flame • Wave length range 190 – 800 nm wave length • Sensitivity at least 0.35 abs for 5µg/ml aqueous copper standard solution with air – acetylene flame • Optics: Double Beam dual blazed / holographic Monochromator <ul style="list-style-type: none"> • Focal length At least 250 mm focal length

Sl.No	Item	Specifications
		<ul style="list-style-type: none"> • Resolution 1800 lines / mm • Width Automatic bandwidth of 0.2 to 2.0 nm • Flame Atomizer: All titanium or equivalent burner with impact bead / Flow spoiler, premix Design <ul style="list-style-type: none"> • Movement Automatic movement into the sample compartment • Affect from Acids /Organic solvent Unaffected from attacks by acid solution or organic solvents (e.g. Methyl isobutyl Ketone i.e. MIBK • Flame Alignment in liquid beam Fully automatic, optimized with motorized burner mount for vertical and horizontal burner adjustment • Nebulizer High precision able to provide manually adjustable uptake rates material of the nebulizer and related Venturi should be inert to acid solutions and organic solvents such as MIBK • Flame Control Computer controlled ignition • Gas Control Computer controlled with oxidant and fuel gases monitoring to monitor constant fuel / oxidant ration ignition • Safety Function Interlocking system to prevent ignition • Essential Interlock Monitor Burner type as well as its presence in position, air selector, flame sensor, liquid trap level, gas supply pressure and air supply anywhere in the network of gas tubings in the system • Automatic Lamp Selection Function Computer controlled Hollow Cathode Lamp selection and alignment Lamp Holder At least 8 lamp holder with built in power supplies for hollow cathode lamps and electrode – less discharge lamps or equivalent Operating Parameter setting Automatic Setting • Read Out /Display Display facility for absorbance as well as concentration, Display of errors or error codes, absorbance range at least up to 2.0 Abs. <ul style="list-style-type: none"> • Scale Expansion Scale expansion at least up to 100x • Integration time Integration time should cover at least 0.2 to 50 seconds range • Measurement Measurements of mean, RSD and CV, Background only mode, Integration of peak height and peak areas. • Accessories / Spares with Flame AA System <ul style="list-style-type: none"> • Vapour Generation Assembly: Should be continuous flow based hydride / mercury vapour generator with option of using with or without a programmable auto sampler <ul style="list-style-type: none"> • Precision Precision of better than or at least 1% at ppb levels of mercury, arsenic etc. • Absorption Cell The absorption cell's material should have no effect of the high heat of the flame and the cell for the analysis of mercury should be of a

Sl.No	Item	Specifications
		<p>closed cell design</p> <ul style="list-style-type: none"> • Flame Arrester Flame arrester should be provided in the tube which connects the assembly to the absorption cell • Cell Design holder. The design of the cell holder should give a firm and easily adjustable (for alignment) mounting on the burner head. • System accessories Complete with necessary reagent bottles, connectors etc. • Hollow Cathode lamps 16 hollow cathode lamps. One lamp each for the elements: Arsenic, Antimony, Boron, Calcium, Chromium, Cobalt, Copper, Iron, 19 Nickel, Lead, Manganese, Mercury, Selenium, Tin, Vanadium and Zinc. Equivalent coded lamps will also be acceptable. • Air Compressor with Air Filter or equivalent Air Service Unit Complete with pressure regulator quite in operation, necessary tubing and connectors and should meet the air supply requirements of AAS operation. Oil Free Pump Oil- free pump and moisture trap Corrosion Resistant Resistant to acidic vapour and the drain value (if any) should be made of stainless steel of equivalent corrosion resistant material • Gas Regulators Nitrous – oxide gas regulator Nitrous Oxide Gas regulator (two stage) with heater, with necessary tubings and connectors. Necessary transformer should be provided to transform this supply to the requirements of the heater. The heater should work on 230±10volts 50 Hz AC power supply. Acetylene Gas regulator Acetylene gas regulator (two stage) with necessary tubing and connectors. Nitrogen Gas regulator Nitrogen regulator (two stage) with necessary tunings and connectors. • Graphite Furnace System: <ul style="list-style-type: none"> • Graphite Tube: Atomizer Should be computer controlled fully enclosed graphite tube system consisting of stabilized temperature / total pyrolytic graphite plate form. • Gas Supplies: Provision of two gas supplies (programme selectable) with independent control over the gas supply through the furnace. • Heating Rate: Heating rate of at least 2000°C per second Cooling Time • Cooling time: 20 seconds • Temperature Range: Temperature range ambient to 2600°C or more in 1°C increments Feed back system • Feed back system for furnace temperature control, interlocks for water, gas, temperature,

Sl.No	Item	Specifications
		<p>furnace door, graphite tube damage and mains power.</p> <ul style="list-style-type: none"> • Temp. Programming: At least eight steps temperature programming facility with flexibility of programme selection, ramp time, gases, gas flow and read trigger for 20 each temperature step. • Control: Computer controlled with appropriate provision for print out of the furnace and sample parameters • Display: Calibration data / graphs, temperature profiles, signal graphics and the instrument status. • Memory: Memory should be able to store at least ten non volatile programmes • Ciller / Cooling Water Re-circulation Unit: Refrigerating water circulation unit of appropriate capacity. No discharge of water from this water circulation unit. • DATA WORK STATION <ul style="list-style-type: none"> • Application Software: <ul style="list-style-type: none"> • Programme facility with multitasking software • Should provide complete control of instrument with instrument status display and its various accessories. • Provide accurate and reproducible time averaged, integration, non – averaged integration, multi level calibration. • Software should handle instrument linear absorbance reading, concentration, or emission intensity, integration time, built-in statistics, calibration equation control, slope of analytical curve using operator selective calibration standard • Built-in interface for computer connection and use of optional accessories. • Comprehensive quality control protocols facility including blank, multiple quality control standards, QA/QC audit trail and calibration failure. • Computer System: <ul style="list-style-type: none"> • Make: Reputed brand such as HP/Compaq/IBM/ Dell • Processor: Intel core 2 duo processor 3.00 GHz or above • RAM: 4 GB (upgradable up to 8 GB) • HDD 500 GB ultra DMA or higher HDD (7200 RMP) • Monitor: 21” TFT – LCD Flat Colour • CD ROM: 52X CD- ROM • DVD-CDRW: 32X DVD-ROM and

SI.No	Item	Specifications
		<p>CDRW – combo Drive Max speed 48x24x48</p> <ul style="list-style-type: none"> • Ports: 2 serial, 1 parallel and 2 USB front 6 rear USB2 PS/2 Port, 1 VGA integrated Port 1line in/out port • Key Board: 104 keys • Mouse: Optical mouse with pad • Ethernet: 32 bit auto selectable 10/100 MBPS • Graphics: Internet ready with integrated graphics • Sound: Integrated sound card and inbuilt stereo speakers • Printer HP Laserjet Printer 1200 x 1200 dpi 12 PPM black • Operation Software: <ul style="list-style-type: none"> • Preloaded Windows XP Professional operating system with Licensed CD • MS Office 2000 Standard with media, manual and Licensed CD • Preloaded Antivirus with latest version along with Licensed CD • ADDITIONAL ITEMS <ul style="list-style-type: none"> • Operation Kit: Manufacturers Standard Operation Kit including all required items, tubings, fittings for start up / regular operation of instrument. • Operation / maintenance: Manual Operation / maintenance Manual for each unit Analytical manual • Analytical manual: including applications for flame, VGA and graphite system Service Manual • Service manual: with one set of required tools for each system / unit • Trouble Shooting Charts, Spare parts Catalogue, Application Notes for trace metal analysis in food and water samples • Dust Cover One for each unit • Consumables: For three years operation for each of the following units: Flame AAS (basic unit, burner system) Vapour generation assembly Graphite Furnace Atomizer Auto sampler • Operation and Maintenance Training: Two weeks training to be provided to two scientist on software training, operation, maintenance and troubleshooting aspects of instrument. • General Conditions of Supply <ul style="list-style-type: none"> • The instrument and all its units should operate on 230 ±10 volts 50Hz power supply • All the operation and maintenance manuals, circuit diagrams, application notes and application softwares to be supplied should be

Sl.No	Item	Specifications
		<p>in English Language.</p> <ul style="list-style-type: none"> • The supplier / manufacturer should have Indian Agent to provide after sales service. • The main unit and all the sub units of the instrument should be serviced by the Indian representative of supplier. • The Bidder should be a manufacturer / authorized representative of a manufacturer, who must have designed, manufactured, tested and supplied two numbers of such equipment similar to the type specified in the past five years, which shall be in successful operation for at least 2 years as on the date of bid opening. • The bidder should furnish the information on past supplies and their satisfactory performance. • Bidders shall invariably furnish documentary evidence (client's certificate – at least two) in support of the satisfactory operation of the equipment as specified above. • Notwithstanding anything stated above the purchaser reserves the right to assess the capability and capacity of the bidder to perform the contract, should the circumstances warrant such an assessment in the overall interest of the purchaser. • Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered. • Buy-back price for old Atomic Absorption Spectrophotometer [Make: GBC Scientific Equipments, Australia, Model: Avanta PM and System AVANTA ULTRA Z1 & PAL4000 Auto-sampler Year of Installation: 2001] may also be quoted
2.	LOVIBOND TINTOMETER (DIGITAL)	<ul style="list-style-type: none"> • Measuring principle: Visual, in terms of Lovibond® units • Modes: Transmittance, reflectance Range 0.1 - 79.9 Red, Yellow; 0.1 - 49.9 Blue; 0.1 - 3.9 Neutral • Resolution: 0.1 Lovibond® unit • Optical system: 11 glass-filled nylon racks containing a graduated range of Lovibond® colour glasses • Viewing system Fully adjustable, prismatic with integral blue filter for light standardization • Light source 2 x 12 Volt, 10 Watt tungsten halogen lamp Illuminant approximates to daylight • Path length Up to 153 mm (6") • Power pack 12 Volt ac, switchable to suit 220/110 Volt supply Approvals CE • Instrument housing Fabricated sheet steel with a tough, textured paint finish • Conformance filters and certified colour reference solutions representing a range of Lovibond® colours,

SI.No	Item	Specifications
		<p>for quick and simple quality control checks on instruments and operators.</p> <ul style="list-style-type: none"> • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable agencies during warranty & CMC period. Calibration cost will have to be borne by the supplier. • DQ, IQ, OQ, PQ Documentation during installation. • For validation vender should having it own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. • Warranty: Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered. • Buy-back price for old Digital Lovibond Tintometer [Make: Tintometer Ltd., U.K. Model: PFX 995 Year of Installation: 2003] may also be quoted
3.	FLAME PHOTOMETER	<ul style="list-style-type: none"> • Range Na+: 0 to 199.9 ppm, K+: 0 to 9.99 ppm, Li+: 0 to 9.99 ppm • Sensitivity 0.1 ppm Na+; K=100 units • Specificity less than 0.5% interference when concentrations are equal to test sample concentrations • Reproducibility less than 0.5% C.V. • Linearity less than 1% • Display dual display; 3-1/2-digit LED, 12.5 mm (1/2") • Fuel supply high-grade propane/butane mixture regulated at approximately 30 psi • Air supply 6 liters/min at 12 psi; oil and moisture free • Recorder output 0.05 to 5 V (switchable) • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NABL accredited agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. • Equipment should be FDA / CE certified or equivalent standard of repute. It should be ISO 9001:2000 or other equivalent quality certification. • All electrical peripherals required for smooth functioning e.g. voltage stabilizer should be provided with the equipment. • Warranty: Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered.

SI.No	Item	Specifications
4.	MUFFLE FURNACE	<ul style="list-style-type: none"> • 1200 degree with 23 liter capacity or more • Double Shell case, Stainless Steel • High Purity insulation material with efficient low thermal insulation • Bench top model • Vertically lift break switch/side lift break with front loading • Door: positive break switch Inside • Chamber Size: 245-280 mm x 340-400 mm x 230-250 mm (WDH) • Maximum temperature: 1200 °C Standard continuous temperature 1050 °C or more • Heating Rate: The furnace should be fast heating type with maximum attainable temperature should reach in 110 mins or better • Temperature control: Should be microprocessor based & at least 8 segment programmable 3216P1 or equivalent controller with necessary safety features. Programmable Temperature controller with heating rate control from 10 deg. min-1 to 100 deg.min-1 preferable • Temperature Accuracy: ± 5 oC over the whole temperature range of operation and in the entire muffle • Safety: Over Temperature protection should be added • Gas purging: Gas purging facility (inert gas inlet and outlet) • Weight : less than 80 kg • The furnace should be CE certified with suitable power supply • Installation, training and commissioning: Vendor must ensure satisfactory installation and commissioning of the system at CFL, Kolkata. A detailed training on handling, operation and applications must be provided to at least 5 scientists. Installation services must include IQ/OQ/PQ • For validation vender should have its own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. • Warranty: Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered. • Buy-back price for old Muffle furnace [Make: Heraeus Instrument, Germany, Model: M110, Year of Installation: 2000] may also be quoted
5.	GAS CHROMATOGRAPHY WITH FID AND ECD DETECTORS	<ul style="list-style-type: none"> • Pesticides residues and other Food & Water related applications as per FSSAI requirements • Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional.

SI.No	Item	Specifications
	Oven	<ul style="list-style-type: none"> • Upto 450 °C, Fast Oven with 120 °C/min ramp, –20 7ramps • Cool-down time from 450 °C to 50°C within 5 minutes • Should be able to accommodate two or more injectors and three detectors • Automatic leak test of system through single key
	Pneumatic Controls	<ul style="list-style-type: none"> • 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision
	Injector (2 or more)	<ul style="list-style-type: none"> • Should be capable of large volume injection Temperature ramped splitless, Split and Cold on-column modes 450 °C max. and 10 ramps. • Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. • Injector must be able to operate with capillary & wide bore columns • Injector must be provided with Backflush system.
	Autosampler (Liquid and Headspace)	<p>Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl</p> <ul style="list-style-type: none"> • The type and volume of the syringe must be automatically detected by the system. • Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. • Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents. <p>Head space auto sampler with a capacity 50 vials or better that support 10 & 20ml vial capacity with Pnuematic control</p> <ul style="list-style-type: none"> • Incubation Oven Temperature Range 50 to 200 °C in 1 °C steps • Syringe Temperature 50 °C to 150 °C in 1 °C steps • Incubation Oven Capacity vials or better
	Detectors	<ul style="list-style-type: none"> • The GC must have complete integrated control of all parameters (no external control module) for the following detectors: FID, and ECD. • Detector must be independently controlled and operational for maximum sensitivity
	Flame Ionization Detector (FID)	<ul style="list-style-type: none"> • Linear range : better than 10⁷ • Minimum detectable amount with makeup gases : 1.5 pgC/sec • Operating temperature limits: 450°C with standard ceramic/quartz flame jet • Auto flame out detection. • Acquisition rate 50 Hz or more.
	Electron Capture Detector ECD	<ul style="list-style-type: none"> • Linear dynamic range : better than 10⁴ • Complete with ⁶³Ni source and low voltage heaters. • Minimum detectable amount: Less than 10 fg of lindane.

SI.No	Item	Specifications
		<ul style="list-style-type: none"> Operating temperature limits : 400°C
	Gas Supplies	<ul style="list-style-type: none"> Required High purity Gas cylinders (2 No. Each)
SOFTWARE AND HARDWARE (Single point control of Software & Hardware)		
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).
	Software	Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions. Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified. All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC. Head Space Auto Sampler, Automation and event control from PC through same software. IQOQ of the system as well as software must be provided.
		Software update upto five years
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD Monitor with Printer - B/W - duplex - laser - Legal, A4 - 1200 dpi x 1200 dpi - up to 21 ppm – capacity with Network Card and Bluetooth facility.
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.
	Application Support	The Application support for stated applications required during method development and validations.
	Pre Installation Requirements (PIR)	Provide PIR of the system.
OTHER REQUISITES FOR GC WITH ECD, FID		
	Automatic Change Over Manifold for each gas line	

SI.No	Item	Specifications
	Complete Gas Purification Panel with fittings & installation of all gases	
	Renewable In Line Gas Purification System	
	Renewable gas purifier cartridge, Spare Set	
	Gas clean filters/Traps (6 No.)	
	Septa for injectors	Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (for each injector). (400 No.)
	Liners	<ul style="list-style-type: none"> Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) Suitable Injector Liner upto 10 µL (6 No.) Suitable Injector Liner upto 250 µL (6 No.) Suitable Injector Liner upto 500 µL (6 No.) Liner O-Rings Max Temp 375 °C (100 No.) Liners types required as per the application
	Ferrules and Nuts	50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID
	Columns for GC Applications	<ul style="list-style-type: none"> Pesticide column (30m x 0.250mm x 0.25µm (HP-5MS / DB-1MS or equivalent) (02 no.) Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) Column for Cholesterol Application (02 No.)
	Vials, caps and tool for autosampler <i>(Only Compatible sizes should be supplied)</i>	<ul style="list-style-type: none"> 2000 No. each Vial sets (1, 2 mL, Crimp type, Amber and Clear glass) 200 No. Vials (10,20ml Crimp type with cap & septa) 1000 No. 300/500 µL Recovery vials 6000 No. Septa PTFE/Silicone (for 1, 2 mL Vials) 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) Ergonomic Crimping Tools for different vial types Ergonomic Decapping Tools for different vial types 10 No. each Storage Racks for (for 1, 2 mL Vials) Head Space vials 10,20 ml capacity (500no. each)
	Autosampler Syringe	10 µL (12 No.), 100 and 250 µL (04 No. each); Manual syringe-2µl, 5µl and 500 µl (04 No. each). Headspace syringe (02 no.10µl, 500µl,02 no. 1ml)
	Sample Preparation <i>(Water & Food)</i>	<p>QuEChERS Kits for Pesticides and Herbicides in following Matrices:</p> <ul style="list-style-type: none"> Water (1000 No.) Matrices with high fat (1000 No.) Matrices with high Water content and (1000 No.) Matrices with high pigmented (1000 No.)
	Tools and Kits	Septa Removing tool

SI.No	Item	Specifications
		Tubing Cutter with rotating diamond blade for column Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing) Tubing Cutter for Plastic tubing with spare blade set
	Miscellaneous	Consumables required for each detector must be provided
	Warranty	Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered.
	Buy Back	Buy back price for old Gas Chromatograph - Mass Spectrometer (GC / MS) With Headspace (HS) sampler, ECD, FID and Single Quadruple MS detector [Make: Perkin Elmer USA Model: Clarus® 500, Year of Installation: 2006 may also be quoted.
6.	GAS CHROMATOGRAPHY WITH NPD AND THERMAL CONDUCTIVITY DETECTOR(TCD) DETECTORS	<ul style="list-style-type: none"> Pesticides residues and other Food & Water related applications as per FSSAI requirements Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional.
	Oven	<ul style="list-style-type: none"> Upto 450 °C, Fast Oven with 120 °C/min ramp, -20 °C/min Cool-down time from 450 °C to 50°C within 5 minutes Should be able to accommodate two or more injectors and three detectors Automatic leak test of system through single key
	Pneumatic Controls	<ul style="list-style-type: none"> 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision
	Injector (2 or more)	<ul style="list-style-type: none"> Should be capable of large volume injection Temperature ramped split-less, Split and Cold on-column modes 450 °C max and 10 ramps. Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. Injector must be able to operate with capillary & wide bore columns Injector must be provided with Backflush system.
	Autosampler	Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl <ul style="list-style-type: none"> The type and volume of the syringe must be automatically detected by the system. Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents.

