

बिड दस्तावेज़ / Bid Document

बिड विवरण / Bid Details	
बिड बंद होने की तारीख/समय / Bid End Date/Time	28-09-2026 14:00:00
बिड खुलने की तारीख/समय / Bid Opening Date/Time	29-09-2026 14:00:00
बिड पेशकश वैधता (बंद होने की तारीख से) / Bid Offer Validity (From End Date)	180 (Days)
मंत्रालय/राज्य का नाम / Ministry/State Name	Kerala
विभाग का नाम / Department Name	Home Department Kerala
संगठन का नाम / Organisation Name	Police Department
कार्यालय का नाम / Office Name	Police Headquarters
शिकायत निवारण के संपर्क विवरण / Contact details of Grievance redressal	HOD Email id :aig2phq.pol@kerala.gov.in Buyer Email id: jsmodphq.pol@kerala.gov.in
कुल मात्रा / Total Quantity	3
वस्तु श्रेणी / Item Category	Mobile Device Forensic Extraction Software (Q2)
बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का) / Minimum Average Annual Turnover of the bidder (For 3 Years)	84 Lakh (s)
मूल उपकरण निर्माता का औसत टर्नओवर (गत 3 वर्षों का) / OEM Average Turnover (Last 3 Years)	672 Lakh (s)
उन्हीं/समान सेवा के लिए अपेक्षित विगत अनुभव के वर्ष / Years of Past Experience Required for same/similar service	3 Year (s)
टर्नओवर पात्रता मानदंड / Turnover eligibility criteria	To be verified by the buyer at the time of technical evaluation
एमएसएमई के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है / MSE Relaxation for Years of Experience and Turnover	No
स्टार्टअप के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है / Startup Relaxation for Years of Experience and Turnover	No

बिड विवरण/Bid Details	
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,OEM Annual Turnover,Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेजों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ मेनू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	Yes (Documents submitted as part of a clarification or representation during the tender/bid process will also be displayed to other participated bidders after log in)
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	3
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	4
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
विगत प्रदर्शन /Past Performance	40 %
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	No
बिड का प्रकार/Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	2 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
अनुमानित बिड मूल्य / Estimated Bid Value	16800000
Payment Timelines	Payments shall be made to the Seller within 45 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
वित्तीय दस्तावेज की आवश्यकता है / Financial Document Required	Yes
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईएमडी राशि/EMD Amount	168000

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	38

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने है। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b). ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

(c). ईएमडी और संपादन जमानत राशि लाभार्थी के पक्ष में होनी चाहिए। / Earnest Money Deposit (EMD) shall also be accepted by the buyer in the form of a surety bond.

लाभार्थी /Beneficiary :

Junior Supdt
Police Headquarters, Home Department Kerala, Police Department,
(Pramod S)

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	No
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एमआईआई खरीद वरीयता/MII Purchase Preference

एमआईआई खरीद वरीयता/MII Purchase Preference	No
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1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

2. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM of the product

offered in the bid {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts and delivery acceptance certificates like CRAC to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

3. OEM Turn Over Criteria: The minimum average annual financial turnover of the OEM of the offered product during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the OEM is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

4. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

5. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 40% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

Mobile Device Forensic Extraction Software (3 pieces)

तकनीकी विशिष्टियाँ /Technical Specifications

[* जेम केटेगरी विशिष्टि के अनुसार / As per GeM Category Specification](#)

विवरण/Specification	विशिष्टि का नाम /Specification Name	बिड के लिए आवश्यक अनुमत मूल्य /Bid Requirement (Allowed Values)
Generic	Primary Product Scope Class	Mobile Device Acquisition and Analysis Software
	Deployment Model	On-Premise, Private Cloud, Public Cloud, MeitY Empanelled Public Cloud
	Licence Entitlement Model	Per User, Per Node, Per Lab, Per Endpoint
	Licence Tenure	3 Year Subscription, 5 Year Subscription, Perpetual Licence Or higher
Software Features	Supported Device Class	Smartphones, Tablets, Feature Phones, SIM/UICC Cards, Removable Mobile Storage Media, Mobile Backup Files, Mobile Device Images
	Supported Mobile Operating Environment	Android, iOS/iPadOS, HarmonyOS, Feature Phone/Proprietary OS, Legacy BlackBerry OS, Legacy Symbian OS, Legacy Windows Mobile/Phone OS
	Supported Acquisition Class	Logical Acquisition, File System Acquisition, Physical Acquisition where Supported, Backup File Import, Device Image Import, SIM/UICC Import, Removable Storage Import, App Data Import, Device Triage Acquisition, Selective Artefact Acquisition

