

POLICE



DEPARTMENT

No. C1-14155/2024/FSL

Forensic Science Laboratory,

Thiruvananthapuram

✉dirfsl.pol@kerala.gov.in

☎04712721533

Dated. 10-02-2025

Tender for Lab Equipments

The Director, Forensic Science Laboratory, Kerala Police Department, Government of Kerala invites online bids from reputed manufacturers/ authorized dealers or reputed vendors for the "Purchase of **Lab Equipments** for Forensic Science Laboratory and Regional Forensic Science Laboratories". The bidders should comply with the following general conditions in addition to the additional conditions of the instant tender.

Terms & conditions

1. The supplier should quote the price valid for a period of one year.
2. If the authorized distributor is supplying the items, the Manufacturer/ Principal Company has to submit an authorization letter for the dealer/authorized distributor.
3. All the quotations are to be enclosed with maximum discount.
4. The purchases are for Forensic Science Laboratory and Regional Forensic Science Laboratories.
5. Delivery of the consignment should be made at on the places mentioned in the supply order.
6. If the company is dealing with perishable goods, which require Cold Chain Management the delivery should be prompt. If any damages occur the supplier will be responsible for its replacement.
7. Penalty will be imposed on delay in delivery as per the existing rules.
8. In case of purchase of goods viz., consumables, disposables, etc the contractual obligations should be considered as completed when supply is done and the items are inspected and accepted by the Institute.
9. For all supplies above Rs.1 Lakh, the successful tenderer should furnish a Performance Bank Guarantee/ Security Deposit @ 5% of the total assignment (purchase order value) in the form of Fixed Deposit or Bank Guarantee from a Commercial Bank which should be valid for a period of 60 days beyond completion of all contractual obligation of the supplier including warranty (if any).
10. Payment mode is through online after acceptance of goods in good condition at the places mentioned in the supply order.
11. For all ordered goods, Insurance/ liability may be upto the supplier only.



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12. If the quote is not according to the above terms and conditions, the same will be summarily rejected.

General Condition

1. The Bidder should be a reputed Original Equipment Manufacturers (OEM) or authorized dealer of OEM, who is having an Authorization Certificate from the OEM to participate in the tender floated by Kerala Police. Certificate from the OEM for sales and service, to be produced.
2. One bidder cannot represent two suppliers/ OEMs or quotes on their behalf in a particular tender.
3. The OEM/ Bidder should have a well equipped service centre functioning in India (preferably in Kerala) to cater to immediately after sales requirement; copy of Service Centre details must be enclosed along with Tender document. (Preferably bidder should have a Service Centre in Kerala/South India).
4. A reputed vendor can participate in the tender provided the vending outfit is functioning in the market for at least 10 years.
5. The Bidder should have valid GST registration. Copy of GST registration certificate should be enclosed along with the tender.
6. The bidder should have valid PAN/Taxation Index Number. Copy of PAN/Taxation Index Number allocation letter should be enclosed along with the tender.
7. The Bidder must fulfil the following minimum qualification criteria to prove the techno-commercial competence and submit the documents in support thereof
 1. Valid Authorization letter from the OEM to attend this particular Tender.
 2. Certificate of Registration/Incorporation Certificate of the Bidder.
 3. Last 3 year's financial status of the Bidder's/P&L and Balance Sheet/audit report of last 3 years.
 4. The bidder (authorized dealer/distributor) should have the dealership/distribution ship for at least 3 (three) continuous consecutive years with the OEM.
 5. The Bidder has to submit a Warranty Certificate along with invoices.
 6. In case of a proprietary item, a certificate by the OEM to be attached

Tender No. & Date	15/24-25 dated 10/2/25
Item with qty	Automatic Melting point apparatus-01 Automatic Petroleum Distillation Set-01 Automatic Pourpoint apparatus-01 Automatic smoke point apparatus-01
Estimated Amount	44.5 Lakh
Tender Fees	8375+Tax
Earnest Money Deposit	44500
Date and time of publication of e	



Date and time of publication of e-Tender	10/2/25 6.00PM
Date of submission of e-Tender	10/2/25 6.00PM
Last date and time for online submission of e-tender	20/2/25 3.00PM
Date and time of opening of e-Tender	21/2/25 3.00PM
Place of opening	Forensic Science Laboratory, Thiruvananthapuram
Bid Validity (Total Number of Days up to which the rates are to be firm)	365
Address of Tender Inviting Authority	Director, Forensic Science Laboratory, Kerala, Vazhuthacaud, Thiruvananthapuram-695010 Ph: 04712721533 e - m a i l : dirfsl.pol@kerala@gov.in Website: www.keralapolice.gov.in

1. Mode of submission of bids: - Online. All Bid documents shall be submitted only in online procedure through the e-GP website www.etenders.kerala.gov.in in their designated online covers. Details of covers are given separately. No other mode of submission shall be accepted and such tenders will be rejected outright. 2. Cover details: - technical bid, financial bid.