SI.No	Item	Specifications
	Detectors	<ul style="list-style-type: none"> The GC must have complete integrated control of all parameters (no external control module) for the following detectors: NPD, and TCD. Detector must be independently controlled and operational for maximum sensitivity
	Nitrogen Phosphorus Detector (NPD)	<ul style="list-style-type: none"> Minimum detectable amount: 100fg N/sec, 100fg P/sec Linear dynamic range: better than 10⁴ Operating temperature limits: 450 °C with standard jet
	Thermal Conductivity Detector TCD	<ul style="list-style-type: none"> Capillary-column compatible Proven constant current design Software protection to prevent filament burnout Ideal for series operation 1/8-in. fittings PPC pneumatics - software flow control of reference gas Operating temperature 100 °C to 350 °C in 1 °C increments Sensitivity 9 µV/ppmnonane at 160 mA at the bridge with a detector temperature of 100 °C or 100 pgtridecane, /mL with He Minimum detectable quantity Typically < 1 ppm nonane Linear dynamic range: better than 10⁵ +/- 5% Operating temperature limits: 400 °C
	Gas Supplies	<ul style="list-style-type: none"> Required High purity Gas cylinders (2 No. Each)
SOFTWARE AND HARDWARE (Single point control of Software & Hardware)		
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).
	Software	<p>Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions. Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified. All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC. Head Space Auto Sampler, Automation and event control from PC through same software. IQOQ of the system as well as software must be provided.</p>
		Software update upto five years
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD

SI.No	Item	Specifications
		Monitor with Printer - B/W - duplex - laser - Legal, A4 - 1200 dpi x 1200 dpi - up to 21 ppm – capacity with Network Card and Bluetooth facility.
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.
	Application Support	The Application support for stated applications required during method development and validations.
	Pre Installation Requirements (PIR)	Provide PIR of the system.
OTHER REQUISITES FOR GC WITH ECD, FID		
Automatic Change Over Manifold for each gas line		
Complete Gas Purification Panel with fittings & installation of all gases		
Renewable In Line Gas Purification System		
Renewable gas purifier cartridge, Spare Set		
Gas clean filters/Traps (6 No.)		
Septa for injectors		Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (for each injector). (400 No.)
Liners		<ul style="list-style-type: none"> • Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) • Suitable Injector Liner upto 10 µL (6 No.) • Suitable Injector Liner upto 250 µL (6 No.) • Suitable Injector Liner upto 500 µL (6 No.) • Liner O-Rings Max Temp 375 °C (100 No.) • Liners types required as per the application
Ferrules and Nuts		50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID
Columns for GC Applications		<ul style="list-style-type: none"> • Pesticide column (30m x 0.250mm x 0.25µm (HP-5MS / DB-1MS or equivalent) (02 no.) • Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) • Column for Cholesterol Application (02 No.)
Vials, caps and tool for autosampler <i>(Only Compatible sizes should</i>		<ul style="list-style-type: none"> • 2000 No. each Vial sets (1, 2 mL, Crimp type, Amber and Clear glass) • 200 No. Vials (10,20ml Crimp type with cap & septa) • 1000 No. 300/500 µL Recovery vials

SI.No	Item	Specifications
	<i>be supplied)</i>	<ul style="list-style-type: none"> • 6000 No. Septa PTFE/Silicone (for 1, 2 mL Vials) • 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) • Ergonomic Crimping Tools for different vial types • Ergonomic Decapping Tools for different vial types • 10 No. each Storage Racks for (for 1, 2 mL Vials) • Head Space vials 10,20 ml capacity (500no. each)
	Autosampler Syringe	10 µL (12 No.), 100 and 250 µL (04 No. each); Manual syringe-2µl, 5µl and 500 µl (04 No. each). Headspace syringe (02 no.10µl, 500µl,02 no. 1ml)
	Sample Preparation <i>(Water & Food)</i>	QuEChERS Kits for Pesticides and Herbicides in following Matrices: <ul style="list-style-type: none"> • Water (1000 No.) • Matrices with high fat (1000 No.) • Matrices with high Water content and (1000 No.) • Matrices with high pigmented (1000 No.)
	Tools and Kits	Septa Removing tool
		Tubing Cutter with rotating diamond blade for column
		Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing)
		Tubing Cutter for Plastic tubing with spare blade set
	Miscellaneous	Consumables required for each detector must be provided
	Warranty	Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered.
7.	MICROWAVE DIGESTION SYSTEM	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc.
	Application	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc•
	General	The instrument should have a superior pressure venting so as to prevent any loss of volatile metals and should have homogeneous microwave field to avoid sample burning
	System	Microwave digestion system should have temperature and pressure monitoring system. The system should be

SI.No	Item	Specifications
		software controlled. Different types of rotors available for the digestion of the different type samples should also be quoted. Necessary consumables and maintenance parts should also be quoted to run instrument trouble free
	Instrument	<p>The system should be a stand alone work station and should have</p> <ul style="list-style-type: none"> • The System should have the feature of simply choose a method and it automatically recognizes the vessel type, counts the vessels and determines all of the parameters necessary for a fast, complete digestion • Should have provision that user can set the desired parameters for digestion • Should have Automatic Microwave power application depending on the load • Auto sensing of temperature and pressure inside the vessel • Be capable of processing different amounts of samples (from 0.3 g up to 10g) in the same run assuring the same conditions of temperature and pressure
	Display	The Instrument should have the high-resolution, colour touch screen, acid resistant, LED/LCD screen should serve as controller and display. Should be provided training videos for sample preparation vessel assembly, system use, and maintenance. Should have Data management – Easy access to stored methods, real-time data and results of past runs. Should be able to display the detailed methods, graphs of temperature and power against time and temperature of individual vessels.
	Interlocks	The system should have good interlocking system for safety and cavity door.
	Vessel	The system should be high throughput which can hold atleast 24 high pressure vessels. Must be supplied with digestion vessel racks and suitable accessories for the handling of two sizes of digestion vessels:
	System	The material of construction should be high purity TFM fluropolymer. Vessel volume should be One set for vessels of volume between 10 and 15 ml, and one set for vessels of volume > 25 ml. It should be operated for maximum temperature capacity of 250°C or more and maximum pressure of 35 Bar or more. The system should be provided with temperature sensor (Thermocouple type/ Fiber optics/IR Sensor) which will measure real temperature of the vessels and control it. The vessels should have automatic venting and re-sealing system in case there is excess pressure development essential. After Digestion, vessels

SI.No	Item	Specifications
		must be vent-able before uncapping the vessel for safety reasons. For ease of use, the vessels must not require the use of an energizing tool in order to reform seals prior to operation. Additional twelve numbers of vessels (of both sizes) as specified above should be supplied along with the system.
	Microwave Power and output with uniform energy distribution	The Instrument should have single magnetron 1500 W (or more of delivered energy, should provide the temperature needed (300 °C) for difficult samples and high-throughput vessel sets delivering unpulsed continuous power & precisely tuned wave guide. Disperses microwave energy uniformly throughout the cavity. No need for motor driven diffusers or attenuators. System software must automatically adjust the power delivery based upon sample load and pre-programmed control settings. Automatic Power control Technology delivers maximum energy to the sample, ensuring complete digestions. Controllable via microprocessor 230 V input, pulsed and unpulsed-essential 50 Hz, AC Operated. The Instrument should have "waveguide" between the magnetron (the microwave energy source) and the cavity. This waveguide fed system should provide maximum tuned transfer of microwave energy from the magnetron to the load in the microwave cavity. planes. This should result in uniform heating of the sample load.
	Microwave Cavity	The microwave cavity should be heavy duty and have sufficient space to mount and dismount vessels individually and all parts inside the cavity should be totally microwave transparent. The Cavity should be constructed with non magnetic Rugged high-grade 316 solid steel cavity. The vessel assembly during a run should be visible from outside The coating inside the cavity should be acid/ chemical. resistant special polymer coating like fluoro-polymer / PTFE.
	Controls	<p>The Instrument should have a) Reliable Temperature and b) Pressure controls independent of each other</p> <ul style="list-style-type: none"> • Automatic temperature control system, temperature sensor (thermocouple) should be protected properly from any chemical attack, sensor should monitor and control all vessels simultaneously-essential • Automatic Pressure control: should have a pressure sensor which has a total capability of up to 500psi automatically control the pressure. It should be possible to remove the pressure device at a high pressure. The Vessels should act as self-regulators of pressure
	Control	The control terminal should have high resolution LED/LCD Acid Resistant display. Touch screen which should have

SI.No	Item	Specifications
		method storage capacity. All the features should be in built in the software. Should have provision for manual programming storage apart from pre-installed programme. Continuous display of temperature and power inside the reaction vessels is required.
	Safety	There has to be multiple levels of safety. A safe mechanism to tackle the unused or reflected microwave energy Capable of shutting off in the event of the A very loud noise or bang in the instrument. If the temperature of the vessel is near its highest tolerance limit. Have inbuilt exhaust system to cool the vessels and to drive away if any fumes in the cavity-essential
	Quality Standards	The manufacturer should be ISO 9001 certified for design and manufacture of microwave digestion system
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator • GLP-validated software for controlling the system
	Operation and maintenance training component	The supplier will have to carry out successful installation at our laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.
	Warranty	Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered. This will include yearly calibration start-up / commissioning routine servicing, regular maintenance, preventive maintenance of equipment and components and break down repairs as and when occurring, ensuring that system does not remain out of service for a period more than 24 hours in case of major breakdowns and 6-8 hour in the case of minor breakdowns due to any unforeseen break down. The institution will provide Water / Electricity power, etc. for maintenance work. The successful tenderer shall keep the essential spares at site during the Contract Period to avoid the delay in attending faults / maintenance.
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached.
	Operating manuals, service manuals, other manuals	Should provide 2 sets (hardcopy and soft-copy) of:- <ul style="list-style-type: none"> • User, technical and maintenance manuals to be supplied in English language along with machine diagrams; • List of equipment and procedures required for local calibration and routine maintenance;

SI.No	Item	Specifications
		<ul style="list-style-type: none"> • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; • Certificate of calibration and inspection
	Certificates Performance and safety standards (specific to the device type); Local and/or international	<ul style="list-style-type: none"> • Should be FDA/CE/BIS approved product. • Manufacturer and Supplier should have ISO 13485 certification under ISO 9001 for quality standards. • Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements (or equivalent BIS Standard) • Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety
	Supplier/ Manufacturer	<ul style="list-style-type: none"> • Must be ISO certified for quality
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> • Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer;
	Recommendations or warnings	<ul style="list-style-type: none"> • Any warning signs would be adequately displayed
	Buy Back	Microwave Digestion System [Make: CEM Corp., USA Model: MARS 5, Year of Installation: 2008.
8.	DIGITAL BUTYRO REFRACTOMETER	For checking purity and adulteration of fats and oils
	System	Automated Operating LCD screen directly without manual alignment, can connect PC with RS232 interface
	Display	The required data to be displayed on the screen, including: the date, temperature, refractive index, concentration, and amended in accordance with the current temperature
	Measurement Range (Automatic Temperature Compensation)	<ul style="list-style-type: none"> • Concentration 0;95% • Refractive Index 1.3000–1.7000
	Minimum Indication	Butyro 0.1% RI 0.0001
	Measurement Accuracy	Butyro $\pm 0.5\%$ (at 40°C) RI ± 0.0003 (at 40°C)
	Precision (Reproducibility)	RI ± 0.00005 Butyro ± 0.05
	Measurement Temperature	<ul style="list-style-type: none"> • 10 to 50°C
	Ambient Temperature Sample	<ul style="list-style-type: none"> • 10 to 40°C

SI.No	Item	Specifications
	Volume Measurement Time	Less than 5 sec
	Sample Volume	> 0.1 ml
	Calibration certificate	
	Accessories	Reference Material Oil 50 ml
	Operation and training component	<ul style="list-style-type: none"> The supplier will have to carry out successful Installation at the laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for a minimum of two scientific personnel operating the system till customer satisfaction
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> Should be FDA/CE/BIS approved product. Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements(or equivalent BIS Standard) Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety
	Supplier/ Manufacturer	<ul style="list-style-type: none"> Must be ISO certified for quality
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer;
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed
	Warranty	Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered.
	Service contract clauses, including prices	<ul style="list-style-type: none"> List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;
	Operating manuals, service manuals, other manuals	<p>Should provide 2 sets(hardcopy and soft-copy) of:-</p> <ul style="list-style-type: none"> User, technical and maintenance manuals to be supplied in English language along with machine diagrams; List of equipment and procedures required for local calibration and routine maintenance; Service and operation manuals (original and copy) to be provided; Advanced maintenance tasks documentation; Certificate of calibration and inspection
	Buy Back	Buy back price for old Refractometer [Make: Bellingham Stanley, U.K. Model: RFM 330, Year of Installation: 1996 may also be quoted.
9.	Flash point apparatus	<ul style="list-style-type: none"> Instrument designed in strict accordance with the test method ASTM D93, Method A and B. Microprocessor controlled unit with digital easy to read display of the results. Ignition :-Electric ignition. Thermal detection (with metal sample temperature probe) of the flash to eliminate interference from water or silicone containing compound.

Sl.No	Item	Specifications
		<ul style="list-style-type: none"> • Cooling : - Facility for built-in cooling connection. • Automatic correction for standard barometric pressure vis-à-vis with final result. • Unit should have diagnostic program to check every key component and assembly and calibration facility. • Unit should automatically determine flash point in strict compliance with the appropriate test method. • Heating should be microprocessor controlled at the specified rate; the ignitor is activated and dipped at precisely the correct temperature and frequency. • Safety device for fire protection with alarm. • Resistance check box for temperature calibration with calibration certificate. • The unit should be operable on 230v / 50 Hz. • The system should be ISO 9001 quality standard and supplied with operation manual. • Merely copying our specifications in the quotation shall not make the parties eligible for consideration of the quotation. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer and the specifications mentioned in the quotation must be reflected/supported by the printed technical leaflet/literature. • Calibration : The firm must ensure that the equipment supplied is fully calibrated as per specification requirements and also source of future calibration at New Delhi & their frequency of calibration needed • Spares : Vendor should quote recommended spares for two years alongwith the equipment for smooth functioning of the equipment. • Spare Parts : Availability of spare parts of the equipment/instrument must be guaranteed for a period of at least seven years from the date of supply. • After Sales Services: It should be clearly mentioned in the quotation whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or their authorized agent/representative. Terms of the after sales services, if any, may be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services. • Inspection: The inspection of the system will be done by our technical expert in the presence of firm representative. • Users List : The list of users specifically for the same model/make of the quoted item (not the list of general users) along with the complete name, address & contract numbers of the user organizations/persons may be submitted with the quotation along with the performance certificates from all/some of them. • Training: Our Scientist/Technical persons should be trained by the supplier at the project site free of cost. <p>NOTE:- Firms having equipment wherein single mother</p>

SI.No	Item	Specifications
		<p>unit can be used for carrying out Flash Point by Abel Flash Point using interchangeable analyzer unit shall be considered, if otherwise found suitable vis-à-vis price factor & performance. Other specification requirement for Abel Flash Point apparatus is enclosed.</p> <ul style="list-style-type: none"> • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable calibration solutions by any agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. • Comprehensive warranty with spares for five years from the date of installation of the instrument should be covered. • Buy-back price for old Automated Pensky-Martens closed-cup flash point tester with sample changer measures the flash point of up to 12 samples automatically [Make: Petrotest, Germany Model: PMA-4, Year of Installation: 2004] may also be quoted.
10.	Water Purification system	Table top Water Purification System (Tap Water Feed) should be capable of produce water for use in HPLC solvents, Microbiology and reagent grade with the help of pre-treatment module; RO Module, DI Module, Storage tank, UV Oxidation Chamber, Polishing module and final membrane filter 0.22um
	Pre-treatment System	<p>Should consists:</p> <ul style="list-style-type: none"> • 5 micron,1 micron and Activated Carbon wrapped type depth filter • Pressure gauge with regulator • The unit should have automatic low/high pressure cut-off
	Reverse Osmosis with Electro Deionization Stage:	<ul style="list-style-type: none"> ▪ Pre-treatment cartridge with auto-scaling compounds, 0.5 micron filter and activated carbon or better. ▪ Prefilter combination to protect the RO Membranes life or better. ▪ RO Module with high performance thin film composite membrane with salt retention rate up to 98%. The retention rate for dissolved organic compounds, particles & colloids & bacteria exceeds 99% ▪ Deionization Module: Mixed bed resin module utilized for a reduction of the inlet conductivity. Used for inorganic applications. ▪ Conductivity measurement is to be done after RO, DI & Polishing module to monitor the performance of Individual cartridge. ▪ Should have suitable back wash programme before every operation or better

SI.No	Item	Specifications
	Storage Tank:	<ul style="list-style-type: none"> • 30 L or better Storage Tank with UV Lamp, Air filter, CO2 Trap & Level Sensor. • The tank should made of pure water resistant Poly Ethylene material with an outlet to drain the tank totally and a pressure sensor for the tank level control • The storage tank should be 100% drainable.
	General requirements	<ul style="list-style-type: none"> ▪ Online UV oxidation chamber: UV Light Energy at 185 nm & 254 nm wavelengths. ▪ TOC Measurement: Online continuous TOC measurement with Live Display. ▪ Sterile Filter with 0.22 µm or better with Autoclavable option for re-use ▪ System should meet reagent water quality standards including ASTM Type 1, CLSI and ISO 3696 Type ▪ System should have flexible remote dispenser to dispense water whenever needed ▪ System should have built-in automatic self-cleaning mechanism to extend the life of cartridge ▪ Automatic flushing and recirculation in standby mode to maintain consistent peak water purity ▪ User can collect RO Quality water from the Storage tank & ultrapure water from flexible dispenser ▪ Should have cartridge change indicator ▪ The system should incorporate a fully comprehensive, graphic colour LCD display to provide system status, performance parameters, routine maintenance status and alarms of troubleshooting, tank level status and automatic warning of reordering of consumables and ▪ Provision for digital display to indicate status of operation, resistivity or conductivity, temperature and also alarm system in case of malfunctioning.
	Pure Water Specification: (Type-2)	<ul style="list-style-type: none"> • Production Rate : 10 LPH or better • Conductivity : <2µs/cm at 298K (25°C) or better • pH at 298K (25°C) => 6.6 or effectively neutral • Total silica max 3ug/L or better
	The Ultrapure Product Water should of the following specifications: (Type-1)	<ul style="list-style-type: none"> • Flow Rate : 1.0 L/min or better • Should have conductivity @ 25 Deg C : 0.055 µs/cm or better • Should have resistivity @ 25 Deg C : 18.2 M -cm or better • TOC : < 1 ppb or better • Bacteria : <1 cfu/ml or better • Particles >0.1µm : <1 per ml or better • pH at 298K (25°C) = > 6.6 or Effectively neutral
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator
	Operation and	The supplier will have to carry out successful installation at our laboratory premises (where ever the system has to be

SI.No	Item	Specifications
	maintenance training component	installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.
	Warranty	Comprehensive Maintenance of the equipment supplied, installed, commissioned for 60 months after 2 year Warranty/Defects Liability Period. This will include yearly calibration start-up / commissioning routine servicing, regular maintenance, preventive maintenance of equipment and components and break down repairs as and when occurring, ensuring that system does not remain out of service for a period more than 24 hours in case of major breakdowns and 6-8 hour in the case of minor breakdowns due to any unforeseen break down. The institution will provide Water / Electricity power, etc. for maintenance work. The successful tenderer shall keep the essential spares at site during the Contract Period to avoid the delay in attending faults / maintenance.
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> • User, technical and maintenance manuals to be supplied in English language along with machine diagrams; • List of equipment and procedures required for local calibration and routine maintenance; • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; • Certificate of calibration and inspection
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> • Should be FDA/CE/BIS approved product. • Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. • Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements (or equivalent BIS Standard) • Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety
	Supplier/ Manufacturer	<ul style="list-style-type: none"> • Must be ISO certified for quality
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> • Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer;
	Recommendations or warnings	<ul style="list-style-type: none"> • Any warning signs would be adequately displayed
	Buy Back	Buy Back price for old Deionized water generation system [Make: Millipore, U.S.A Model: ELIX 3, 10 AND MILLI Q, Year of Installation: 2008 may also be quoted.