विवरण/Specification	विशिष्टि का नाम /Specification Name	बिड के लिए आवश्यक अनुमत मूल्य /Bid Requirement (Allowed Values)
	Supported Device Access / Lock State Handling	Unlocked Device Acquisition, Buyer-Provided Credential/Passcode-Based Acquisition, AFU Locked Device Acquisition where Supported, BFU Locked Device Acquisition where Supported, Limited Locked Device Triage where Supported, Full File System Acquisition where Supported, Physical Acquisition where Supported, Backup/Image-Based Acquisition
	Mobile Artefact Coverage	Call Logs, Contacts, SMS/MMS, Chat/Application Artefacts, Media Files, Documents, Browser Artefacts, Location Artefacts, Calendar Artefacts, Notes Artefacts, Email Artefacts, Installed Application List, System Logs, Deleted Artefact Recovery
	Analysis and Triage Capability	Timeline Analysis, Keyword Search, Regular Expression Search, Hash-Based Search, Duplicate File Identification, Media Metadata Analysis, Location Timeline Analysis, Application Artefact Parsing, Communication Pattern Analysis, Machine-Assisted Media Categorisation, Location Pattern Analysis, Sensitive Content Triage Workflow
	Case and Evidence Management	Case Workspace Creation, Evidence Source Tagging, File Import Log, Hash Generation for Imported Files, Evidence Integrity Verification
	Reporting and Statutory Export Capability	Extraction Summary Report, Device Information Report, Artefact Report, Timeline Report, Location Report, Communication Report, Deleted Artefact Report, BSA Section 63 / Erstwhile Section 65B Certificate Template Export, Evidence Hash/Integrity Statement Export, Source Data Import Register Export, PDF Export, XLSX Export, HTML Export
	Data Security and Retention Control	Encryption at Rest

Additional Specification Parameters - Mobile Device Forensic Extraction Software (3 pieces)

Specification Parameter Name	Bid Requirement (Allowed Values)
added in the ATC	added in the ATC

* Bidders offering must also comply with the additional specification parameters mentioned above.

परेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.No.	परेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
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क्र.सं./S.No.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	K C Ceynoy	695033,Opp. South Zone ADGP Office & IGP Trivandrum office, Nandavanam,Thiruvananthapuram	3	25

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

2. Generic

Actual delivery (and Installation & Commissioning (if covered in scope of supply)) is to be done at following address

RFSL
Kannur
RFSL
Thrissur
RFSL Ernakulam
.

3. Generic

Bidders shall quote only those products (Part of Service delivery) in the bid which are not obsolete in the market and has at least 5 years residual market life i.e. the offered product shall not be declared end-of-life by the OEM before this period.

4. Generic

Experience Criteria: The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for 3 years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the year. In case of bunch bids, the primary product having highest value should meet this criterion.

5. Generic

Manufacturer Authorization:Wherever Authorised Distributors/service providers are submitting the bid, Authorisation Form /Certificate with OEM/Original Service Provider details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid

6. Generic

Non return of Hard Disk: As per Buyer organization's Security Policy,Faulty Hard Disk of

Servers/Desktop Computers/ Laptops etc. will not be returned back to the OEM/supplier against warranty replacement.

7. **Generic**

The successful bidder has to supply all essential accessories required for the successful installation and commissioning of the goods supplied. Besides standard accessories as per normal industry practice, following accessories must be part of supply and cost should be included in bid price:

Supply installation and commissioning

.

8. **OEM**

IMPORTED PRODUCTS: In case of imported products, OEM or Authorized Seller of OEM should have a registered office in India to provide after sales service support in India. The certificate to this effect should be submitted.

9. **Forms of EMD and PBG**

Bidders can also submit the EMD with Banker's Cheque in favour of

Assistant Inspector General of Police Procurment
payable at
Thiruvananthapuram

.