2. Technical Bid cum and Financial Bid. In the case of Foreign Equipments, the rate must be quoted in Indian Rupees. The documents to be uploaded under each online covers are specified in the website.

3. Downloading of e-Tender documents: - The tender document can be downloaded from the e- GP website www.etenders.kerala.gov.in from the date and time of publication of e-tender onwards to last date and time for online submission of e - tender. Downloading of tender documents will not be possible after the date specified above.

4. Submission of e-Tender documents: - The digitally signed tender document and other specified documents shall be submitted online through the e-GP website www.etenders.kerala.gov.in well in advance before the last date and time mentioned above. No submission shall be allowed after the last date mentioned above.

5. Payment of Tender Fees: - A non-refundable tender fee shall be paid in online mode through the e-GP website www.etenders.kerala.gov.in at the time of bid submission. No other mode of payment shall be accepted. The tenders of bidders who do not remit fees through online will be rejected outright.

6. Payment of Earnest Money Deposit (EMD): - The EMD shall be paid in online mode through the e-GP website www.etenders.kerala.gov.in at the time of bid submission. No other mode of remittance shall be accepted.



7. Exemption from payment of EMD: - Bidders who are registered with Store Purchase Department, Kerala or National Small Scale Industries Corporation Ltd., New Delhi (for the items tendered) are exempted from submission of EMD. Those bidders claiming exemption shall submit valid registration certificate from the SPD, Kerala or NSSIC, New Delhi.

8. Tenders of bidders who do not remit EMD online or do not upload documental proof (digitally signed) for exemption of EMD will be rejected outright.

10. Opening of e-Tenders: - The bids shall be opened online through the e-GP website www.etenders.kerala.gov.in at the Police Headquarters, Vazhuthacaud, Thiruvananthapuram on the date and time mentioned above in the presence of the Bidders/ authorized representatives who wish to attend at the above address. If the tender opening date happens to be a holiday or non-working day due to any valid reason, the tender opening process will be done on the next working day at the same time and place specified. Any change in the opening date/time/venue due to other reasons shall be informed by way of Corrigendum published in the e-GP website. The Technical Bids will be evaluated by a Technical Evaluation Committee and those that do not conform to the specifications or to the satisfaction of the Committee will be rejected. The financial bids of the Technically qualified Tenderers only will be considered for opening. The date of opening of financial Bids will be intimated to the concerned technically qualified tenderers, over phone/Fax/e-mail. This will be within 7 to 10 days of evaluation of technical bid

11. Technical Evaluation: - All tenderers who quote for the supply of above equipment are required to be ready for live demonstration on technical evaluation time. Date and place will be informed later.

12. All Bidders who participate in e-tender should produce hard copies of all relevant documents related to e tender at the time of technical evaluation, without fail. Note to Bidders: i. Bidders have to procure legally valid Digital Certificate (Class III) as per Information Technology Act, 2000 for digitally signing their electronic bids. Bidders can procure the same from any of the websites www.etenders.kerala.gov.in.

ii. Bidders are advised to note the Tender_Id and Tender No. & Date for future reference.

iii. All uploaded documents should contain the signature and the office seal of the bidder/ authorized persons and should be digitally signed while uploading. Documents uploaded without digitally signing shall entitle rejection of the tender.

iv. In the case of Foreign Equipments, the rate should be quoted in Indian Rupees. Preference will be given to those who are ready to supply the item without opening Letter of Credit. Ordinarily, non advance payment will be made for procuring the above item. In case advance payment has to be made, a clear case has to be made out by the Tenderer. However this will be only on extraordinary circumstances.

1. For obtaining Digital Signature Certificate and help on e-tendering process, contact Kerala State IT Mission, e-Government Procurement PMU & Helpdesk, Basement floor of Pension Treasury e- mail: etendershelp@kerala.gov.in; Website: www.etenders.kerala.gov.in on all government working days from 9:30 am to 5:30 pm.