3. **Delivery Period** – Delivery period for supply of items would be **90 days** from the date of issue of Supply Order. Please note that Supply Order can be cancelled unilaterally by the Buyer in case items are not received within the Supply Ordered delivery period. Extension of Supply Ordered delivery period will be at the sole discretion of the Buyer, with applicability of Liquidated Damages(LD) clause.

4. **Penalty for delay in supplies / Installation**: In the event of delay in supply, installation, testing and commissioning of the equipment to the satisfaction of the **FSSAI/Director, Central Food Laboratory, 3, Kyd Street, Kolkata-700016** beyond the stipulated date:

- a. The Bidder will inform **FSSAI/Director, CFL, 3, Kyd Street, Kolkata-700016** well in advance in writing the reasons for delay in supply and/or installation of the equipment.
- b. **FSSAI/Director, CFL, Kolkata** shall have the right to recover liquidated damages at the rate of 0.25% of the Value of the equipment per day, by which the supplies or their satisfactory installation and commissioning is delayed subject to a maximum of 10%. Once the maximum is reached **FSSAI/Director, CFL, Kolkata** may consider termination of the supply order.

Note: The right to accept the reason(s) for delay and consider reduction or waive off the penalty for the same shall be at the sole discretion of FSSAI.

5. **Consignee Details.** O/o The Director, Central Food Laboratory, 3, Kyd Street, Kolkata-700016.

6. **Eligibility Criteria for Pre-Qualification of Bidders.** The firm/Bidder fulfilling the following eligibility criteria will be considered for opening of their Commercial Bids: -

- (a) Average Annual financial turnover, during the last three years should not be less than Rs. Five Crore. Documentary evidence duly attested by a Chartered Accountant/Company Secretary should be submitted alongwith the Technical Bid. Bidders should also enclose notary attested copy of IT returns filed for the last three financial years, notary attested audited copy of audited accounts, balance sheet, annual report etc.
- (b) Bidder must have valid GST Registration Certification. A copy of the certificate should be enclosed with the Technical Bid.
- (c) Bidder must possess valid PAN Card. A copy of the same should be enclosed with the Technical Bid.
- (d) Demand Draft/Pay Order of Rs. 7,50,000/- (Rupees Seven Lakh Fifty Thousand only) toward Earnest Money drawn in favour of Senior Accounts Officer, FSSAI should be submitted along with the Technical Bid.
- (e) Bidders are required to submit Bank Solvency Certificate issued not earlier than 30 Sep 2017.
- (f) Documents proving experience of having successfully installed minimum 03 equipments of similar nature should be submitted with the Technical Bid.
- (g) Bidders should have the capability to attend repairs of the equipment and have the capability to ensure the uptime in a year of 90% as per **Annexure II**. (Documentary proof shall be submitted on the after sales facilities and expertise of the bidder.)
- (h) Bidders who have been blacklisted / debarred by the Tender Inviting Authority or blacklisted / debarred by any State Government or Central Government department/Organization should not participate in the tender during the period of blacklisting. The bidder should enclose an undertaking to this effect alongwith the Technical Bid as per **Annexure III**.

(i) Bidder should provide general information as per **Annexure IV**. Any other details, as considered necessary may also be provided.

(j) Non- receipt of above mentioned documents may lead to rejection of the bid submitted by the bidder.

7. **Two-Bid System.** The quotation must be submitted by the bidder under two –bid system i.e. Technical-Bid and Commercial Bid to be submitted in separate sealed covers. Format of Technical Bid is at para 10 of the RFP. The documents mentioned in para(s) 6 and 10 should be enclosed with the Technical –Bid. Bidders are also required to furnish clause by clause compliance of specifications bringing out clearly the deviations from specification, if any. The Bidders are advised to submit the compliance statement as per **Annexure V**.

8. **Other terms and Conditions:**

(a) All the terms and conditions in respect of warranty/guarantee, CAMC/AMC, Training of Staff etc shall be complied with.

(b) Technical Specifications and Standards: The Goods & Services to be provided by the successful bidder under this contract shall conform to the technical specifications and quality control parameters mentioned in **para 2 of Part-II** of this document.

(c) The bidder shall be responsible for payment of any charges due to any statutory authorities such as Income Tax, GST, Customs Duties, etc.

(d) In the event, if it found that there is some statutory deduction to be made at the source, the Tender Inviting Authority will have the authority to do so.

9. **Amendment of tender documents:**

(a) At any time prior to the dead line for submission of Tender, the Tender Inviting Authority may, for any reason, modify the tender document by amendment.

(b) The amendments shall be published on the website, and the tender shall submit copy of amendments published if any signed by the bidder or the authorized representative shall be enclosed as part of the technical bid as a proof of having read and accepted the terms and conditions of the tender document.

(c) The Tender Inviting Authority shall not be responsible for failure to inform the prospective bidders for any notices published related to each tender. Bidders are requested to browse the website of the Tender Inviting Authority for information/general notices/amendments to tender document etc on a day to day basis till the tender is concluded.

10. **Bid Form****TECHNICAL BID FORM (A)**

1	Tender to be submitted to	Joint Director(QA), Food Safety and Standards Authority of India, FDA Bhawan, Kotla Road, New Delhi-110002
2	Closing date and time for receipt of Tenders.	1500 hrs on 08 Jan 2017
3	Time, date & place of opening of Technical Bids	1530 hrs on 08 Jan 2017 in Conference Hall, Food Safety and Standards Authority of India, FDA Bhawan, Kotla Road, New Delhi-110002
4	Earnest Money Deposit	Rs.7,50,000/- (Rupees Seven Lakh Fifty Thousand only) DD/Banker's Cheque No. _____ Dated _____ Issuing Bank _____
5	Schedule of Requirements and other Technical features as contained in Pat II of the RFP	Complied / Not complied
6	Bank Solvency Certificate (issued not earlier than 30 Sep 2017)	Enclosed / Not enclosed
7	Authenticated copy of PAN	Enclosed / Not enclosed
8	Authenticated copy of GST Regn.	Enclosed / Not enclosed
9	Tender Bid valid for acceptance up to 06 months from the date of opening of the commercial bid.	Accepted / Not Accepted
10	Experience Certificate of having successfully installed minimum 03 equipment of similar nature.	Enclosed / Not enclosed
11	Average Annual Financial Turnover during the last three Financial years 2016-17, 2015-16 and 2014-15, should not be less than Rs. Five Crore.	Enclosed / Not enclosed
12	An undertaking that the bidder has not been blacklisted/debarred by any State Govt./ Central Govt. Department/organization as per Annexure III.	Enclosed / Not enclosed
13	Documentary proof shall be submitted on the after sales facilities and expertise of the bidder	Enclosed / Not enclosed
14	Compliance sheet as per Annexure V	Enclosed / Not enclosed
15	Declaration form as per Annexure I	Enclosed / Not enclosed
16	General Information about the Bidder as per Annexure IV	Enclosed / Not enclosed
17	Certificate of Guarantee/Warranty as per Annexure II	Enclosed / Not enclosed

Signature of Bidder _____
Name in Block letters _____
Capacity in which signed _____
Date _____

Stamp of the Firm

TECHNICAL BID FORM (B)

The bids of only the technically qualified bidders will be eligible for consideration for opening of financial bid. The technical bid of the bidders will be evaluated on the basis of specification of the offered model vis-à-vis the prescribed specification given below :

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
1.	ATOMIC ABSORPTION SPECTROPHOTMETER [GTA /FLAME / VGA]	<ul style="list-style-type: none"> • Atomic Absorption Spectrophotometer(GTA/FLAME/VGA), Computer Controlled with built-in flame emission mode, Unit for Flame (Air Acetylene and nitrous oxide-acetylene), Graphite Tube Atomizer (GTA), Chiller / Water circulating unit, Auto samplers for GTA and flame • Wave length range 190 – 800 nm wave length • Sensitivity at least 0.35 abs for 5µg/ml aqueous copper standard solution with air – acetylene flame • Optics: Double Beam dual blazed / holographic Monochromator <ul style="list-style-type: none"> • Focal length At least 250 mm focal length • Resolution 1800 lines / mm • Width Automatic bandwidth of 0.2 to 2.0 nm • Flame Atomizer: All titanium or equivalent burner with impact bead / Flow spoiler, premix Design <ul style="list-style-type: none"> • Movement Automatic movement into the sample compartment • Affect from Acids /Organic solvent Unaffected from attacks by acid solution or organic solvents (e.g. Methyl isobutyl Ketone i.e. MIBK • Flame Alignment in liquid beam Fully automatic, optimized with motorized burner mount for vertical and horizontal burner adjustment • Nebulizer High precision able to provide manually adjustable uptake rates material of the nebulizer and 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>related Venturi should be inert to acid solutions and organic solvents such as MIBK</p> <ul style="list-style-type: none"> • Flame Control Computer controlled ignition • Gas Control Computer controlled with oxidant and fuel gases monitoring to monitor constant fuel / oxidant ration ignition • Safety Function Interlocking system to prevent ignition • Essential Interlock Monitor Burner type as well as its presence in position, air selector, flame sensor, liquid trap level, gas supply pressure and air supply anywhere in the network of gas tubings in the system • Automatic Lamp Selection Function Computer controlled Hollow Cathode Lamp selection and alignment Lamp Holder At least 8 lamp holder with built in power supplies for hollow cathode lamps and electrode – less discharge lamps or equivalent Operating Parameter setting Automatic Setting • Read Out /Display Display facility for absorbance as well as concentration, Display of errors or error codes, absorbance range at least up to 2.0 Abs. <ul style="list-style-type: none"> • Scale Expansion Scale expansion at least up to 100x • Integration time Integration time should cover at least 0.2 to 50 seconds range • Measurement Measurements of mean, RSD and CV, Background only mode, Integration of peak height and peak areas. • Accessories / Spares with Flame AA System <ul style="list-style-type: none"> • Vapour Generation Assembly: Should be continuous flow based hydride / mercury vapour 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>generator with option of using with or without a programmable auto sampler</p> <ul style="list-style-type: none"> • Precision Precision of better than or at least 1% at ppb levels of mercury, arsenic etc. • Absorption Cell The absorption cell's material should have no effect of the high heat of the flame and the cell for the analysis of mercury should be of a closed cell design • Flame Arrester Flame arrester should be provided in the tube which connects the assembly to the absorption cell • Cell Design holder. The design of the cell holder should give a firm and easily adjustable (for alignment) mounting on the burner head. • System accessories Complete with necessary reagent bottles, connectors etc. • Hollow Cathode lamps 16 hollow cathode lamps. One lamp each for the elements: Arsenic, Antimony, Boron, Calcium, Chromium, Cobalt, Copper, Iron, 19 Nickel, Lead, Manganese, Mercury, Selenium, Tin, Vanadium and Zinc. Equivalent coded lamps will also be acceptable. • Air Compressor with Air Filter or equivalent Air Service Unit Complete with pressure regulator quite in operation, 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>necessary tubing and connectors and should meet the air supply requirements of AAS operation. Oil Free Pump Oil- free pump and moisture trap Corrosion Resistant Resistant to acidic vapour and the drain value (if any) should be made of stainless steel of equivalent corrosion resistant material</p> <ul style="list-style-type: none"> • Gas Regulators Nitrous – oxide gas regulator Nitrous Oxide Gas regulator (two stage) with heater, with necessary tubings and connectors. Necessary transformer should be provided to transform this supply to the requirements of the heater. The heater should work on 230±10volts 50 Hz AC power supply. Acetylene Gas regulator Acetylene gas regulator (two stage) with necessary tubing and connectors. Nitrogen Gas regulator Nitrogen regulator (two stage) with necessary tunings and connectors. • Graphite Furnace System: <ul style="list-style-type: none"> • Graphite Tube: Atomizer Should be computer controlled fully enclosed graphite tube system consisting of stabilized temperature / total pyrolytic graphite plate form. • Gas Supplies: Provision of two gas supplies (programme selectable) with independent control over the gas supply through the furnace. • Heating Rate: Heating rate of at least 2000°C per second • Cooling Time • Cooling time: 20 seconds • Temperature Range: 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>Temperature range ambient to 2600°C or more in 1°C increments Feed back system</p> <ul style="list-style-type: none"> • Feed back system for furnace temperature control, interlocks for water, gas, temperature, furnace door, graphite tube damage and mains power. • Temp. Programming: At least eight steps temperature programming facility with flexibility of programme selection, ramp time, gases, gas flow and read trigger for 20 each temperature step. • Control: Computer controlled with appropriate provision for print out of the furnace and sample parameters • Display: Calibration data / graphs, temperature profiles, signal graphics and the instrument status. • Memory: Memory should be able to store at least ten non volatile programmes • Ciller / Cooling Water Re-circulation Unit: Refrigerating water circulation unit of appropriate capacity. No discharge of water from this water circulation unit. • DATA WORK STATION <ul style="list-style-type: none"> • Application Software: <ul style="list-style-type: none"> • Programme facility with multitasking software • Should provide complete control of instrument with instrument status display and its various accessories. • Provide accurate and reproducible time averaged, integration, non – averaged 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>integration, multi level calibration.</p> <ul style="list-style-type: none"> • Software should handle instrument linear absorbance reading, concentration, or emission intensity, integration time, built-in statistics, calibration equation control, slope of analytical curve using operator selective calibration standard • Built-in interface for computer connection and use of optional accessories. • Comprehensive quality control protocols facility including blank, multiple quality control standards, QA/QC audit trail and calibration failure. • Computer System: <ul style="list-style-type: none"> • Make: Reputed brand such as HP/Compaq/IBM/ Dell • Processor: Intel core 2 duo processor 3.00 GHz or above • RAM: 4 GB (upgradable up to 8 GB) HDD 500 GB ultra DMA or higher HDD (7200 RMP) • Monitor: 21" TFT – LCD Flat Colour • CD ROM: 52X CD-ROM • DVD-CDRW: 32X DVD-ROM and CDRW – combo Drive Max speed 48x24x48 • Ports: 2 serial, 1 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>parallel and 2 USB front 6 rear USB2 PS/2 Port, 1 VGA integrated Port 1line in/out port</p> <ul style="list-style-type: none"> • Key Board: 104 keys • Mouse: Optical mouse with pad • Ethernet: 32 bit auto selectable 10/100 MBPS • Graphics: Internet ready with integrated graphics • Sound: Integrated sound card and inbuilt stereo speakers • Printer HP Laserjet Printer 1200 x 1200 dpi 12 PPM black • Operation Software: <ul style="list-style-type: none"> • Preloaded Windows XP Professional operating system with Licensed CD • MS Office 2000 Standard with media, manual and Licensed CD • Preloaded Antivirus with latest version along with Licensed CD • ADDITIONAL ITEMS <ul style="list-style-type: none"> • Operation Kit: Manufacturers Standard Operation Kit including all required items, tubings, fittings for start up / regular operation of instrument. • Operation / maintenance: Manual Operation / maintenance Manual for each unit Analytical manual • Analytical manual: including applications for flame, VGA and graphite system Service 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>Manual</p> <ul style="list-style-type: none"> • Service manual: with one set of required tools for each system / unit • Trouble Shooting Charts, Spare parts Catalogue, Application Notes for trace metal analysis in food and water samples • Dust Cover One for each unit • Consumables: For three years operation for each of the following units: Flame AAS (basic unit, burner system) Vapour generation assembly Graphite Furnace Atomizer Auto sampler • Operation and Maintenance Training: Two weeks training to be provided to two scientist on software training, operation, maintenance and troubleshooting aspects of instrument. • General Conditions of Supply <ul style="list-style-type: none"> • The instrument and all its units should operate on 230 ±10 volts 50Hz power supply • All the operation and maintenance manuals, circuit diagrams, application notes and application softwares to be supplied should be in English Language. • The supplier / manufacturer should have Indian Agent to provide after sales service. • The main unit and all the sub units of the instrument should be serviced by the Indian representative of supplier. • The Bidder should be a manufacturer / authorized representative of a manufacturer, who must have designed, manufactured, tested and supplied two numbers of such equipment 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>similar to the type specified in the past five years, which shall be in successful operation for at least 2 years as on the date of bid opening.</p> <ul style="list-style-type: none"> • The bidder should furnish the information on past supplies and their satisfactory performance. • Bidders shall invariably furnish documentary evidence (client's certificate – at least two) in support of the satisfactory operation of the equipment as specified above. • Notwithstanding anything stated above the purchaser reserves the right to assess the capability and capacity of the bidder to perform the contract, should the circumstances warrant such an assessment in the overall interest of the purchaser. <p>Warranty: Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.</p>		
2.	LOVIBOND TINTOMETER (DIGITAL)	<ul style="list-style-type: none"> • Measuring principle: Visual, in terms of Lovibond® units • Modes: Transmittance, reflectance Range 0.1 - 79.9 Red, Yellow; 0.1 - 49.9 Blue; 0.1 - 3.9 Neutral • Resolution: 0.1 Lovibond® unit • Optical system: 11 glass-filled nylon racks containing a graduated range of Lovibond® colour glasses • Viewing system Fully adjustable, prismatic with integral blue filter for light standardization • Light source 2 x 12 Volt, 10 Watt tungsten halogen lamp Illuminant approximates to daylight • Path length Up to 153 mm (6") • Power pack 12 Volt ac, switchable to suit 220/110 Volt supply Approvals 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>CE Instrument housing Fabricated sheet steel with a tough, textured paint finish</p> <ul style="list-style-type: none"> • Conformance filters and certified colour reference solutions representing a range of Lovibond® colours, for quick and simple quality control checks on instruments and operators. • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable agencies during warranty & CMC period. Calibration cost will have to be borne by the supplier. • DQ, IQ, OQ, PQ Documentation during installation. • For validation vender should having it own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. <p>Warranty: Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.</p>		
3.	FLAME PHOTOMETER	<ul style="list-style-type: none"> • Range Na+: 0 to 199.9 ppm, K+: 0 to 9.99 ppm, Li+: 0 to 9.99 ppm • Sensitivity 0.1 ppm Na+; K=100 units • Specificity less than 0.5% interference when concentrations are equal to test sample concentrations • Reproducibility less than 0.5% C.V. • Linearity less than 1% • Display dual display; 3-1/2-digit LED, 12.5 mm (1/2") • Fuel supply high-grade propane/butane mixture regulated at 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>approximately 30 psi</p> <ul style="list-style-type: none"> • Air supply 6 liters/min at 12 psi; oil and moisture free • Recorder output 0.05 to 5 V (switchable) • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NABL accredited agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. • Equipment should be FDA / CE certified or equivalent standard of repute. It should be ISO 9001:2000 or other equivalent quality certification. • All electrical peripherals required for smooth functioning e.g. voltage stabilizer should be provided with the equipment. • Warranty: Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 		
4.	MUFFLE FURNACE	<ul style="list-style-type: none"> • 1200 degree with 23 liter capacity or more • Double Shell case, Stainless Steel • High Purity insulation material with efficient low thermal insulation • Bench top model • Vertically lift break switch/side lift break with front loading • Door: positive break switch Inside • Chamber Size: 245-280 mm x 340-400 mm x 230-250 mm (WDH) • Maximum temperature: 1200 °C Standard continuous temperature 1050 °C or more • Heating Rate: The furnace should be fast heating type with maximum attainable temperature should reach 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>in 110 mins or better</p> <ul style="list-style-type: none"> • Temperature control: Should be microprocessor based & at least 8 segment programmable 3216P1 or equivalent controller with necessary safety features. Programmable Temperature controller with heating rate control from 10 deg. min-1 to 100 deg.min-1 preferable • Temperature Accuracy: ± 5 oC over the whole temperature range of operation and in the entire muffle • Safety: Over Temperature protection should be added • Gas purging: Gas purging facility (inert gas inlet and outlet) • Weight : less than 80 kg • The furnace should be CE certified with suitable power supply • Installation, training and commissioning: Vendor must ensure satisfactory installation and commissioning of the system at CFL, Kolkata. A detailed training on handling, operation and applications must be provided to at least 5 scientists. Installation services must include IQ/OQ/PQ • For validation vender should have its own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. • Warranty: Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 		
5.	GAS CHROMATOGRAPHY WITH FID AND ECD DETECTORS	<ul style="list-style-type: none"> • Pesticides residues and other Food & Water related applications as per FSSAI requirements • Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional.		
	Oven	<ul style="list-style-type: none"> • Upto 450 °C, Fast Oven with 120 °C/min ramp, -20 7ramps • Cool-down time from 450 °C to 50°C within 5 minutes • Should be able to accommodate two or more injectors and three detectors • Automatic leak test of system through single key 		
	Pneumatic Controls	<ul style="list-style-type: none"> • 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision 		
	Injector (2 or more)	<ul style="list-style-type: none"> • Should be capable of large volume injection Temperature ramped splitless, Split and Cold on-column modes 450°C max. and 10 ramps. • Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. • Injector must be able to operate with capillary & wide bore columns • Injector must be provided with Backflush system. 		
	Autosampler (Liquid and Headspace)	<p>Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl</p> <ul style="list-style-type: none"> • The type and volume of the syringe must be automatically detected by the system. • Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. • Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents. <p>Head space auto sampler with a capacity 50 vials or better that support 10 & 20ml vial capacity with Pnuematic control</p>		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<ul style="list-style-type: none"> • Incubation Oven Temperature Range 50 to 200 °C in 1 °C steps • Syringe Temperature 50 °C to 150 °C in 1 °C steps • Incubation Oven Capacity vials or better 		
	Detectors	<ul style="list-style-type: none"> • The GC must have complete integrated control of all parameters (no external control module) for the following detectors: FID, and ECD. • Detector must be independently controlled and operational for maximum sensitivity 		
	Flame Ionization Detector (FID)	<ul style="list-style-type: none"> • Linear range : better than 10⁷ • Minimum detectable amount with makeup gases : 1.5 pgC/sec • Operating temperature limits: 450°C with standard ceramic/quartz flame jet • Auto flame out detection. • Acquisition rate 50 Hz or more. 		
	Electron Capture Detector ECD	<ul style="list-style-type: none"> • Linear dynamic range : better than 10⁴ • Complete with ⁶³Ni source and low voltage heaters. • Minimum detectable amount: Less than 10 fg of lindane. • Operating temperature limits : 400°C 		
	Gas Supplies	<ul style="list-style-type: none"> • Required High purity Gas cylinders (2 No. Each) 		
	SOFTWARE AND HARDWARE (Single point control of Software & Hardware)			
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).		
	Software	Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions. Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified.All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC.Head Space Auto Sampler, Automation and event control from PC through same software.IQOQ of the system as well as software must be provided.		
		Software update upto five years		
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD Monitor with Printer - B/W - duplex - laser - Legal, A4 - 1200 dpi x 1200 dpi - up to 21 ppm – capacity with Network Card and Bluetooth facility.		
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.		
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.		
	Application Support	The Application support for stated applications required during method development and validations.		
	Pre Installation Requirements (PIR)	Provide PIR of the system.		
	OTHER REQUISITES FOR GC WITH ECD, FID			