2. The Director, Forensic Science Laboratory is empowered to reject any tender



without assigning any reason. For any clarification regarding the terms and conditions in this tender notice or e tender document, please contact Director, FSL, Or Manager FSL, Thiruvananthapuram – 10, on all Government working days from 10:30 am to 5:00 pm. (Ph. No. 0471-2722136)(Ph. No. 0471- 2722155)

Note: Bidders are advised to go through the conditions in the notice inviting tender and the tender document carefully and comply them to avoid out right rejection of their tender. For any litigation relating to this order, the jurisdiction will be Thiruvananthapuram City.

1. Specification of Automatic Meltingpoint Apparatus

1. Simultaneous determination of more than three samples
2. Temperature Range: - 10 °C to 350°C with 0.1°C resolution/ better
3. Shorter heating and cooling times
4. Extremely linear microprocessor-controlled temperature ramping
5. Ramping Rate: 0.1°C/ minute to 20 ° C/minute
6. Temperature sensor: Pt RTD/better
7. Built in digital camera to capture real time images of the samples
8. Better reproducibility
9. Display: LED/LCD/better
10. Facility to determine phase transitions in the samples
11. Temperature Display: Melting point and Melting point range
12. Temperature accuracy: 0.3°C (up to 100°C)/ better
13. Memory (Data base): Accommodate up to 24 or more different analysis
14. Facility to save measurements
15. Facility to print or to transferred record to a PC via USB
16. Should provide sample preparation tools, certified reference Standards, tweezers, spatula, melting point capillaries, motor and pestle, etc.
17. Latest computer with UPS
18. Should be provided with calibration certificate, Traceability Certificate of standards, CE certificate as per NABL norms.
19. All relevant accessories/consumables should be provided to ensure trouble free working of the instrument
20. Pre-installation visit should be done for determination of deal condition for the instrument
21. Should have a good after sale service/ technical support.
22. The instrument should have warranty for 3 years from the date of installation including replaceable warranty of the components and external calibration as per NABL requirements.
23. Training: ON SITE and Operated Training for users should be given, should support the users for to optimize the methods as per the standard methods, Instrumentation and Application Training as and when required free of cost.
24. The vendor should substantiate all claims about their product using the original brochure and other documents. A list of existing customers of the vendor who are using this product should be along with their address and contact mobile number.
25. The bidder must ensure that the details of quoted model along with the photograph must be available in the bidder's/manufacture's website.



2. Specification of Automatic Petroleum Distillation Set

Technical Specification for fully Automatic Petroleum Distillation Equipment as per test method ASTM D86(Group 0 to 4), D850, D1078, DIN 51751, ISO 3405, IP 123, IP 195 and ISO 3405, IS 1448: part 18 is as per following.

1. Auto Distillation Units should be a compact self-contained instrument with liquid coolant free cooling system, delivered with all accessories to immediately begin testing.
2. The apparatus should automatically set, monitor and control all distillation parameters including initial and final heating rates, distillation rate, condenser and receiver temperatures, receiver chamber conditions etc. on its own for any given sample.
3. The Equipment should have the facility to calculate Cetane Index as per D4737 and D976 and Driveability Index according to D4814.
4. User Interface: Large 10" graphic TFT-LCD color touch screen and Alpha Numeric key pad with dedicated function keys and solvent proof protection. The distillation analyzer should have connectivity ports such as USB ports, HDMI and Bluetooth/WIFI to connect to mouse, keyboard, printer and computer.
5. Flask Heating System: Low mass and low voltage non-contact heater with self-positioning heating system and automatic heater lifting and lowering. Heating coil should not be in contact with the flask to avoid any damage to the flask. Fully automatic initial heat settings, distillation rate regulation and final heating regulation, to start test select the group and push start button.
6. Temperature Range: Ambient to 450 deg. C/better, +/- 0.1 deg. C and Temperature probe: Pt 100 with a valid calibration certificate.
7. Condenser Temperature range 0 to 80°C programmable constant temperature, temperature ramping or special temperature profile, instantaneously ready at switch on, automatic cooling via Peltier cooling and switch between groups within 5 mins. Receiver chamber should be capable of maintaining programmable temperature from 0 to 60°C and also should measure the charge volume before distillation. /better
8. The analyzer volume measurement system should have image capture based optical sensor technology with +/- 0.1ml accuracy and +/- 0.01ml Resolution.
9. The analyzer should have facility to detect temperature of the flask and LED system to indicate the operator.
10. The analyzer should have facility to detect right flask attached to the condenser line.
11. Instrument should be able to perform manual distillation with ASTM thermometer and manual heating control.
12. The Pt100 sample vapor temperature probe should be wireless and easy to connect and should be made of metal. It should have the facility to adjust the probe position in the flask without removing from the flask.
13. Temperature probe should be of Pt 100 with IEC 751 probe class A. Should be made of non-corrosive material.
14. Should be equipped with Intelligent vapour probe capable of memorizing calibration data and it should avoid any manual adjustment in the flask neck.
15. Flask Installation:

1. Instrument should be capable of accommodating 100ml, 125ml, 200ml and 250ml flasks to suit various ASTM, IP and ISO methods.



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2. The installation of flask should be such that it should be risk free when setting in to the base plate. Also, the self-positioning heater plate should be capable of lifting automatically

3. The door and the heating element in the heating chamber should move automatically up and down without any manual intervention. /better.

16. Receiver chamber should be made of corrosion resistant material. It should be capable of installing 100 and 200 mL receivers/ better.

17. Sample volume measurement: Optical measuring system compatible with samples producing smoke in the receiver cylinder; Range: 0 to 103% of charge volume; Resolution: 0,03ml; Accuracy: $\pm 0,1$ ml./better

18. The offered instrument should have a built-in calibrated atmospheric pressure sensor and humidity sensor.

19. Calibration of pressure sensor: Single point against reference barometer; also should be equipped with memory for calibration history.

20. Should enlist all Error messages for easy service diagnostics and quick rectification.

21. Transparent door for viewing of test samples in the receiver chamber is required.

1. Should have multi-level access control for running tests, defining unit configuration and maintenance (calibration & diagnostic).

2. Automatic exhaust of vapour from receiver chamber at the end of test to reduce VOC emission in the laboratory.

3. Equipped with automatic cooling liquid level detection to alert the user for filling the coolant.

22. Should have built-in fire UL certified extinguisher with two fire sensors.

23. Automatic safety shut down of heater and other power devices in case if fire detected

24. The analyzer should have portable fire extinguishing system on the back of the instrument with Optical fire sensor, and will automatically shut down the heater and other power devices in case of fire. The instrument should also detect whether the inert gas is connected or not.

25. The equipment should have Sensors to monitor and alert operators for the following cases:

a) absence or improper placing of temperature probe in distillation flask,

b) Absence of distillate receiver cylinder,

c) Absence of distillate drop plate,

d) Wrong heater base plate,

e) condenser not cleaned,

f) Receiver Chamber door open,

e) flask not in position. The software should have function to disable the above sensors.



26. The analyzer software should have Temperature and Volume calibration functions and should store the calibration data with Last Calibration date, due and frequency of calibration etc. The software should have provision to record error log.
27. Memory 40 or more distillation programs and 15 or more complete distillation test results. Memory for all calibrations with validity period and to remind when next calibrations due. Software should have provision to record error log.
28. Output: Built-in integrated large LCD display for displaying distillation curves & Reports.
29. Supplier should supply below consumables and spares necessary for trouble free operation of the distillation analyzer.
 1. Distillation Flask 125mL: 10 Nos.
 2. Automatic Dry Point Kit- 1 set
 3. Distillation probe-1
 4. Measuring cylinder with metal base: 4 Nos.
 5. Sample pt100 sensor: 1 No
 6. Heater Plate 38 mm & 50 mm: 3 Nos. Each
 7. Boiling Stones: minimum 200g
 8. Condenser Cleaning wire with plugs: 1 No
 9. Drip Plate: 2 Nos.
 10. Condenser stopper: 10 Nos.
 11. Silicone hose for flask connection
 12. Boiling stones- 1 Packet
 13. CRM of Gasoline, Kerosene& Diesel: 250ml each with traceability certificate
 14. Ambient temperature sensor; Automatic dry point kit for 200cc; Automatic dry point kit for 125cc; Crude oil testing kit for GOST 2170-part B; 200cc measuring cylinder, Kit for determination of 10% distillation residue; VOC reduction kit; Doctor Box for instrument diagnostics; portable fire extinguishing system with optical fire sensor
30. Latest computer with UPS and printer
31. Standard modular table for the instrument with accessories.
32. IQ/OQ certification should be in the vendor scope
33. Should be provided with calibration certificate, Traceability Certificate of standards, CE certificate as per NABL norms.
34. All relevant accessories/consumables should be provided to ensure trouble free working of the instrument
35. Pre-installation visit should be done for determination of deal condition for the instrument
36. Should have a good after sale service/ technical support.
37. The instrument should have warranty for 3 years from the date of installation including replaceable warranty of the components and external calibration as per NABL requirements.
38. Training: ON SITE and Operated Training for users should be given. Should support the users for to optimize the methods as per the standard methods Instrumentation and Application Training as and when required free of cost.