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Automatic Change Over Manifold for each gas line			
	Complete Gas Purification Panel with fittings & installation of all gases			
	Renewable In Line Gas Purification System			
	Renewable gas purifier cartridge, Spare Set			
	Gas clean filters/Traps (6 No.)			
	Septa for injectors	Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (for each injector). (400 No.)		
	Liners	<ul style="list-style-type: none"> • Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) • Suitable Injector Liner upto 10 µL (6 No.) • Suitable Injector Liner upto 250 µL (6 No.) • Suitable Injector Liner upto 500 µL (6 No.) • Liner O-Rings Max Temp 375 °C (100 No.) • Liners types required as per the application 		
	Ferrules and Nuts	50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID		
	Columns for GC Applications	<ul style="list-style-type: none"> • Pesticide column (30m x 0.250mm x 0.25µm (HP-5MS / DB-1MS or equivalent) (02 no.) • Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) • Column for Cholesterol Application (02 No.) 		
	Vials, caps and tool for autosampler <i>(Only Compatible sizes should be supplied)</i>	<ul style="list-style-type: none"> • 2000 No. each Vial sets (1, 2 mL, Crimp type, Amber and Clear glass) • 200 No. Vials (10,20ml Crimp type with cap & septa) • 1000 No. 300/500 µL Recovery vials • 6000 No. Septa PTFE/Silicone (for 1, 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		2 mL Vials) <ul style="list-style-type: none"> • 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) • Ergonomic Crimping Tools for different vial types • Ergonomic Decapping Tools for different vial types • 10 No. each Storage Racks for (for 1, 2 mL Vials) • Head Space vials 10,20 ml capacity (500no. each) 		
	Autosampler Syringe	10 µL (12 No.), 100 and 250 µL (04 No. each); Manual syringe-2µl, 5µl and 500 µl (04 No. each). Headspace syringe (02 no.10µl, 500µl,02 no. 1ml)		
	Sample Preparation (Water & Food)	QuEChERS Kits for Pesticides and Herbicides in following Matrices: <ul style="list-style-type: none"> • Water (1000 No.) • Matrices with high fat (1000 No.) • Matrices with high Water content and (1000 No.) • Matrices with high pigmented (1000 No.) 		
	Tools and Kits	Septa Removing tool Tubing Cutter with rotating diamond blade for column Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing) Tubing Cutter for Plastic tubing with spare blade set		
	Miscellaneous	Consumables required for each detector must be provided		
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.		
6.	GAS CHROMATOGRAPH	<ul style="list-style-type: none"> • Pesticides residues and other Food & Water related applications as per 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Y WITH NPD AND THERMAL CONDUCTIVITY DETECTOR(TCD) DETECTORS	FSSAI requirements <ul style="list-style-type: none"> Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional. 		
	Oven	<ul style="list-style-type: none"> Upto 450 °C, Fast Oven with 120 °C/min ramp, -20 °C/min ramps Cool-down time from 450 °C to 50°C within 5 minutes Should be able to accommodate two or more injectors and three detectors Automatic leak test of system through single key 		
	Pneumatic Controls	<ul style="list-style-type: none"> 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision 		
	Injector (2 or more)	<ul style="list-style-type: none"> Should be capable of large volume injection Temperature ramped split-less, Split and Cold on-column modes 450 °C max and 10 ramps. Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. Injector must be able to operate with capillary & wide bore columns Injector must be provided with Backflush system. 		
	Autosampler	Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl <ul style="list-style-type: none"> The type and volume of the syringe must be automatically detected by the system. Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents. 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Detectors	<ul style="list-style-type: none"> The GC must have complete integrated control of all parameters (no external control module) for the following detectors: NPD, and TCD. Detector must be independently controlled and operational for maximum sensitivity 		
	Nitrogen Phosphorus Detector (NPD)	<ul style="list-style-type: none"> Minimum detectable amount: 100fg N/sec, 100fg P/sec Linear dynamic range: better than 10⁴ Operating temperature limits: 450 °C with standard jet 		
	Thermal Conductivity Detector TCD	<ul style="list-style-type: none"> Capillary-column compatible Proven constant current design Software protection to prevent filament burnout Ideal for series operation 1/8-in. fittings PPC pneumatics - software flow control of reference gas Operating temperature 100 °C to 350 °C in 1 °C increments Sensitivity 9 µV/ppmnonane at 160 mA at the bridge with a detector temperature of 100 °C or 100 pgtridecane, /mL with He Minimum detectable quantity Typically < 1 ppm nonane Linear dynamic range: better than 10⁵ +/- 5% Operating temperature limits: 400 °C 		
	Gas Supplies	<ul style="list-style-type: none"> Required High purity Gas cylinders (2 No. Each) 		
	SOFTWARE AND HARDWARE (Single point control of Software & Hardware)			
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).		
	Software	Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions. Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified. All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC. Head Space Auto Sampler, Automation and event control from PC through same software. IQOQ of the system as well as software must be provided.</p>		
		Software update upto five years		
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD Monitor with Printer - B/W - duplex - laser - Legal, A4 - 1200 dpi x 1200 dpi - up to 21 ppm – capacity with Network Card and Bluetooth facility.		
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.		
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.		
	Application Support	The Application support for stated applications required during method development and validations.		
	Pre Installation Requirements (PIR)	Provide PIR of the system.		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	OTHER REQUISITES FOR GC WITH ECD, FID			
	Automatic Change Over Manifold for each gas line			
	Complete Gas Purification Panel with fittings & installation of all gases			
	Renewable In Line Gas Purification System			
	Renewable gas purifier cartridge, Spare Set			
	Gas clean filters/Traps (6 No.)			
	Septa for injectors	Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (<i>for each injector</i>). (400 No.)		
	Liners	<ul style="list-style-type: none"> • Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) • Suitable Injector Liner upto 10 µL (6 No.) • Suitable Injector Liner upto 250 µL (6 No.) • Suitable Injector Liner upto 500 µL (6 No.) • Liner O-Rings Max Temp 375 °C (100 No.) • Liners types required as per the application 		
	Ferrules and Nuts	50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID		
	Columns for GC Applications	<ul style="list-style-type: none"> • Pesticide column (30m x 0.250mm x 0.25µm (HP-5MS / DB-1MS or equivalent) (02 no.) • Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) • Column for Cholesterol Application (02 No.) 		
	Vials, caps and tool for autosampler <i>(Only Compatible sizes</i>	<ul style="list-style-type: none"> • 2000 No. each Vial sets (1, 2 mL, Crimp type, Amber and Clear glass) • 200 No. Vials (10,20ml Crimp type with cap & septa) 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	<i>should be supplied)</i>	<ul style="list-style-type: none"> • 1000 No. 300/500 µL Recovery vials • 6000 No. Septa PTFE/Silicone (for 1, 2 mL Vials) • 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) • Ergonomic Crimping Tools for different vial types • Ergonomic Decapping Tools for different vial types • 10 No. each Storage Racks for (for 1, 2 mL Vials) • Head Space vials 10,20 ml capacity (500no. each) 		
	Autosampler Syringe	10 µL (12 No.), 100 and 250 µL (04 No. each); Manual syringe-2µl, 5µl and 500 µl (04 No. each). Headspace syringe (02 no.10µl, 500µl,02 no. 1ml)		
	Sample Preparation (Water & Food)	QuEChERS Kits for Pesticides and Herbicides in following Matrices: <ul style="list-style-type: none"> • Water (1000 No.) • Matrices with high fat (1000 No.) • Matrices with high Water content and (1000 No.) • Matrices with high pigmented (1000 No.) 		
	Tools and Kits	Septa Removing tool Tubing Cutter with rotating diamond blade for column Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing) Tubing Cutter for Plastic tubing with spare blade set		
	Miscellaneous	Consumables required for each detector must be provided		
	Warranty	Comprehensive warranty with spares parts and labour for five years from the		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		date of installation of the instrument should be covered.		
7.	MICROWAVE DIGESTION SYSTEM	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc.		
	Application	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc•		
	General	The instrument should have a superior pressure venting so as to prevent any loss of volatile metals and should have homogeneous microwave field to avoid sample burning		
	System	Microwave digestion system should have temperature and pressure monitoring system. The system should be software controlled. Different types of rotors available for the digestion of the different type samples should also be quoted. Necessary consumables and maintenance parts should also be quoted to run instrument trouble free		
	Instrument	<p>The system should be a stand alone work station and should have</p> <ul style="list-style-type: none"> • The System should have the feature of simply choose a method and it automatically recognizes the vessel type, counts the vessels and determines all of the parameters necessary for a fast, complete digestion • Should have provision that user can 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>set the desired parameters for digestion</p> <ul style="list-style-type: none"> • Should have Automatic Microwave power application depending on the load • Auto sensing of temperature and pressure inside the vessel • Be capable of processing different amounts of samples (from 0.3 g up to 10g) in the same run assuring the same conditions of temperature and pressure 		
	Display	<p>The Instrument should have the high-resolution, colour touch screen, acid resistant, LED/LCD screen should serve as controller and display</p> <p>Should be provided training videos for sample preparation vessel assembly, system use, and maintenance</p> <p>Should have Data management – Easy access to stored methods, real-time data and results of past runs</p> <p>Should be able to display the detailed methods, graphs of temperature and power against time and temperature of individual vessels.</p>		
	Interlocks	The system should have good interlocking system for safety and cavity door.		
	Vessel	The system should be high throughput which can hold atleast 24 high pressure vessels. Must be supplied with digestion vessel racks and suitable accessories for the handling of two sizes of digestion vessels:		
	System	The material of construction should be high purity TFM fluoropolymer. Vessel volume should be One set for vessels of volume between 10 and 15 ml, and one		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>set for vessels of volume > 25 ml. It should be operated for maximum temperature capacity of 250°C or more and maximum pressure of 35 Bar or more. The system should be provided with temperature sensor (Thermocouple type/ Fiber optics/IR Sensor) which will measure real temperature of the vessels and control it. The vessels should have automatic venting and re-sealing system in case there is excess pressure development essential. After Digestion, vessels must be vent-able before uncapping the vessel for safety reasons. For ease of use, the vessels must not require the use of an energizing tool in order to reform seals prior to operation. Additional twelve numbers of vessels (of both sizes) as specified above should be supplied along with the system.</p>		
	<p>Microwave Power and output with uniform energy distribution</p>	<p>The Instrument should have single magnetron 1500 W (or more of delivered energy, should provide the temperature needed (300 °C) for difficult samples and high-throughput vessel sets delivering unpulsed continuous power & precisely tuned wave guide</p> <p>Disperses microwave energy uniformly throughout the cavity. No need for motor driven diffusers or attenuators. System software must automatically adjust the power delivery based upon sample load and pre-programmed control settings. Automatic Power control Technology delivers maximum energy to the sample, ensuring complete digestions. Controllable via microprocessor 230 V input, pulsed and unpulsed-essential 50 Hz, AC Operated. The Instrument should have “waveguide” between the magnetron</p>		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		(the microwave energy source) and the cavity. This waveguide fed system should provide maximum tuned transfer of microwave energy from the magnetron to the load in the microwave cavity. planes. This should result in uniform heating of the sample load.		
	Microwave Cavity	The microwave cavity should be heavy duty and have sufficient space to mount and dismount vessels individually and all parts inside the cavity should be totally microwave transparent. The Cavity should be constructed with non magnetic Rugged high-grade 316 solid steel cavity. The vessel assembly during a run should be visible from outside The coating inside the cavity should be acid/ chemical. resistant special polymer coating like fluoro-polymer / PTFE.		
	Controls	<p>The Instrument should have a) Reliable Temperature and b) Pressure controls independent of each other</p> <ul style="list-style-type: none"> • Automatic temperature control system, temperature sensor (thermocouple) should be protected properly from any chemical attack, sensor should monitor and control all vessels simultaneously-essential • Automatic Pressure control: should have a pressure sensor which has a total capability of up to 500psi automatically control the pressure. It should be possible to remove the pressure device at a high pressure. The Vessels should act as self-regulators of pressure 		
	Control	The control terminal should have high resolution LED/LCD Acid Resistant display. Touch screen which should have method storage capacity. All the features		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		should be in built in the software. Should have provision for manual programming storage apart from pre-installed programme. Continuous display of temperature and power inside the reaction vessels is required.		
	Safety	There has to be multiple levels of safety. A safe mechanism to tackle the unused or reflected microwave energy Capable of shutting off in the event of the A very loud noise or bang in the instrument. If the temperature of the vessel is near its highest tolerance limit. Have inbuilt exhaust system to cool the vessels and to drive away if any fumes in the cavity-essential		
	Quality Standards	The manufacturer should be ISO 9001 certified for design and manufacture of microwave digestion system		
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator • GLP-validated software for controlling the system 		
	Operation and maintenance training component	The supplier will have to carry out successful installation at our laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.		
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. This will include yearly calibration start-up / commissioning routine servicing, regular maintenance, preventive maintenance of equipment and components and break down repairs as and when occurring, ensuring that system does not remain out of service for a period more than 24		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		hours in case of major breakdowns and 6-8 hour in the case of minor breakdowns due to any unforeseen break down. The institution will provide Water / Electricity power, etc. for maintenance work. The successful tenderer shall keep the essential spares at site during the Contract Period to avoid the delay in attending faults / maintenance		
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;		
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> • User, technical and maintenance manuals to be supplied in English language along with machine diagrams; • List of equipment and procedures required for local calibration and routine maintenance; • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; • Certificate of calibration and inspection 		
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> • Should be FDA/CE/BIS approved product. • Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. • Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements(or equivalent BIS Standard) • Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 		
	Supplier/ Manufacturer	<ul style="list-style-type: none"> • Must be ISO certified for quality 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 		
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 		
8.	DIGITAL BUTRYO REFRACTOMETER	For checking purity and adulteration of fats and oils		
	System	Automated Operating LCD screen directly without manual alignment, can connect PC with RS232 interface		
	Display	The required data to be displayed on the screen, including: the date, temperature, refractive index, concentration, and amended in accordance with the current temperature		
	Measurement Range (Automatic Temperature Compensation)	<ul style="list-style-type: none"> Concentration 0;95% Refractive Index 1.3000–1.7000 		
	Minimum Indication	Butyro 0.1% RI 0.0001		
	Measurement Accuracy	Butyro $\pm 0.5\%$ (at 40°C) RI ± 0.0003 (at 40°C)		
	Precision (Reproducibility)	RI ± 0.00005 Butyro ± 0.05		
	Measurement Temperature	<ul style="list-style-type: none"> 10 to 50°C 		
	Ambient Temperature Sample	<ul style="list-style-type: none"> 10 to 40°C 		
	Volume Measurement Time	Less than 5 sec		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Sample Volume	> 0.1 ml		
	Calibration certificate			
	Accessories	Reference Material Oil 50 ml		
	Operation and training component	<ul style="list-style-type: none"> The supplier will have to carry out successful Installation at the laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for a minimum of two scientific personnel operating the system till customer satisfaction 		
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> Should be FDA/CE/BIS approved product. Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements(or equivalent BIS Standard) Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 		
	Supplier/ Manufacturer	<ul style="list-style-type: none"> Must be ISO certified for quality 		
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 		
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 		
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.		
	Service contract clauses, including prices	<ul style="list-style-type: none"> List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached; 		
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> User, technical and maintenance manuals to be supplied in English language along with machine 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		diagrams; <ul style="list-style-type: none"> • List of equipment and procedures required for local calibration and routine maintenance; • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; • Certificate of calibration and inspection 		
9.	Flash point apparatus	<ul style="list-style-type: none"> • Instrument designed in strict accordance with the test method ASTM D93, Method A and B. • Microprocessor controlled unit with digital easy to read display of the results. • Ignition :-Electric ignition. • Thermal detection (with metal sample temperature probe) of the flash to eliminate interference from water or silicone containing compound. • Cooling : - Facility for built-in cooling connection. • Automatic correction for standard barometric pressure vis-à-vis with final result. • Unit should have diagnostic program to check every key component and assembly and calibration facility. • Unit should automatically determine flash point in strict compliance with the appropriate test method. • Heating should be microprocessor controlled at the specified rate; the ignitor is activated and dipped at precisely the correct temperature and frequency. • Safety device for fire protection with alarm. • Resistance check box for temperature calibration with calibration certificate. • The unit should be operable on 230v / 50 Hz. • The system should be ISO 9001 quality standard and supplied with operation manual. 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<ul style="list-style-type: none"> • Merely copying our specifications in the quotation shall not make the parties eligible for consideration of the quotation. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer and the specifications mentioned in the quotation must be reflected/supported by the printed technical leaflet/literature. • Calibration : The firm must ensure that the equipment supplied is fully calibrated as per specification requirements and also source of future calibration at New Delhi & their frequency of calibration needed • Spares : Vendor should quote recommended spares for two years alongwith the equipment for smooth functioning of the equipment. • Spare Parts : Availability of spare parts of the equipment/instrument must be guaranteed for a period of at least seven years from the date of supply. • After Sales Services: It should be clearly mentioned in the quotation whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or their authorized agent/ representative. Terms of the after sales services, if any, may be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services. • Inspection: The inspection of the system will be done by our technical expert in the presence of firm representative. • Users List : The list of users specifically for the same model/make of the quoted item (not the list of general users) along with the complete name, address & contract 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<p>numbers of the user organizations/persons may be submitted with the quotation along with the performance certificates from all/some of them.</p> <ul style="list-style-type: none"> • Training: Our Scientist/Technical persons should be trained by the supplier at the project site free of cost. NOTE:- Firms having equipment wherein single mother unit can be used for carrying out Flash Point by Abel Flash Point using interchangeable analyzer unit shall be considered, if otherwise found suitable vis-à-vis price factor & performance. Other specification requirement for Abel Flash Point apparatus is enclosed. • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable calibration solutions by any agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. <p>Warranty : Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.</p>		
10.	Water Purification system	Table top Water Purification System (Tap Water Feed) should be capable of produce water for use in HPLC solvents, Microbiology and reagent grade with the help of pre-treatment module; RO Module, DI Module, Storage tank, UV Oxidation Chamber, Polishing module and final membrane filter 0.22um		
	Pre-treatment System	Should consists: <ul style="list-style-type: none"> • 5 micron,1 micron and Activated 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		Carbon wrapped type depth filter <ul style="list-style-type: none"> • Pressure gauge with regulator • The unit should have automatic low/high pressure cut-off 		
	Reverse Osmosis with Electro Deionization Stage:	<ul style="list-style-type: none"> ▪ Pre-treatment cartridge with auto-scaling compounds, 0.5 micron filter and activated carbon or better. ▪ Prefilter combination to protect the RO Membranes life or better. ▪ RO Module with high performance thin film composite membrane with salt retention rate up to 98%. The retention rate for dissolved organic compounds, particles & colloids & bacteria exceeds 99% ▪ Deionization Module: Mixed bed resin module utilized for a reduction of the inlet conductivity. Used for inorganic applications. ▪ Conductivity measurement is to be done after RO, DI & Polishing module to monitor the performance of Individual cartridge. ▪ Should have suitable back wash programme before every operation or better. 		
	Storage Tank:	<ul style="list-style-type: none"> • 30 L or better Storage Tank with UV Lamp, Air filter, CO2 Trap & Level Sensor. • The tank should made of pure water resistant Poly Ethylene material with an outlet to drain the tank totally and a pressure sensor for the tank level control • The storage tank should be 100% drainable. 		
	General requirements	<ul style="list-style-type: none"> ▪ Online UV oxidation chamber: UV Light Energy at 185 nm & 254 nm wavelengths. ▪ TOC Measurement: Online continuous TOC measurement with Live Display. ▪ Sterile Filter with 0.22 µm or better with Autoclavable option for re-use ▪ System should meet reagent water quality standards including ASTM Type 1, CLSI and ISO 3696 Type 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
		<ul style="list-style-type: none"> ▪ System should have flexible remote dispenser to dispense water whenever needed ▪ System should have built-in automatic self-cleaning mechanism to extend the life of cartridge ▪ Automatic flushing and recirculation in standby mode to maintain consistent peak water purity ▪ User can collect RO Quality water from the Storage tank & ultrapure water from flexible dispenser ▪ Should have cartridge change indicator ▪ The system should incorporate a fully comprehensive, graphic colour LCD display to provide system status, performance parameters, routine maintenance status and alarms of troubleshooting, tank level status and automatic warning of reordering of consumables and ▪ Provision for digital display to indicate status of operation, resistivity or conductivity, temperature and also alarm system in case of malfunctioning. 		
	Pure Water Specification: (Type-2)	<ul style="list-style-type: none"> • Production Rate : 10 LPH or better • Conductivity : <2µs/cm at 298K (25°C) or better • pH at 298K (25°C) => 6.6 or effectively neutral • Total silica max 3ug/L or better 		
	The Ultrapure Product Water should of the following specifications: (Type-1)	<ul style="list-style-type: none"> • Flow Rate : 1.0 L/min or better • Should have conductivity @ 25 Deg C : 0.055 µs/cm or better • Should have resistivity @ 25 Deg C : 18.2 M -cm or better • TOC : < 1 ppb or better • Bacteria : <1 cfu/ml or better • Particles >0.1µm : <1 per ml or better • pH at 298K (25°C) = > 6.6 or Effectively neutral 		
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator 		
	Operation and	The supplier will have to carry out		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	maintenance training component	successful installation at our laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.		
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.		
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;		
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> • User, technical and maintenance manuals to be supplied in English language along with machine diagrams; • List of equipment and procedures required for local calibration and routine maintenance; • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; • Certificate of calibration and inspection 		
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> • Should be FDA/CE/BIS approved product. • Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. • Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements (or equivalent BIS Standard) • Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 		
	Supplier/ Manufacturer	<ul style="list-style-type: none"> • Must be ISO certified for quality 		