39. The vendor should substantiate all claims about their product using the original brochure and other documents. A list of existing customers of the vendor who are using this product should be along with their address and contact mobile number.

40. The bidder must ensure that the details of quoted model along with the photograph must be available in the bidder's/manufacture's website. So that during technical evaluation the details can be cross checked from the website.

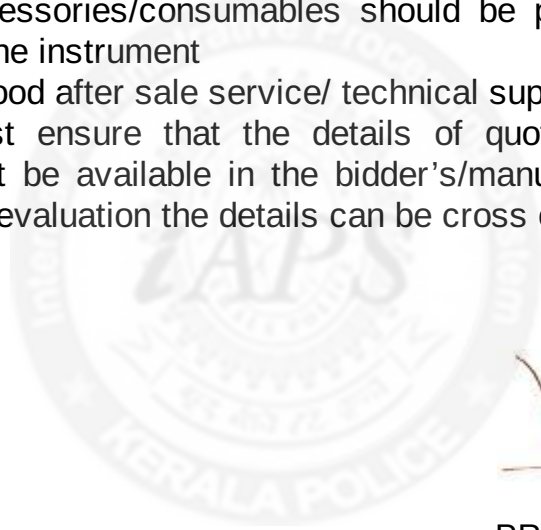
3.Specification of Pourpoint Apparatus

1. Determination of Pour Point by Fully Automatic Tilt Method with built-in cooling system
2. Instrument should be fully automatic according to D 5950, ASTM D 97 and IP 15/ D D5853/IS 3016/JIS K2269 method for analysis of Pour point of diesel, petroleum products etc.
3. Detection: Optical tilt method
4. Bench top, compact, noise free and portable
5. It should have automatic calibration features for Jacket, Sample, Arm position and refrigerator efficiency/better
6. Test jar should have same dimensions and volume as described by the standard test method
7. Cooling system should be integrated gas CFC free motor compressors (Single/ Double stage)/ better.
8. Temperature measuring resolution must be 1⁰C or less than 1⁰C.
9. Temperature Measurement: Jacket ± 0.5 ⁰C accuracy/better, Pt100 Metal probe engraved with Serial No: ± 0.1 ⁰C accuracy/better.
10. Temperature Range: - 105⁰C to 50⁰C/ better
11. Tilt interval: 1⁰C or 3 ⁰C/ better
12. Temperature Accuracy: ± 0.1 ⁰C
13. Should have good precision, repeatability and reproducibility
14. Measuring Temperature Probe: Pt 100 metal probe/ better with official certificate
15. Colour touch screen Display
16. Should have good safety features
17. Multi-level password protection facility
18. USB port for computer connectivity
19. It should have more storage capacity.
20. Should be capable to save all analysis parameters, data processing parameters and report format.
21. Should be provided with Computer, Printer & Suitable table
22. All necessary accessories for the full Fledge working of the instrument to be supplied.
23. Pure reference samples should be supplied along with instrument.
24. Should be provided with calibration certificate, Traceability certificate and CE certificate as per NABL requirements.
25. The bidder must ensure that the details of quoted model along with the photograph must be available in the bidder's/manufacture's website. So that during technical evaluation the details can be cross checked from the website

4.Specification of Smoke point apparatus



- Communication: USD92, Ethernet (1), RS232 (1)
- Printer output: Serial port
- printer should be quoted
- Dimensions: (W x D x H) 330 x 330 x 420mm
- Weight: 10 kg
- Electrical: 110 to 240V-50/60Hz-75W
- Accessories to be Supplied:
- 1 x Candle with one wick
- 1 x Wick Trimmer set
- Instruction / User manual
- 2 AC220-001 Wicks for SP20 Apparatus (pack of 100)
- Complete smoke point candle
- Tong for wick insertion
- Wick tube
- Igniter set
- Printer paper rolls
- Wick extractor soxhlet suitable for wick extraction according to ASTM D 1322/ IP 598 Test procedure
- Extraction Thimbles for 100 ml soxhlet extractor
- Pure reference samples should be supplied along with instrument
- Should be provided with calibration certificate, Traceability certificate and CE certificate as per NABL requirements.
- All relevant accessories/consumables should be provided to ensure trouble free working of the instrument
- Should have a good after sale service/ technical support.
- The bidder must ensure that the details of quoted model along with the photograph must be available in the bidder's/manufacture's website. So that during technical evaluation the details can be cross checked from the website



PRADEEP SAJI K
Director FSL