SI.No	Item	Specifications	Please Specify whether the quoted model meets the specification (Yes/No)	Name of the Model and its Specification
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 		
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 		

Note : List of Installations of the quoted Model or a comparable model of equivalent sensitivity preferably in food analysis sector in India (Attach Performance certificate from the organizations where the quoted model or a comparable model of equivalent sensitivity has already been installed)

PART III- STANDARD CONDITIONS OF RFP

The Bidder is required to give confirmation of their acceptance of the Standard Conditions of the Request for Proposal mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the Contract) as selected by the Tender Inviting Authority(i.e. Buyer). Failure to do so may result in rejection of the Bid submitted by the Bidder.

2. **Law:** The Supply Order shall be considered and made in accordance with the law of the Republic of India. The Supply Order shall be governed by and interpreted in accordance with the laws of the Republic of India.

3. **Award of Contract.** The contract will be awarded to the lowest evaluated responsive bidder qualifying to the final round after scrutiny of the technical bids and demonstration of the accessories, i.e. after financial bid opening.

4. **Effective Date of the Contract.** The contract shall come into effect on the date of signature by both the parties on the contract (Effective Date) and shall remain valid until the completion of the obligations of the parties under the contract. The deliveries and supplies and performance of the services shall commence from the effective date of the contract.

5. **Effective Date of the Supply Order:** The Supply Order shall come into effect on the date of its acknowledgment by the Seller and shall remain valid until the completion of the obligations of the parties under the Supply Order. The deliveries and supplies and performance of the service shall commence from the effective date of the Supply Order.

6. **Arbitration.** All disputes or differences arising out of or in connection with the Contract shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to construction or performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration is as per the Arbitration and Conciliation Act, 1996 of India. Venue of Arbitration shall be the place from where the contract has been issued i.e. New Delhi, India.

7. **Penalty for use of Undue influence.** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Government of India for showing or forbearing to show favour or disfavour to any person in relation to the present Contract or any other Contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/ penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

8. **Agents / Agency Commission:** The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores/provider of the services referred to in this Supply Order and has not engaged any individual or firm, whether Indian or foreign whatsoever, to

intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries whether officially or unofficially, to the award of the Supply Order to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this Supply Order, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any Supply Order with the Government of India/FSSAI for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Supply Order either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Supply Order along with interest at the rate of 2% per annum above LIBOR rate. The Buyer will also have the right to recover any such amount from any Supply Orders concluded earlier with the Government of India/FSSAI.

9. **Non-disclosure of Supply Order documents:** Except with the written consent of the Buyer / Seller, other party shall not disclose the Supply Order or any provision, specification, plan, design, pattern, sample or information thereof to any third party.

10. **Termination of Supply Order:** The Buyer shall have the right to terminate this Supply Order in part or in full in any of the following cases:-

(a) The delivery of the material is delayed for causes not attributable to Force Majeure for more than (02 months) after the scheduled date of delivery.

(b) The Seller is declared bankrupt or becomes insolvent.

(c) The delivery of material is delayed due to causes of Force Majeure by more than (04 months).

(d) The Buyer has noticed that the Seller has utilized the services of any Indian/Foreign agent in getting this Supply Order and paid any commission to such individual/company etc.

(e) As per decision of the Arbitration Tribunal.

11. **Notices** : Any notice required or permitted by the Supply Order shall be written in the English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is sent.

12. **Transfer and Sub-letting:** The seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Supply Order or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Supply Order or any part thereof.

13. **Patents and other Industrial Property Rights:** The prices stated in the present Supply Order shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other industrial property rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

14. **Amendments:** No provision of present Supply Order shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Supply Order and signed on behalf of both the parties and which expressly states to amend the present Supply Order.

15. **Taxes and Duties**

(i) **General**

- (a) Bidders must indicate separately the relevant Taxes/Duties likely to be paid in connection with delivery of completed goods specified in RFP. In absence of this, the total cost quoted by them in their bid will be taken into account in the ranking of bids.
- (b) If a Bidder is exempted from payment of any duty/tax upto any value of supplies from them, he should clearly state that no such duty/tax will be charged by them up to the limit of exemption which they may have. If any concession is available in regard to rate/quantum of any duty/tax, it should be brought out clearly. In such cases, relevant certificate will be issued by the Buyer later to enable the Seller to obtain exemptions from taxation authorities.
- (c) Any changes in levies, taxes and duties levied by Central/State/Local government such as excise duty, Octroi/entry tax, GST etc. on final product upward as a result of any statutory variation taking place within contract period shall be allowed reimbursement by the Buyer, to the extent of actual quantum of such duty/tax paid by the Seller. Similarly, in case of downward revision in any such duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall include all reliefs, exemptions, rebates, concession etc, if any, obtained by the Seller. Section 64-A of Sales of Goods Act will be relevant in this situation.
- (d) Levies, taxes and duties levied by Central/State/Local governments such as excise duty, Octroi/entry tax, GST etc. on final product will be paid by the Buyer on actuals, based on relevant documentary evidence. Taxes and duties on input items will not be paid by Buyer and they may not be indicted separately in the bids. Bidders are required to include the same in the pricing of their product.

(ii) **GST**

- (a) If it is desired by the Bidder to ask for GST to be paid as extra, the same must be specifically stated. In the absence of any such stipulation in the bid, it will be presumed that the prices quoted by the Bidder are inclusive of GST and no liability of GST will be developed upon the Buyer.
- (b) On the Bids quoting GST extra, the rate and the nature of GST applicable at the time of supply should be shown separately. GST will be paid to the Seller at the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to GST and the same is payable as per the terms of the Supply Order.

(iii) **Octroi Duty & Local Taxes**

- (a) Normally, materials to be supplied to Government Departments against Government Supply Orders are exempted from levy of town duty, Octroi Duty, Terminal Tax and other levies of local bodies. The local Town/Municipal Body regulations at times, however, provide for such Exemption only on production of such exemption certificate from any authorised officer. Seller should ensure that stores ordered against Supply Orders placed by this office are exempted from levy of Town Duty/Octroi Duty, Terminal Tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the Buyer, to avoid payment of such local taxes or duties.
- (b) In case where the Municipality or other local body insists upon payment of these duties or taxes the same should be paid by the Seller to avoid delay in supplies and possible demurrage charges. The receipt obtained for such payment should be forwarded to the Buyer without delay together with a copy of the relevant act or by-laws/notifications of the Municipality of the local body concerned to enable him to take up the question of refund with the concerned bodies if admissible under the said acts or rules.

PART IV- SPECIAL CONDITIONS OF RFP

1. The Bidder is required to give confirmation of their acceptance of Special Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the Contract) as selected by the Tender Inviting Authority (i.e. Buyer). Failure to do so may result in rejection of Bid submitted by the Bidder.

2. **Performance Guarantee:**

The Seller will be required to furnish a Performance Guarantee by way of Bank Guarantee through a public sector bank or a private sector bank authorized to conduct government business for a sum equal to 10% of the contract value within 30 days of receipt of the confirmed order. Performance Bank Guarantee should be valid up to 60 days beyond the date of warranty.

3. **Option Clause:** To take care of any change in the requirement during the period starting from issue of RFP till placement of the contract, Buyer reserves the right to 100% plus/minus increase or decrease the quantity of the required goods up to that limit without any change in the terms & conditions and prices quoted by the Seller. While awarding the contract, the quantity ordered can be increased or decreased by the Buyer within this tolerance limit.

4. **Payment Terms:** The payment will be made as per the following terms on production of the requisite documents:

S.N.	Amount to be paid, INR	Condition(s) for release
1	80 % of the cost of equipment / item through an irrevocable Letter of Credit (LC) in favour of Seller	Upon presentation of the duly endorsed (by the user Authority) original shipping documents by the Seller
2	Next 10% of the cost of equipment / item	Within 15 days of the receipt of request in writing from the Seller, accompanied by a certificate from the user Authority to the effect that the quantities ordered have been received; and that the equipment / item has been installed & commissioned satisfactorily. GST and Custom duty, if any, shall also be paid on actual basis subject to production of actual payment receipt by the Seller.
3	Balance 10% of the cost of equipment / item	Within 15 days of the receipt of request in writing from the Seller, accompanied by a certificate from the user Authority to the effect that the required training and validation (wherever applicable) has been imparted satisfactorily.

5. **Paying Authority :**

The payment will be made on submission of the following documents by the Seller to the Paying Authority along with the bill:

- i. Ink-signed copy of contingent bill / Seller's bill.
- ii. Ink signed copy of commercial invoice/Seller's bill.
- iii. Copy of Supply Order and Contract.

- iv. CRVs in duplicate.
- v. Inspection note.
- vi. Claim for statutory and other levies to be supported with requisite documents / proof of payment such as Excise duty challan, Customs duty clearance certificate, Octroi receipt, proof of payment for EPF/ESIC contribution with nominal roll of beneficiaries, etc as applicable.
- vii. Guarantee / Warranty certificate.
- viii. Performance Bank guarantee /Indemnity bond where applicable.
- ix. Details for electronic payment viz Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code, MICR code (if these details are not incorporated in supply order/Supply Order).
- x. Any other document / certificate that may be provided for in the Supply Order.
- xi. User Acceptance.

6. **Fall clause.** The following Fall clause will form part of the contract placed on_successful bidder

(a) The price charged for the stores supplied under the contract by the Seller shall in no event exceed the lowest prices at which the Seller sells the stores or offer to sell stores of identical description to any persons/Organisation including the purchaser or any department of the Central government or any Department of State government or any statutory undertaking of the Central or State government as the case may be during the period till performance of all supply Orders placed during the currency of the rate contract is completed.

(b) If at any time, during the said period the Seller reduces the sale price, sells or offer to sell such stores to any person/organisation including the Buyer or any Deptt, of Central Govt. or any Department of the State Government or any Statutory undertaking of the Central or State Government as the case may be at a price lower than the price chargeable under the contract, the Seller shall forthwith notify such reduction or sale or offer of sale to the Buyer and the price payable under the contract for the stores of such reduction of sale or offer of the sale shall stand correspondingly reduced.

(c) The Seller shall furnish the following certificate to the Paying Authority along with each bill for payment for supplies made against the Rate contract – “We certify that there has been no reduction in sale price of the stores of description identical to the stores supplied to the Government under the contract herein and such stores have not been offered/sold by me/us to any person/organisation including the purchaser or any department of Central Government or any Department of a state Government or any Statutory Undertaking of the Central or state Government as the case may be upto the date of bill/the date of completion of supplies against all supply orders placed during the currency of the Rate Contract at price lower than the price charged to the government under the contract except for quantity of stores categories under sub-clauses (a),(b) and of sub-para (ii) above details of which -”.

7. **Risk & Expense clause:-**

(a) Should the stores or any installment thereof not be delivered within the time or times specified in the contract documents, or if defective delivery is made in respect of the stores or any installment thereof, the Buyer shall after granting the Seller 45 days to cure the breach, be at liberty, without prejudice to the right to recover liquidated damages as a remedy for breach of contract, to declare the contract as cancelled either wholly or to the extent of such default.

(b) Should the stores or any installment thereof not perform in accordance with the specifications / parameters provided by the SELLER during the check proof tests to be done in the BUYER's country, the BUYER shall be at liberty, without prejudice to any other

remedies for breach of contract, to cancel the contract wholly or to the extent of such default.

(c) In case of a material breach that was not remedied within 45 days, the BUYER shall, having given the right of first refusal to the SELLER be at liberty to purchase, manufacture, or procure from any other source as he thinks fit, other stores of the same or similar description to make good:-

- (i) Such default.
- (ii) In the event of the contract being wholly determined the balance of the stores remaining to be delivered there under.

(d) Any excess of the purchase price, cost of manufacturer, or value of any stores procured from any other supplier as the case may be, over the contract price appropriate to such default or balance shall be recoverable from the SELLER. Such recoveries shall not exceed 10% of the value of the contract.”

8. **Force Majeure clause :-**

(a) Neither party shall bear responsibility for the complete or partial nonperformance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.

(b) In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.

(c) The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.

(d) Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.

(e) If the impossibility of complete or partial performance of an obligation lasts for more than 4 (four) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

9. **Buy Back Offer:** The purchase of tendered item(s) will be adjusted/offset against buyback of old item(s) mentioned below. Bidders will formulate and submit their tenders accordingly. Interested Bidders can inspect the old goods to be traded through this transaction. Buyer reserves its right to trade or not to trade the old goods while purchasing the new ones and the Bidders are to frame their bids accordingly covering both the options. Details of the buy-back offer are as under :

- (a) Details of Items for buy-back scheme:

1. Atomic Absorption Spectrophotometer [Make: GBC Scientific Equipments, Australia, Model: Avanta PM and System AVANTA ULTRA Z1 & PAL4000 Auto-sampler Year of Installation: 2001.
2. Microwave Digestion System [Make: CEM Corp., USA Model: MARS 5, Year of Installation: 2008.
3. Gas Chromatograph - Mass Spectrometer (GC / MS) With Headspace (HS) sampler, ECD, FID and Single Quadruple MS detector [Make: Perkin Elmer USA Model: Clarus® 500, Year of Installation: 2006.
4. Refractometer [Make: Bellingham Stanley, U.K. Model: RFM 330, Year of Installation: 1996.
5. Deionized water generation system [Make: Millipore, U.S.A Model: ELIX 3, 10 AND MILLI Q, Year of Installation: 2008.
6. Digital Lovibond Tintometer [Make: Tintometer Ltd., U.K. Model: PFX 995 Year of Installation: 2003.
7. Automated Pensky-Martens closed-cup flash point tester with sample changer measures the flash point of up to 12 samples automatically [Make: Petrotest, Germany Model: PMA-4, Year of Installation: 2004.
8. Muffle furnace [Make: Heraeus Instrument, Germany Model: M110, Year of Installation: 2000

Further details may be provided during the site visit.

(b) Place for Inspection of Old items: CFL, 3, Kyd Street, Kolkata-700016 (**Tele: 033-22291309/71827**).

(c) **Timings for Inspection:** 10:30 to 12:30 and 1430 to 1630 on all working days.

(d) **Last date for Inspection :** Inspection should be carried out before Pre-bid meeting.

(e) Period of handing over old items to successful bidder: Within 15 days of placement of order.

(f) Handling Charges and Transportation expenses to take out the old items will be borne by the successful bidder.

10. **Specification:** The following Specification clause will form part of the contract placed on successful Bidder - The Seller guarantees to meet the specifications as per Part-II of RFP and to incorporate the modifications to the existing design configuration to meet the specific requirement of the Buyer Services as per modifications/requirements recommended after the Maintenance Evaluation Trials. All technical literature and drawings shall be amended as the modifications by the Seller before supply to the Buyer. The Seller, in consultation with the Buyer, may carry out technical upgradation/alterations in the design, drawings and specifications due to change in manufacturing procedures, indigenization or obsolescence. This will, however, not in any way, adversely affect the end specifications of the equipment. Changes in technical details, drawings repair and maintenance techniques alongwith necessary tools as a result of upgradation/alterations will be provided to the Buyer free of cost within (7) days of affecting such upgradation/alterations.

11. **Quality:** The quality of the stores delivered according to the present Contract shall correspond to the technical conditions and standards valid for the deliveries of the same stores for in Seller's country or specifications enumerated as per RFP and shall also include therein modification to the stores suggested by the Buyer. Such modifications will be mutually agreed to. The Seller confirms that the stores to be supplied under this Contract shall be new i.e. not manufactured before (Year of Contract), and shall incorporate all the latest improvements and modifications thereto and spares of improved and modified equipment are backward integrated and interchangeable with same equipment supplied by the Seller in the past if any. The Seller shall supply an interchangeability certificate along with the changed part numbers wherein it should be mentioned that item would provide as much life as the original item.

12. **Inspection Authority:** Inspection may be carried out by a duly appointed Inspection Officer or duly constituted Inspection Committee before award of tender at the cost of the bidder.

13. **Franking clause:** The following franking clause will form part of the contract placed on successful Bidder –

(a) In the case of Acceptance of Goods “The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer/Committee will not have the effect of keeping the Contract alive. The goods are being passed without prejudice to the rights of the Tenderer under the terms and conditions of the Contract”.

(b) In the case of Rejection of Goods “The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer/Committee will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the Supply Order.”

14. **Warranty//Training:** The Seller has to warrant that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

Warranty: Minimum 05 Years warranty after successful installation of the instrument. Service and training during warranty period should be free of cost. This should cover the repair and maintenance with spare parts of the equipment purchased under the Supply Order. This will also include :

(i) **Preventive Maintenance Service:** The Seller will provide a minimum of two Preventive Maintenance Service visits during a year to the operating base to carry out functional check-ups and minor adjustments/tuning as may be required.

(ii) **Breakdown Maintenance Service:** In case of any breakdown of the equipment/system, on receiving a call from the Buyer, the Seller is to provide maintenance service to make the equipment/system serviceable.

(b) **Response time:** The response time of the Seller should not exceed 48 hours from the time the breakdown intimation is provided by the Buyer.

(c) Serviceability of 90% per year is to be ensured. This amounts to total maximum downtime of 37 days per year. Also unserviceability should not exceed 2 working days at one time. Required spares to attain this serviceability may be stored at site by the Seller at his own cost. Total down time would be calculated at the end of the year. If downtime exceeds permitted downtime, Liquidated Damages would be applicable for the delayed period.

(d) Maximum repair turnaround time for equipment/system would be 3 days. However, the spares should be maintained in a serviceable condition to avoid complete breakdown of the equipment/system.

(e) **Technical Documentation** : All necessary changes in the documentation (Technical and Operators manual) for changes carried out on hardware and software of the equipment will be provided.

(f) During the Warranty period, the Seller shall carry out all necessary servicing/repairs to the equipment/system under Warranty at the current location of the equipment/system. Prior permission of the Buyer would be required in case certain components/sub systems are to be shifted out of location. On such occasions, before taking over the goods or components, the Seller will give suitable bank guarantee to the Buyer to cover the estimated current value of item being taken.

(g) The Buyer reserves its right to terminate the maintenance Supply Order at any time without assigning any reason after giving a notice of 1 month. The Seller will not be entitled to claim any compensation against such termination. However, while terminating

the Supply Order, if any payment is due to the Seller for maintenance services already performed in terms of the Supply Order, the same would be paid to it as per the Supply Order terms.

15. **Training:** Training for the operation of instrument, software, data evaluation, trouble shooting and development of analytical methods will be provided free of cost during the warranty period and CAMC period.

16. **Uptime.** The successful bidder will guarantee to provide 90% uptime of all the systems during warranty and subsequent AMC. In case of failure to do so, proportionate payment will be deducted from the bank guarantee/payment due to the successful bidder. **A certificate as per Annexure V may be enclosed with the Technical Bid.**

17. **Intellectual Proprietary Rights.** The Seller shall, at all times, indemnify and keep indemnified the Buyer, free of cost, against all claims which may arise in respect of goods & services to be provided by the Seller under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks.

In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the Buyer, the Buyer shall notify the successful bidder of the same and the Seller shall, at his own expenses take care of the same for settlement without any liability to the Buyer.

The Seller/its Indian Agent/CMC Provider shall at all times, indemnify and keep indemnified the Buyer/ Government of India against all claims/ damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under Comprehensive Warranty/ CAMC.

18. **Special conditions:**

(a) The bidder has to arrange supply of equipment/material as per the technical specification mentioned in para 2 of Part II of RFP.

(b) The bidder has to provide the after sales support for the equipment/material and other works done.

(c) The certificate of fitness shall be obtained by the Seller.

(d) Onsite performance evaluation of the equipment may be carried out for those who qualify in the technical bid.

(e) The bidder will ensure that the equipment is properly insured for 110% of the order value to cover the transit upto site of installation of the equipment.

(f) Best trade packing suitable for safe Rail/Road/Air transit shall be used subject to packing and marking being acceptable to the Inspecting Authority.

PART V- EVALUATION CRITERIA & PRICE BID ISSUE

1. **Evaluation Criteria**- The broad guidelines for evaluation of Bids will be as follows:
- (a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the RFP, both technically and commercially.
 - (b) In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the Tender Inviting Authority with reference to the technical characteristics mentioned in the RFP. The compliance of Technical Bids would be determined on the basis of the parameters specified in the RFP.
 - (c) The commercial terms and documents submitted as part of the technical bids shall be scrutinized by a Technical Evaluation Committee constituted by the Tender Inviting Authority.
 - (d) The Technical Evaluation Committee may also verify the veracity of claims in respect of the known performance of the equipment offered, the experience and reputation of bidder in the field, the financial solvency etc.
 - (e) The decisions of the Technical Evaluation Committee on whether the tenders are responsive or non-responsive or requiring clarifications will be informed.
 - (f) The demonstration/presentation may also be conducted by Technical Evaluation Committee in which external experts from the User Institutions/funding agencies may be Invited.
 - (g) The price Bids of only those Bidders will be opened whose Technical Bids are cleared after technical evaluation.
 - (h) The Lowest Bid will be decided upon the lowest price quoted by the particular Bidder as per the Price Format given at Para 2 below. The consideration of taxes and duties in evaluation process will be as follows :-
 - L-1 bidder will be determined by excluding levies, taxes and duties levied by Central/State/Local governments such as excise duty, GST, Octroi/entry tax, etc. on Goods and Services as quoted by bidders.
 - (j) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is discrepancy between words and figures; the amount in words will prevail for calculation of price.
 - (k) The Lowest acceptable Bid will be considered further for placement of Supply order after complete clarification and price negotiations as decided by the Tender Inviting Authority.
 - (l) The Bidders are required to spell out the rates of GST, etc in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duties will be entreated after the opening of tenders.
 - (m) Any other criteria as applicable to suit in a particular case.

2. **Price Bid Format :** The Price Bid Format is given below and Bidders are required to fill this up correctly with full details, as required under Part-II of RFP :-

(a) Basic cost of the item/items:

Cost Details

Sl.No	Item	Specifications	Price in INR
1.	ATOMIC ABSORPTION SPECTROPHOTMETER [GTA /FLAME / VGA]	<ul style="list-style-type: none"> • Atomic Absorption Spectrophotometer (GTA/FLAME/VGA), Computer Controlled with built-in flame emission mode, Unit for Flame (Air Acetylene and nitrous oxide-acetylene), Graphite Tube Atomizer (GTA), Chiller / Water circulating unit, Auto samplers for GTA and flame • Wave length range 190 – 800 nm wave length • Sensitivity at least 0.35 abs for 5µg/ml aqueous copper standard solution with air – acetylene flame • Optics: Double Beam dual blazed / holographic Monochromator <ul style="list-style-type: none"> • Focal length At least 250 mm focal length • Resolution 1800 lines / mm • Width Automatic bandwidth of 0.2 to 2.0 nm • Flame Atomizer: All titanium or equivalent burner with impact bead / Flow spoiler, premix Design <ul style="list-style-type: none"> • Movement Automatic movement into the sample compartment • Affect from Acids /Organic solvent Unaffected from attacks by acid solution or organic solvents (e.g. Methyl isobutyl Ketone i.e. MIBK • Flame Alignment in liquid beam Fully automatic, optimized with motorized burner mount for vertical and horizontal burner adjustment • Nebulizer High precision able to provide manually adjustable uptake rates material of the nebulizer and related Venturi should be inert to acid solutions and organic solvents such as MIBK • Flame Control Computer controlled ignition • Gas Control Computer controlled with oxidant and fuel gases monitoring to monitor constant fuel / oxidant ration ignition • Safety Function Interlocking system to prevent ignition • Essential Interlock Monitor Burner type as well as its presence in position, air selector, flame sensor, liquid trap level, gas supply pressure and air supply anywhere in the network of gas tubings in the system 	

Sl.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Automatic Lamp Selection Function Computer controlled Hollow Cathode Lamp selection and alignment Lamp Holder At least 8 lamp holder with built in power supplies for hollow cathode lamps and electrode – less discharge lamps or equivalent Operating Parameter setting Automatic Setting • Read Out /Display Display facility for absorbance as well as concentration, Display of errors or error codes, absorbance range at least up to 2.0 Abs. <ul style="list-style-type: none"> • Scale Expansion Scale expansion at least up to 100x • Integration time Integration time should cover at least 0.2 to 50 seconds range • Measurement Measurements of mean, RSD and CV, Background only mode, Integration of peak height and peak areas. • Accessories / Spares with Flame AA System <ul style="list-style-type: none"> • Vapour Generation Assembly: Should be continuous flow based hydride / mercury vapour generator with option of using with or without a programmable auto sampler <ul style="list-style-type: none"> • Precision Precision of better than or at least 1% at ppb levels of mercury, arsenic etc. • Absorption Cell The absorption cell's material should have no effect of the high heat of the flame and the cell for the analysis of mercury should be of a closed cell design • Flame Arrester Flame arrester should be provided in the tube which connects the assembly to the absorption cell • Cell Design holder. The design of the cell holder should give a firm and easily adjustable (for alignment) mounting on the burner head. • System accessories Complete with necessary reagent bottles, connectors etc. • Hollow Cathode lamps 16 hollow cathode lamps. One lamp each for the elements: Arsenic, Antimony, Boron, Calcium, Chromium, Cobalt, Copper, Iron, 19 Nickel, Lead, Manganese, Mercury, Selenium, Tin, Vanadium and Zinc. Equivalent coded lamps will 	

SI.No	Item	Specifications	Price in INR
		<p>also be acceptable.</p> <ul style="list-style-type: none"> • Air Compressor with Air Filter or equivalent Air Service Unit Complete with pressure regulator quite in operation, necessary tubing and connectors and should meet the air supply requirements of AAS operation. Oil Free Pump Oil- free pump and moisture trap Corrosion Resistant Resistant to acidic vapour and the drain value (if any) should be made of stainless steel of equivalent corrosion resistant material • Gas Regulators Nitrous – oxide gas regulator Nitrous Oxide Gas regulator (two stage) with heater, with necessary tubings and connectors. Necessary transformer should be provided to transform this supply to the requirements of the heater. The heater should work on 230±10volts 50 Hz AC power supply. Acetylene Gas regulator Acetylene gas regulator (two stage) with necessary tubing and connectors. Nitrogen Gas regulator Nitrogen regulator (two stage) with necessary tunings and connectors. • Graphite Furnace System: <ul style="list-style-type: none"> • Graphite Tube: Atomizer Should be computer controlled fully enclosed graphite tube system consisting of stabilized temperature / total pyrolytic graphite plate form. • Gas Supplies: Provision of two gas supplies (programme selectable) with independent control over the gas supply through the furnace. • Heating Rate: Heating rate of at least 2000°C per second Cooling Time • Cooling time: 20 seconds • Temperature Range: Temperature range ambient to 2600°C or more in 1°C increments Feed back system • Feed back system for furnace temperature control, interlocks for water, gas, temperature, furnace door, graphite tube damage and mains power. • Temp. Programming: At least eight steps temperature programming facility with flexibility of programme selection, ramp time, gases, gas flow and read trigger for 20 each temperature step. 	

Sl.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Control: Computer controlled with appropriate provision for print out of the furnace and sample parameters • Display: Calibration data / graphs, temperature profiles, signal graphics and the instrument status. • Memory: Memory should be able to store at least ten non volatile programmes • Ciller / Cooling Water Re-circulation Unit: Refrigerating water circulation unit of appropriate capacity. No discharge of water from this water circulation unit. • DATA WORK STATION <ul style="list-style-type: none"> • Application Software: <ul style="list-style-type: none"> • Programme facility with multitasking software • Should provide complete control of instrument with instrument status display and its various accessories. • Provide accurate and reproducible time averaged, integration, non – averaged integration, multi level calibration. • Software should handle instrument linear absorbance reading, concentration, or emission intensity, integration time, built-in statistics, calibration equation control, slope of analytical curve using operator selective calibration standard • Built-in interface for computer connection and use of optional accessories. • Comprehensive quality control protocols facility including blank, multiple quality control standards, QA/QC audit trail and calibration failure. • Computer System: <ul style="list-style-type: none"> • Make: Reputed brand such as HP/Compaq/IBM/ Dell • Processor: Intel core 2 duo processor 3.00 GHz or above • RAM: 4 GB (upgradable up to 8 GB) HDD 500 GB ultra DMA or higher HDD (7200 RMP) • Monitor: 21” TFT – LCD Flat 	

SI.No	Item	Specifications	Price in INR
		<p>Colour</p> <ul style="list-style-type: none"> • CD ROM: 52X CD- ROM • DVD-CDRW: 32X DVD-ROM and CDRW – combo Drive Max speed 48x24x48 • Ports: 2 serial, 1 parallel and 2 USB front 6 rear USB2 PS/2 Port, 1 VGA integrated Port 1line in/out port • Key Board: 104 keys • Mouse: Optical mouse with pad • Ethernet: 32 bit auto selectable 10/100 MBPS • Graphics: Internet ready with integrated graphics • Sound: Integrated sound card and inbuilt stereo speakers • Printer HP Laserjet Printer 1200 x 1200 dpi 12 PPM black • Operation Software: <ul style="list-style-type: none"> • Preloaded Windows XP Professional operating system with Licensed CD • MS Office 2000 Standard with media, manual and Licensed CD • Preloaded Antivirus with latest version along with Licensed CD • ADDITIONAL ITEMS <ul style="list-style-type: none"> • Operation Kit: Manufacturers Standard Operation Kit including all required items, tubings, fittings for start up / regular operation of instrument. • Operation / maintenance: Manual Operation / maintenance Manual for each unit Analytical manual • Analytical manual: including applications for flame, VGA and graphite system Service Manual • Service manual: with one set of required tools for each system / unit • Trouble Shooting Charts, Spare parts Catalogue, Application Notes for trace metal analysis in food and water samples • Dust Cover One for each unit • Consumables: For three years operation for each of the following units: Flame AAS (basic unit, burner system) Vapour generation assembly Graphite Furnace Atomizer Auto sampler 	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Operation and Maintenance Training: Two weeks training to be provided to two scientist on software training, operation, maintenance and troubleshooting aspects of instrument. • General Conditions of Supply <ul style="list-style-type: none"> • The instrument and all its units should operate on 230 ±10 volts 50Hz power supply • All the operation and maintenance manuals, circuit diagrams, application notes and application softwares to be supplied should be in English Language. • The supplier / manufacturer should have Indian Agent to provide after sales service. • The main unit and all the sub units of the instrument should be serviced by the Indian representative of supplier. • The Bidder should be a manufacturer / authorized representative of a manufacturer, who must have designed, manufactured, tested and supplied two numbers of such equipment similar to the type specified in the past five years, which shall be in successful operation for at least 2 years as on the date of bid opening. • The bidder should furnish the information on past supplies and their satisfactory performance. • Bidders shall invariably furnish documentary evidence (client's certificate – at least two) in support of the satisfactory operation of the equipment as specified above. • Notwithstanding anything stated above the purchaser reserves the right to assess the capability and capacity of the bidder to perform the contract, should the circumstances warrant such an assessment in the overall interest of the purchaser. • Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 	
2.	LOVIBOND TINTOMETER (DIGITAL)	<ul style="list-style-type: none"> • Measuring principle: Visual, in terms of Lovibond® units • Modes: Transmittance, reflectance Range 0.1 - 79.9 Red, Yellow; 0.1 - 49.9 Blue; 0.1 - 3.9 Neutral • Resolution: 0.1 Lovibond® unit 	

Sl.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Optical system: 11 glass-filled nylon racks containing a graduated range of Lovibond® colour glasses • Viewing system Fully adjustable, prismatic with integral blue filter for light standardization • Light source 2 x 12 Volt, 10 Watt tungsten halogen lamp Illuminant approximates to daylight • Path length Up to 153 mm (6") • Power pack 12 Volt ac, switchable to suit 220/110 Volt supply Approvals CE Instrument housing Fabricated sheet steel with a tough, textured paint finish • Conformance filters and certified colour reference solutions representing a range of Lovibond® colours, for quick and simple quality control checks on instruments and operators. • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable agencies during warranty & CMC period. Calibration cost will have to be borne by the supplier. • DQ, IQ, OQ, PQ Documentation during installation. • For validation vender should having it own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. • Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 	
3.	FLAME PHOTOMETER	<ul style="list-style-type: none"> • Range Na+: 0 to 199.9 ppm, K+: 0 to 9.99 ppm, Li+: 0 to 9.99 ppm • Sensitivity 0.1 ppm Na+; K=100 units • Specificity less than 0.5% interference when concentrations are equal to test sample concentrations • Reproducibility less than 0.5% C.V. • Linearity less than 1% • Display dual display; 3-1/2-digit LED, 12.5 mm (1/2") • Fuel supply high-grade propane/butane mixture regulated at approximately 30 psi • Air supply 6 liters/min at 12 psi; oil and moisture free 	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Recorder output 0.05 to 5 V (switchable) • Certifications: <ul style="list-style-type: none"> • Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NABL accredited agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. • Equipment should be FDA / CE certified or equivalent standard of repute. It should be ISO 9001:2000 or other equivalent quality certification. • All electrical peripherals required for smooth functioning e.g. voltage stabilizer should be provided with the equipment. • Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 	
4.	MUFFLE FURNACE	<ul style="list-style-type: none"> • 1200 degree with 23 liter capacity or more • Double Shell case, Stainless Steel • High Purity insulation material with efficient low thermal insulation • Bench top model • Vertically lift break switch/side lift break with front loading • Door: positive break switch Inside • Chamber Size: 245-280 mm x 340-400 mm x 230-250 mm (WDH) • Maximum temperature: 1200 °C Standard continuous temperature 1050 °C or more • Heating Rate: The furnace should be fast heating type with maximum attainable temperature should reach in 110 mins or better • Temperature control: Should be microprocessor based & at least 8 segment programmable 3216P1 or equivalent controller with necessary safety features. Programmable Temperature controller with heating rate control from 10 deg. min-1 to 100 deg.min-1 preferable • Temperature Accuracy: ± 5 oC over the whole temperature range of operation and in the entire muffle • Safety: Over Temperature protection should be added • Gas purging: Gas purging facility (inert gas inlet and outlet) • Weight : less than 80 kg • The furnace should be CE certified with suitable power supply 	

Sl.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Installation, training and commissioning: Vendor must ensure satisfactory installation and commissioning of the system at CFL, Kolkata. A detailed training on handling, operation and applications must be provided to at least 5 scientists. Installation services must include IQ/OQ/PQ • For validation vender should have its own capability with their own company trained service engineer to perform validation. No third part validation will be entertained. One validation at the time of installation should be done by company personnel. • Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 	
5.	GAS CHROMATOGRAPHY WITH FID AND ECD DETECTORS Oven Pneumatic Controls Injector (2 or more) Autosampler (Liquid and Headspace)	<ul style="list-style-type: none"> • Pesticides residues and other Food & Water related applications as per FSSAI requirements • Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional. • Upto 450 °C, Fast Oven with 120 °C/min ramp, -20 7ramps • Cool-down time from 450 °C to 50°C within 5 minutes • Should be able to accommodate two or more injectors and three detectors • Automatic leak test of system through single key • 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision • Should be capable of large volume injection Temperature ramped splitless, Split and Cold on-column modes 450 °C max. and 10 ramps. • Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. • Injector must be able to operate with capillary & wide bore columns • Injector must be provided with Backflush system. Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> The type and volume of the syringe must be automatically detected by the system. Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents. <p>Head space auto sampler with a capacity 50 vials or better that support 10 & 20ml vial capacity with Pnuematic control</p> <ul style="list-style-type: none"> Incubation Oven Temperature Range 50 to 200 °C in 1 °C steps Syringe Temperature 50 °C to 150 °C in 1 °C steps Incubation Oven Capacity vials or better 	
	Detectors	<ul style="list-style-type: none"> The GC must have complete integrated control of all parameters (no external control module) for the following detectors: FID, and ECD. Detector must be independently controlled and operational for maximum sensitivity 	
	Flame Ionization Detector (FID)	<ul style="list-style-type: none"> Linear range : better than 10⁷ Minimum detectable amount with makeup gases : 1.5 pgC/sec Operating temperature limits: 450°C with standard ceramic/quartz flame jet Auto flame out detection. Acquisition rate 50 Hz or more. 	
	Electron Capture Detector ECD	<ul style="list-style-type: none"> Linear dynamic range : better than 10⁴ Complete with ⁶³Ni source and low voltage heaters. <p>Minimum detectable amount: Less than 10 fg of lindane.</p> <ul style="list-style-type: none"> Operating temperature limits : 400°C 	
	Gas Supplies	<ul style="list-style-type: none"> Required High purity Gas cylinders (2 No. Each) 	
	SOFTWARE AND HARDWARE (Single point control of Software & Hardware)		
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).	
	Software	Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions.	

Sl.No	Item	Specifications	Price in INR
		Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified. All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC. Head Space Auto Sampler, Automation and event control from PC through same software. IQOQ of the system as well as software must be provided.	
		Software update upto five years	
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD Monitor with Printer – B/W – duplex – laser – Legal, A4 – 1200 dpi x 1200 dpi – up to 21 ppm – capacity with Network Card and Bluetooth facility.	
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.	
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.	
	Application Support	The Application support for stated applications required during method development and validations.	
	Pre Installation Requirements (PIR)	Provide PIR of the system.	
OTHER REQUISITES FOR GC WITH ECD, FID			
Automatic Change Over Manifold for each gas line			
Complete Gas Purification Panel with fittings & installation of all gases			
Renewable In Line Gas Purification System			
Renewable gas purifier cartridge, Spare Set			
Gas clean filters/Traps (6 No.)			
	Septa for injectors	Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (<i>for each injector</i>). (400 No.)	
	Liners	<ul style="list-style-type: none"> Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) Suitable Injector Liner upto 10 µL (6 No.) 	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> Suitable Injector Liner upto 250 µL (6 No.) Suitable Injector Liner upto 500 µL (6 No.) Liner O-Rings Max Temp 375 °C (100 No.) Liners types required as per the application 	
	Ferrules and Nuts	50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID	
	Columns for GC Applications	<ul style="list-style-type: none"> Pesticide column (30m x 0.250mm x 0.25µm (HP-5MS / DB-1MS or equivalent) (02 no.) Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) Column for Cholesterol Application (02 No.) 	
	Vials, caps and tool for autosampler <i>(Only Compatible sizes should be supplied)</i>	<ul style="list-style-type: none"> 2000 No. each Vial sets (1, 2 MI, Crimp type, Amber and Clear glass) 200 No. Vials (10,20ml Crimp type with cap & septa) 1000 No. 300/500 µL Recovery vials 6000 No. Septa PTFE/Silicone (for 1, 2 mL Vials) 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) Ergonomic Crimping Tools for different vial types Ergonomic Decapping Tools for different vial types 10 No. each Storage Racks for (for 1, 2 mL Vials) Head Space vials 10,20 ml capacity (500no. each) 	
	Autosampler Syringe	10 µL (12 No.), 100 and 250 µL (04 No. each); Manual syringe-2µl, 5µl and 500 µl (04 No. each). Headspace syringe (02 no.10µl, 500µl,02 no. 1ml)	
	Sample Preparation <i>(Water & Food)</i>	<p>QuEChERS Kits for Pesticides and Herbicides in following Matrices:</p> <ul style="list-style-type: none"> Water (1000 No.) Matrices with high fat (1000 No.) Matrices with high Water content and (1000 No.) Matrices with high pigmented (1000 No.) 	
	Tools and Kits	Septa Removing tool	
Tubing Cutter with rotating diamond blade for column			
Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing)			

SI.No	Item	Specifications	Price in INR
		Tubing Cutter for Plastic tubing with spare blade set	
	Miscellaneous	Consumables required for each detector must be provided	
	warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered.	
6.	GAS CHROMATOGRAPH Y WITH NPD AND THERMAL CONDUCTIVITY DETECTOR(TCD) DETECTORS	<ul style="list-style-type: none"> Pesticides residues and other Food & Water related applications as per FSSAI requirements Gas chromatograph with capability of operating concurrently with two injectors or better and three detectors. The system should be quoted with all accessories required to make it fully operational and any other item required for stated applications be quoted as optional. 	
	Oven	<ul style="list-style-type: none"> Upto 450 °C, Fast Oven with 120 °C/min ramp, 20 7ramps Cool-down time from 450 °C to 50°C within 5 minutes Should be able to accommodate two or more injectors and three detectors Automatic leak test of system through single key 	
	Pneumatic Controls	<ul style="list-style-type: none"> 0-140 psi or better, all Electronic Pneumatic Controls with 0.1 psi precision 	
	Injector (2 or more)	<ul style="list-style-type: none"> Should be capable of large volume injection Temperature ramped split-less, Split and Cold on-column modes 450°C max and 10 ramps. Multimode/PTV with 250µL or better Injection Volume capability with complete solvent vaporizer system or Equivalent. Injector must be able to operate with capillary & wide bore columns Injector must be provided with Backflush system. 	
	Autosampler	<p>Robust Liquid autosampler capable of injecting 100 samples or better with syringe capacity of 0.5-100 µl</p> <ul style="list-style-type: none"> The type and volume of the syringe must be automatically detected by the system. Must allow installation and automation of syringe featuring volumes from 0.5 to 100 µl. Must be able to achieve combined multiple solvent rinsing with upto 4 different solvents. 	

SI.No	Item	Specifications	Price in INR
	Detectors	<ul style="list-style-type: none"> The GC must have complete integrated control of all parameters (no external control module) for the following detectors: NPD, and TCD. Detector must be independently controlled and operational for maximum sensitivity 	
	Nitrogen Phosphorus Detector (NPD)	<ul style="list-style-type: none"> Minimum detectable amount: 100fg N/sec, 100fg P/sec Linear dynamic range: better than 10^4 Operating temperature limits: 450 °C with standard jet 	
	Thermal Conductivity Detector TCD	<ul style="list-style-type: none"> Capillary-column compatible Proven constant current design Software protection to prevent filament burnout Ideal for series operation 1/8-in. fittings PPC pneumatics – software flow control of reference gas Operating temperature 100 °C to 350 °C in 1 °C increments Sensitivity 9 μV/ppmnonane at 160 Ma at the bridge with a detector temperature of 100 °C or 100 pgtridecane, /mL with He Minimum detectable quantity Typically < 1 ppm nonane Linear dynamic range: better than 10^5 +/- 5% Operating temperature limits: 400 °C 	
	Gas Supplies	<ul style="list-style-type: none"> Required High purity Gas cylinders (2 No. Each) 	
	SOFTWARE AND HARDWARE (Single point control of Software & Hardware)		
	Library	NIST Traceable Library for pesticides and other compounds (>800 compounds or better).	
	Software	Complete system and software configuration must be 21 CFR Part 11 compliant. Software: Windows Based software with multitasking and capable of performing the following functions: Control the MS, acquire, store, process and reproduce the data. It must be able to control all the devices from same software. Software should allow monitoring of one molecular ion and upto four confirmatory ions. Quantification software for batch process must confirm the analytes as per regulatory requirements in food and environmental sample analysis as per the applications specified.All Flow Controller i.e. Carrier flow, Make-up flow, Hydrogen flow, Air flow etc. value should set through Software by PC.Head Space Auto Sampler, Automation and event control from PC through	

Sl.No	Item	Specifications	Price in INR
		same software.IQOQ of the system as well as software must be provided.	
		Software update upto five years	
	Communication Hardware:	Latest Factory set, branded system with 22-23" Full HD Monitor with Printer – B/W – duplex – laser – Legal, A4 – 1200 dpi x 1200 dpi – up to 21 ppm – capacity with Network Card and Bluetooth facility.	
	IQOQPQ	IQOQPQ of instrument and Software should be provided along with document.	
	Training	Technical and application training to the personnel at site immediately after installation as per terms & conditions of tender.	
	Application Support	The Application support for stated applications required during method development and validations.	
	Pre Installation Requirements (PIR)	Provide PIR of the system.	
OTHER REQUISITES FOR GC WITH ECD, FID			
Automatic Change Over Manifold for each gas line			
Complete Gas Purification Panel with fittings & installation of all gases			
Renewable In Line Gas Purification System			
Renewable gas purifier cartridge, Spare Set			
Gas clean filters/Traps (6 No.)			
Septa for injectors	Non stick, Low bleed, high puncture tolerance and Max. Temp 400 °C (<i>for each injector</i>). (400 No.)		
Liners	<ul style="list-style-type: none"> • Suitable Ultra Inert Injector Liner for SS & SSL (20 No.) • Suitable Injector Liner upto 10 µL (6 No.) • Suitable Injector Liner upto 250 µL (6 No.) • Suitable Injector Liner upto 500 µL (6 No.) • Liner O-Rings Max Temp 375 °C (100 No.) • Liners types required as per the application 		
Ferrules and Nuts	50 No. (for each column end and other interfaces as applicable), 50 No. for GC with ECD, NPD, FID		
Columns for GC	<ul style="list-style-type: none"> • Pesticide column (30m x 0.250mm x 0.25µm 		

SI.No	Item	Specifications	Price in INR
	Applications	(HP-5MS / DB-1MS or equivalent) (02 no.) <ul style="list-style-type: none"> Column for Fatty Acid Profiling with main concern of Trans Fatty Acid Application (02 No.) Column for Cholesterol Application (02 No.) 	
	Vials, caps and tool for autosampler (Only Compatible sizes should be supplied)	<ul style="list-style-type: none"> 2000 No. each Vial sets (1, 2 mL, Crimp type, Amber and Clear glass) 200 No. Vials (10,20ml Crimp type with cap & septa) 1000 No. 300/500 μL Recovery vials 6000 No. Septa PTFE/Silicone (for 1, 2 mL Vials) 6000 No. Septa PTFE/Silicone (for 10, 20 mL Headspace Vials) Ergonomic Crimping Tools for different vial types Ergonomic Decapping Tools for different vial types 10 No. each Storage Racks for (for 1, 2 mL Vials) Head Space vials 10,20 ml capacity (500no. each) 	
	Autosampler Syringe	10 μ L (12 No.), 100 and 250 μ L (04 No. each); Manual syringe-2 μ l, 5 μ l and 500 μ l (04 No. each). Headspace syringe (02 no.10 μ l, 500 μ l,02 no. 1ml)	
	Sample Preparation (Water & Food)	QuEChERS Kits for Pesticides and Herbicides in following Matrices: <ul style="list-style-type: none"> Water (1000 No.) Matrices with high fat (1000 No.) Matrices with high Water content and (1000 No.) Matrices with high pigmented (1000 No.) 	
	Tools and Kits	Septa Removing tool	
		Tubing Cutter with rotating diamond blade for column	
		Tubing Cutter for stainless steel tubing (1/16 & 1/8 inch tubing)	
		Tubing Cutter for Plastic tubing with spare blade set	
	Miscellaneous	Consumables required for each detector must be provided	
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of	

SI.No	Item	Specifications	Price in INR
		the instrument should be covered.	
7.	MICROWAVE DIGESTION SYSTEM	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc.	
	Application	A latest model of microwave digestion system should enable rapid digestion for different inorganic/organic samples like; Different types of FSSAI food and food products, Fish and Fishery products, tea, seasoning powder, biscuits etc•	
	General	The instrument should have a superior pressure venting so as to prevent any loss of volatile metals and should have homogeneous microwave field to avoid sample burning	
	System	Microwave digestion system should have temperature and pressure monitoring system. The system should be software controlled. Different types of rotors available for the digestion of the different type samples should also be quoted. Necessary consumables and maintenance parts should also be quoted to run instrument trouble free	
	Instrument	The system should be a stand alone work station and should have <ul style="list-style-type: none"> • The System should have the feature of simply choose a method and it automatically recognizes the vessel type, counts the vessels and determines all of the parameters necessary for a fast, complete digestion • Should have provision that user can set the desired parameters for digestion • Should have Automatic Microwave power application depending on the load • Auto sensing of temperature and pressure inside the vessel • Be capable of processing different amounts of samples (from 0.3 g up to 10g) in the same run assuring the same conditions of temperature and pressure 	
	Display	The Instrument should have the high-resolution, colour touch screen, acid resistant, LED/LCD screen should serve as controller and display. Should be provided training videos for	

SI.No	Item	Specifications	Price in INR
		sample preparation vessel assembly, system use, and maintenance. Should have Data management – Easy access to stored methods, real-time data and results of past runs. Should be able to display the detailed methods, graphs of temperature and power against time and temperature of individual vessels.	
	Interlocks	The system should have good interlocking system for safety and cavity door.	
	Vessel	The system should be high throughput which can hold atleast 24 high pressure vessels. Must be supplied with digestion vessel racks and suitable accessories for the handling of two sizes of digestion vessels:	
	System	The material of construction should be high purity TFM fluoropolymer. Vessel volume should be One set for vessels of volume between 10 and 15 ml, and one set for vessels of volume > 25 ml. It should be operated for maximum temperature capacity of 250°C or more and maximum pressure of 35 Bar or more. The system should be provided with temperature sensor (Thermocouple type/ Fiber optics/IR Sensor) which will measure real temperature of the vessels and control it. The vessels should have automatic venting and re-sealing system in case there is excess pressure development essential. After Digestion, vessels must be vent-able before uncapping the vessel for safety reasons. For ease of use, the vessels must not require the use of an energizing tool in order to reform seals prior to operation. Additional twelve numbers of vessels (of both sizes) as specified above should be supplied along with the system	
	Microwave Power and output with uniform energy distribution	The Instrument should have single magnetron 1500 W (or more of delivered energy, should provide the temperature needed (300 °C) for difficult samples and high-throughput vessel sets delivering unpulsed continuous power & precisely tuned wave guide. Disperses microwave energy uniformly throughout the cavity.No need for motor driven diffusers or attenuators. System software must automatically adjust the power delivery based upon sample load and pre-programmed control	

SI.No	Item	Specifications	Price in INR
		<p>settings. Automatic Power control Technology delivers maximum energy to the sample, ensuring complete digestions. Controllable via microprocessor 230 V input, pulsed and unpulsed-essential 50 Hz, AC Operated. The Instrument should have “waveguide” between the magnetron (the microwave energy source) and the cavity. This waveguide fed system should provide maximum tuned transfer of microwave energy from the magnetron to the load in the microwave cavity. planes. This should result in uniform heating of the sample load.</p>	
	Microwave Cavity	<p>The microwave cavity should be heavy duty and have sufficient space to mount and dismount vessels individually and all parts inside the cavity should be totally microwave transparent. The Cavity should be constructed with non magnetic Rugged high-grade 316 solid steel cavity. The vessel assembly during a run should be visible from outside The coating inside the cavity should be acid/ chemical. resistant special polymer coating like fluoro-polymer / PTFE.</p>	
	Controls	<p>The Instrument should have a) Reliable Temperature and b) Pressure controls independent of each other</p> <ul style="list-style-type: none"> • Automatic temperature control system, temperature sensor (thermocouple) should be protected properly from any chemical attack, sensor should monitor and control all vessels simultaneously-essential • Automatic Pressure control: should have a pressure sensor which has a total capability of up to 500psi automatically control the pressure. It should be possible to remove the pressure device at a high pressure. The Vessels should act as self-regulators of pressure 	
	Control	<p>The control terminal should have high resolution LED/LCD Acid Resistant display. Touch screen which should have method storage capacity. All the features should be in built in the software. Should have provision for manual programming storage apart from pre-installed programme. Continuous display of temperature and power inside the reaction vessels is required.</p>	

SI.No	Item	Specifications	Price in INR
	Safety	There has to be multiple levels of safety. A safe mechanism to tackle the unused or reflected microwave energy Capable of shutting off in the event of the A very loud noise or bang in the instrument. If the temperature of the vessel is near its highest tolerance limit. Have inbuilt exhaust system to cool the vessels and to drive away if any fumes in the cavity-essential	
	Quality Standards	The manufacturer should be ISO 9001 certified for design and manufacture of microwave digestion system	
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator • GLP-validated software for controlling the system 	
	Operation and maintenance training component	The supplier will have to carry out successful installation at our laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.	
	Warranty	Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. This will include yearly calibration start-up / commissioning routine servicing, regular maintenance, preventive maintenance of equipment and components and break down repairs as and when occurring, ensuring that system does not remain out of service for a period more than 24 hours in case of major breakdowns and 6-8 hour in the case of minor breakdowns due to any unforeseen break down. The institution will provide Water / Electricity power, etc. for maintenance work. The successful tenderer shall keep the essential spares at site during the Contract Period to avoid the delay in attending faults / maintenance	
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;	
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> • User, technical and maintenance manuals to be supplied in English language along with machine diagrams; • List of equipment and procedures required for local calibration and routine maintenance; • Service and operation manuals (original and copy) to be provided; • Advanced maintenance tasks documentation; 	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> Certificate of calibration and inspection 	
	Certificates Performance and safety standards (specific to the device type); Local and/or international	<ul style="list-style-type: none"> Should be FDA/CE/BIS approved product. Manufacturer and Supplier should have ISO 13485 certification under ISO 9001 for quality standards. Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements (or equivalent BIS Standard) Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 	
	Supplier/ Manufacturer	<ul style="list-style-type: none"> Must be ISO certified for quality 	
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 	
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 	
8.	DIGITAL BUTYRO REFRACTOMETER	For checking purity and adulteration of fats and oils	
	System	Automated Operating LCD screen directly without manual alignment, can connect PC with RS232 interface	
	Display	The required data to be displayed on the screen, including: the date, temperature, refractive index, concentration, and amended in accordance with the current temperature	
	Measurement Range (Automatic Temperature Compensation)	<ul style="list-style-type: none"> Concentration 0;95% Refractive Index 1.3000–1.7000 	
	Minimum Indication	Butyro 0.1% RI 0.0001	
	Measurement Accuracy	Butyro $\pm 0.5\%$ (at 40°C) RI ± 0.0003 (at 40°C)	
	Precision (Reproducibility)	RI ± 0.00005 Butyro ± 0.05	
	Measurement Temperature	<ul style="list-style-type: none"> 10 to 50°C 	
	Ambient Temperature	<ul style="list-style-type: none"> 10 to 40°C 	

SI.No	Item	Specifications	Price in INR
	Sample		
	Volume Measurement Time	Less than 5 sec	
	Sample Volume	> 0.1 ml	
	Calibration certificate		
	Accessories	Reference Material Oil 50 ml	
	Operation and training component	<ul style="list-style-type: none"> The supplier will have to carry out successful Installation at the laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for a minimum of two scientific personnel operating the system till customer satisfaction 	
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> Should be FDA/CE/BIS approved product. Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements(or equivalent BIS Standard) Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 	
	Supplier/ Manufacturer	<ul style="list-style-type: none"> Must be ISO certified for quality 	
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 	
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 	
	Warranty	<ul style="list-style-type: none"> Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. 	
	Service contract clauses, including prices	<ul style="list-style-type: none"> List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached; 	
	Operating manuals, service manuals, other manuals	<p>Should provide 2 sets(hardcopy and soft-copy) of:-</p> <ul style="list-style-type: none"> User, technical and maintenance manuals to be supplied in English language along with machine diagrams; List of equipment and procedures required for local calibration and routine maintenance; Service and operation manuals (original and copy) to be provided; Advanced maintenance tasks documentation; Certificate of calibration and inspection 	
9.	Flash point apparatus	<ul style="list-style-type: none"> Instrument designed in strict accordance with the test method ASTM D93, Method A and B. 	

Sl.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> • Microprocessor controlled unit with digital easy to read display of the results. • Ignition :-Electric ignition. • Thermal detection (with metal sample temperature probe) of the flash to eliminate interference from water or silicone containing compound. • Cooling : - Facility for built-in cooling connection. • Automatic correction for standard barometric pressure vis-à-vis with final result. • Unit should have diagnostic program to check every key component and assembly and calibration facility. • Unit should automatically determine flash point in strict compliance with the appropriate test method. • Heating should be microprocessor controlled at the specified rate; the ignitor is activated and dipped at precisely the correct temperature and frequency. • Safety device for fire protection with alarm. • Resistance check box for temperature calibration with calibration certificate. • The unit should be operable on 230v / 50 Hz. • The system should be ISO 9001 quality standard and supplied with operation manual. • Merely copying our specifications in the quotation shall not make the parties eligible for consideration of the quotation. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer and the specifications mentioned in the quotation must be reflected/supported by the printed technical leaflet/literature. • Calibration : The firm must ensure that the equipment supplied is fully calibrated as per specification requirements and also source of future calibration at New Delhi & their frequency of calibration needed • Spares : Vendor should quote recommended spares for two years alongwith the equipment for smooth functioning of the equipment. • Spare Parts : Availability of spare parts of the equipment/instrument must be guaranteed for a period of at least seven years from the date of supply. • After Sales Services: It should be clearly mentioned in the quotation whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or their authorized agent/representative. Terms of the after sales 	

SI.No	Item	Specifications	Price in INR
		<p>services, if any, may be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services.</p> <ul style="list-style-type: none"> • Comprehensive warranty with spares parts and labour for five years from the date of installation of the instrument should be covered. • Inspection: The inspection of the system will be done by our technical expert in the presence of firm representative. • Users List : The list of users specifically for the same model/make of the quoted item (not the list of general users) along with the complete name, address & contract numbers of the user organizations/persons may be submitted with the quotation along with the performance certificates from all/some of them. • Training: Our Scientist/Technical persons should be trained by the supplier at the project site free of cost. NOTE:- Firms having equipment wherein single mother unit can be used for carrying out Flash Point by Abel Flash Point using interchangeable analyzer unit shall be considered, if otherwise found suitable vis-à-vis price factor & performance. Other specification requirement for Abel Flash Point apparatus is enclosed. • Certifications: <ul style="list-style-type: none"> Product certification: CE / US FDA / BIS certified. • Quality Certification: ISO certified. • Should provide calibration certificates from NIST traceable calibration solutions by any agency every year during warranty & CMC period. Calibration cost will have to be borne by the supplier. 	
10.	Water Purification system	Table top Water Purification System (Tap Water Feed) should be capable of produce water for use in HPLC solvents, Microbiology and reagent grade with the help of pre-treatment module; RO Module, DI Module, Storage tank, UV Oxidation Chamber, Polishing module and final membrane filter 0.22um	
	Pre-treatment System	<p>Should consists:</p> <ul style="list-style-type: none"> • 5 micron,1 micron and Activated Carbon wrapped type depth filter • Pressure gauge with regulator • The unit should have automatic low/high pressure cut-off 	

SI.No	Item	Specifications	Price in INR
	Reverse Osmosis with Electro Deionization Stage:	<ul style="list-style-type: none"> ▪ Pre-treatment cartridge with auto-scaling compounds, 0.5 micron filter and activated carbon or better. ▪ Prefilter combination to protect the RO Membranes life or better. ▪ RO Module with high performance thin film composite membrane with salt retention rate up to 98%. The retention rate for dissolved organic compounds, particles & colloids & bacteria exceeds 99% ▪ Deionization Module: Mixed bed resin module utilized for a reduction of the inlet conductivity. Used for inorganic applications. ▪ Conductivity measurement is to be done after RO, DI & Polishing module to monitor the performance of Individual cartridge. ▪ Should have suitable back wash programme before every operation or better 	
	Storage Tank:	<ul style="list-style-type: none"> • 30 L or better Storage Tank with UV Lamp, Air filter, CO2 Trap & Level Sensor. • The tank should made of pure water resistant Poly Ethylene material with an outlet to drain the tank totally and a pressure sensor for the tank level control • The storage tank should be 100% drainable. 	
	General requirements	<ul style="list-style-type: none"> ▪ Online UV oxidation chamber: UV Light Energy at 185 nm & 254 nm wavelengths. ▪ TOC Measurement: Online continuous TOC measurement with Live Display. ▪ Sterile Filter with 0.22 µm or better with Autoclavable option for re-use ▪ System should meet reagent water quality standards including ASTM Type 1, CLSI and ISO 3696 Type ▪ System should have flexible remote dispenser to dispense water whenever needed ▪ System should have built-in automatic self-cleaning mechanism to extend the life of cartridge ▪ Automatic flushing and recirculation in standby mode to maintain consistent peak water purity ▪ User can collect RO Quality water from the Storage tank & ultrapure water from flexible dispenser ▪ Should have cartridge change indicator ▪ The system should incorporate a fully comprehensive, graphic colour LCD display to provide system status, performance parameters, routine maintenance status and alarms of troubleshooting, tank level status and automatic warning of reordering of consumables and 	

SI.No	Item	Specifications	Price in INR
		<ul style="list-style-type: none"> ▪ Provision for digital display to indicate status of operation, resistivity or conductivity, temperature and also alarm system in case of malfunctioning. 	
	Pure Water Specification: (Type-2)	<ul style="list-style-type: none"> • Production Rate : 10 LPH or better • Conductivity : <2µs/cm at 298K (25°C) or better • pH at 298K (25°C) => 6.6 or effectively neutral • Total silica max 3ug/L or better 	
	The Ultrapure Product Water should of the following specifications: (Type-1)	<ul style="list-style-type: none"> • Flow Rate : 1.0 L/min or better • Should have conductivity @ 25 Deg C : 0.055 µs/cm or better • Should have resistivity @ 25 Deg C : 18.2 M -cm or better • TOC : < 1 ppb or better • Bacteria : <1 cfu/ml or better • Particles >0.1µm : <1 per ml or better • pH at 298K (25°C) = > 6.6 or Effectively neutral 	
	Certification required for sign off	<ul style="list-style-type: none"> • IQ/OQ compliance • Calibration certificates for titrator 	
	Operation and maintenance training component	The supplier will have to carry out successful installation at our laboratory premises (where ever the system has to be installed) and provide on – site comprehensive training for scientific personnel operating the system and support services till customer satisfaction with the system.	
	Warranty	Comprehensive Maintenance of the equipment supplied, installed, commissioned for 60 months after 2 year Warranty/Defects Liability Period. This will include yearly calibration start-up / commissioning routine servicing, regular maintenance, preventive maintenance of equipment and components and break down repairs as and when occurring, ensuring that system does not remain out of service for a period more than 24 hours in case of major breakdowns and 6-8 hour in the case of minor breakdowns due to any unforeseen break down. The institution will provide Water / Electricity power, etc. for maintenance work. The successful tenderer shall keep the essential spares at site during the Contract Period to avoid the delay in attending faults / maintenance	
	Service contract clauses, including prices	List of all spares and accessories (including minor) with part numbers and price, required for maintenance and repairs in future after guarantee/warranty period should be attached;	

SI.No	Item	Specifications	Price in INR
	Operating manuals, service manuals, other manuals	Should provide 2 sets(hardcopy and soft-copy) of:- <ul style="list-style-type: none"> User, technical and maintenance manuals to be supplied in English language along with machine diagrams; List of equipment and procedures required for local calibration and routine maintenance; Service and operation manuals (original and copy) to be provided; Advanced maintenance tasks documentation; Certificate of calibration and inspection 	
	Certificates Performance and safety standards (specific to the device type);Local and/or international	<ul style="list-style-type: none"> Should be FDA/CE/BIS approved product. Manufacturer and Supplier should have ISO 13485 certification under ISO 9001for quality standards. Electrical safety conforms to the standards for electrical safety IEC 60601- General requirements (or equivalent BIS Standard) Certified to be compliant with IEC 61010-1, IEC 61010-2-40 for safety 	
	Supplier/ Manufacturer	<ul style="list-style-type: none"> Must be ISO certified for quality 	
	Service Support Contact details (Hierarchy Wise; including a toll free/landline number)	<ul style="list-style-type: none"> Contact details of manufacturer, supplier and local service agent to be provided; Any Contract (AMC/CMC/adhoc) to be declared by the manufacturer; 	
	Recommendations or warnings	<ul style="list-style-type: none"> Any warning signs would be adequately displayed 	
	GROSS TOTAL (A)		
	BUY BACK		
1.	Buy-back price for old Atomic Absorption Spectrophotometer [Make: GBC Scientific Equipments, Australia, Model: Avanta PM and System AVANTA ULTRA Z1 & PAL4000 Auto-sampler Year of Installation: 2001].		
2.	Buy-back price for old Digital Lovibond Tintometer [Make: Tintometer Ltd., U.K. Model: PFX 995 Year of Installation: 2003].		
3.	Buy-back price for old Muffle furnace [Make: Heraeus Instrument, Germany Model: M110, Year of Installation: 2000].		
4.	Buy back price for old Gas Chromatograph – Mass Spectrometer (GC / MS) With Headspace (HS) sampler, ECD, FID and Single Quadruple MS detector [Make: Perkin Elmer USA Model: Clarus® 500, Year of Installation: 2006.		
5.	Buy Back Price for old Microwave Digestion System [Make: CEM Corp., USA Model: MARS 5, Year of Installation: 2008.		
6.	Buy back price for old Refractometer [Make: Bellingham Stanley, U.K. Model: RFM 330, Year of Installation: 1996.		
7.	Buy-back price for old Automated Pensky-Martens closed-cup flash point tester with sample changer measures the flash point of up to 12 samples automatically [Make: Petrotest, Germany Model: PMA-4, Year of Installation: 2004].		

Sl.No	Item	Specifications	Price in INR
8.	Buy Back price for old Deionized water generation system [Make: Millipore, U.S.A Model: ELIX 3, 10 AND MILLI Q, Year of Installation: 2008.		
	Buy Back Total (B)		
	Net Amount (A-B)		

Note1:

- (a) The financial bid has to be filled necessarily in the format given above and has to be signed by the authorized representative of the bidder with full name designation and seal on each page. The above quote should include Clearing and Transportation charges.
- (b) Price quoted should be valid for minimum 06 months from the last date of submission of the bids.
- (c) Explanatory notes, if so desired, can be separately submitted along with the financial bid but financial bid in the above format is required to be submitted.
- (d) Equipment delivery time will be 90 days from the date of issue of Supply order.
- (e) Please indicate separately any duties, taxes.

Note 2 : The rate may be quoted in foreign currency and/or in Indian currency, however, for comparison/evaluation purpose the bills selling market rate of exchange established by RBI for similar transaction as on date of opening of price bid shall be used to convert foreign currencies to the Indian rupees.

Note 3 : Determination of L-1 will be done based on Net amount (not including levies, taxes and duties levied by Central/State/Local governments such as excise duty, GST, Octroi/entry tax, etc. on final product) of all items/requirements as mentioned above.

Signature of tenderer_____

Name in Block letter _____

Date _____

Capacity in which Signed_____

Declaration Form

I/We M/s. _____ represented by its Proprietor /
Managing Partner / Managing Director having its Registered Office at

_____ do hereby
declare that I/We have carefully read all the conditions of tender..... **dated**
for supply of floated by the Food Safety Standard Authority of India, New Delhi and
accepts all terms & conditions of the Tender.

Signature and Seal of the Bidder
Name in capital letters with Designation

NOTE:

1. This should be submitted on the letter head of the bidder company/firm.

CERTIFICATE OF GUARANTEE/WARRANTY

- i. I/We certify that the standard guarantee/warranty shall be for a period of 24 months starting from the date of satisfactory installation, commissioning and handing over of the equipment and of the works conducted therewith covered under the Supply order in working order. During the guarantee/warranty period. I/we shall provide free “after sale service” and the replacement of any part(s) of the equipment or rectification of defects of work of the equipment will be free of cost. The replacement of the parts shall be arranged by us, at our own cost and responsibility. We undertake that the above guarantee/warranty shall begin only from the date of satisfactory and faultless functioning of the equipment for 60 days at **CFL, Kolkata** premises. The benefit of change in dates of the guarantee/warranty period shall be in the interest of the user/your organization.
- ii. During the warranty period, we shall provide at least **02 preventive maintenance service per year**.
- iii. Uptime Guarantee: During the guarantee/warranty period, we will be responsible to maintain the equipment in good working conditions for a period 328 days (i.e. 90% **uptime**) in a block of 365 days.
 - a. All the complaints will be attended by us within 02 working days of receipt of the complaint in our office.
 - b. In case there is delay of more than 02 days in attending to a complaint from our side then you can count the number of days in excess of the permissible response time in the downtime. The above said response time of 2 days for attending to a complaint by us will not be counted in the downtime.
 - c. **Penalty**: We shall pay a penalty equivalent to **0.5 %** of the order value of the equipment for every week or part thereof delay in rectifying the defect.

Note: The right to accept the reason (s) for delay and consider reduction or waive off the penalty for the same shall be at the sole discretion of Director, CFL, Kolkata

- iv. We undertake that all the spares/consumables related to equipment & exclusively supplied by manufacturer/supplier of the equipment shall be covered under warranty. Nothing shall be payable on account of these items during warranty by the Buyer.
- v. We certify that the equipment being/quoted is the latest model and that spares for the equipment will be available for a period of at least 10 years and we also guarantee that we will keep the organization informed of any up date of the equipment over a period of 5 years.
- vi. We guarantee that in case we fail to carry out the maintenance within the stipulated period, **Director, CFL, Kolkata** reserves the right to get the maintenance work carried out at our risk, cost and responsibility. All the expenses including excess payment for repairs/maintenance shall be adjusted against the Performance Bank Guarantee. In case the expenses exceed the amount of Performance Bank Guarantee, the same shall be recoverable from us with/without interest in accordance with the circumstances.
- vii. We shall try to repair the equipment at **CFL, Kolkata** premises itself. However, the equipment will be taken to our site on our own expenses in case it is not possible to repair the same at **CFL, Kolkata**. We shall take the entire responsibility for the safe custody and transportation of the equipment taken out for repairs till the equipment is rehabilitated to the **CFL, Kolkata** after repairs Any loss of equipment or its accessories under its charge on account of theft, fire or any other reasons shall be at our sole risk and responsibility which will be compensated to the Buyer for such losses at the order value for the damaged/lost equipment/part, including accessories.
- viii. We undertake to perform Quality check after every major repair/breakdown/taking the equipment for repair out of **CFL, Kolkata** premises.
- ix. In case of extended guarantee/warranty, we undertake to carry out annual calibration/IPV of the equipment.

- x. We guarantee that we will supply spare parts if and when required on agreed basis for an agreed price. The agreed basis could be an agreed discount on the published catalogue price.
- xi. We guarantee to the effect that before going out of production of spare parts, we will give adequate advance notice to you so that you may undertake to procure the balance of the life time requirements of spare parts.
- xii. We guarantee the entire unit against defects of manufacture, workmanship and poor quality of components.
- xiii. We undertake to provide PM kit as per requirement to meet uptime guarantee condition.

1. Authorized signatory
(with seal)

Date

Place

2. Authorized signatory

NOTE:

1. This should be submitted on the letter head of the bidder company/firm.

FORMAT FOR NON BLACKLISTING OF SUPPLIER

I/ We _____Manufacturer/partner/Authorized Distributor/Agent (strike out which is not applicable) of (Supplier) _____ do hereby declare and solemnly affirm that the individual/firm/company is not black-listed by the Union/State Government/Autonomous body. Any partner or shareholder thereof is not directly or indirectly connected with or has any subsisting interest in business of my/our firm.

DEPONENT

Address _____

I/ We hereby solemnly declare and affirm that the above declaration is true and correct to the best of my knowledge and belief. No part of it is false and nothing has been concealed.

Dated:

DEPONENT

(Note: To be furnished on Rs.50/- non-judicial stamp paper duly attested by the Executive Magistrate/Notary Public/Oath Commissioner.)

General Information about the Bidder

1	Name of the Bidder			
	Registered address of the firm			
	State		District	
	Telephone No.		Fax	
	Email		Website	
Contact Person Details				
2	Name		Designation	
	Telephone No.		Mobile No.	
Communication Address				
3	Address			
	State		District	
	Telephone No.		Fax	
	Email		Website	
Type of the Firm (Please relevant box)				
4	Private Ltd.		Public Ltd.	
	Partnership		Society	
	Registration No. & Date of Registration.			
Nature of Bussiness (Please relevant box)				
5	Original Equipment Manufacturer		Authorized Dealer /Representative	
	Direct Importer		Others, specify.	
Key personnel Details (Chairman, CEO, Directors, Managing Partners etc.)				
6	in case of Directors, DIN Nos. are required			
	Name		Designation	
	Name		Designation	
Bank Details				
7	Bank Account No.		IFSC Code	
	Bank Name & Address		Branch Name	
	Tel No		Email ID	
8	<i>Whether any criminal case was registered against the company or any of its promoters in the past?</i>			Yes / No
9	<i>Other relevant Information provided * (Here enclose the details such as presentation on the details of the bidder in a CD preferably; please avoid submission of detailed leaflets/brochures etc, if possible.)</i>			
Date:		Office Seal		Signature of the bidder / Authorised signatory

Signature and Seal of the Bidder
Name in capital letters with Designation

COMPLIANCE SHEET

Specifications as per indent (point wise)	Compliance of the quoted model	Compliance of alternate model, if any	Remarks (Deviations)

Place:

Signature and seal of the Manufacturer/Bidder

Date:

NOTE:

1. This should be submitted on the letter head of the bidder company/firm.
2. Compliance statement should be supported with the printed catalogue mentioning page number and clearly highlighting the required tender specifications in the catalogue.
3. Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations"

Furnishing of wrong statement may lead to debar from the future purchases of FSSAI.