Bidder has to upload scanned copy / proof of the BC along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

10. **Scope of Supply**

Scope of supply (Bid price to include all cost components) : Supply Installation Testing and Commissioning of Goods

11. **Buyer Added Bid Specific ATC**

Buyer uploaded ATC document [Click here to view the file.](#)

12. **Warranty**

Warranty period of the supplied products shall be 3 years from the date of final acceptance of goods or after completion of installation, commissioning & testing of goods (if included in the scope of supply), at consignee location. OEM Warranty certificates must be submitted by Successful Bidder at the time of delivery of Goods. The seller should guarantee the rectification of goods in case of any break down during the guarantee period. Seller should have well established Installation, Commissioning, Training, Troubleshooting and Maintenance Service group in INDIA for attending the after sales service. Details of Service Centres near consignee destinations are to be uploaded along with the bid.

13. **Forms of EMD and PBG**

Successful Bidder can submit the Performance Security in the form of Account Payee Demand Draft also (besides PBG which is allowed as per GeM GTC). DD should be made in favour of

Assistant Inspector General of Police Procurment
payable at
Thiruvananthapuram

. After award of contract, Successful Bidder can upload scanned copy of the DD in place of PBG and has to ensure delivery of hard copy to the original DD to the Buyer within 15 days of award of contract.

अस्वीकरण/**Disclaimer**

The Additional Terms and Conditions (ATC) have been incorporated by the Buyer after approval of their

Competent Authority. The Buyer ,is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any restriction arising in the bidding process due to these ATCs and including the modification of technical specifications and / or terms and conditions governing the bid.All representations / grievances pertaining to the ATC clauses shall be raised with the buyer organization directly and not with GeM.If any of the clause(s) is/are incorporated by the Buyer regarding the following, the bid & resultant contract shall be treated as null & void. Further, GeM reserves the right, at its sole discretion, to cancel the bid forthwith, without issuance of any prior notice or intimation :-

1. Publishing Custom / BOQ bids for items for which regular GeM categories are available (unless such Custom / BOQ item is bunched with the major regular product Category Item).
2. Mandating procurement of / from specific Brand / Make / Model / Manufacturer / Dealer except in case of Single Bid / Proprietary Article Certificate (PAC) Buying.
3. Inclusion of disqualification criteria related to suspension of seller / service provider, where such suspension period has already expired.
4. Mandating submission of documents (other than EMD and signed Integrity Pact - which can be submitted within 5 days of bid opening) in physical form as a pre-requisite to qualify bidders.
5. Publishing bids on GeM for procurement of works.
6. Procurement of Goods by creating a Service bid on GeM & vice-versa.
7. Seeking sample with bid or approval of samples during bid evaluation process. However, trial / sample, as the case may be, shall be permitted in cases where trial / sample are allowed as per approved and published procurement policy of the Buyers' controlling Ministry / Department / State / Public Sector Enterprises Headquarters. If there is any violation of trial / sample clause with regard to approved policy of the Buyers' Ministry / Department / State / Public Sector Enterprises Headquarters, then this is to be determined and redressed by the concerned Buyer Organisation only.
8. Seeking experience from specific organization / department / institute only or from foreign / export experience.
9. Creating bid for items from incorrect categories.
10. Reference of conditions published on any external site or reference to external documents/clauses.
11. Asking for any Tender fee / Bid Participation fee, as the case may be.
12. Buyer added ATC Clauses which are in contravention of clauses defined in bid detail section, including specifications, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by the applicable GeM GTC.
13. Any ATC clause in contravention with GeM GTC Clause 4 (xiii) (h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
14. In a category based bid, adding additional items, through buyer added, additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogues or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and
- All operative provisions of the erstwhile Labour Laws until their complete substitution.

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

This Bid is governed by the General Terms and Conditions, conditions stipulated in Bid and Service Level Agreement specific to the Service, as the case may be, as provided in the Marketplace.

However, in case of Service, if any condition specified in General Terms and Conditions is contradicted by the conditions stipulated in Service Level Agreement specific to said Service, then it will over-ride the conditions in the General Terms and Conditions.

[यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions](#)

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---

**REPORT OF THE COMMITTEE FOR SPECIFICATION OF CELLEBRITE
INSEYETS ON LINE PRO KIT SOFTWARE FOR RFSL KANNUR, RFSL
THRISSUR & RFSL ERNAKULAM under 'Operation Toofan - The Narco
Hunt**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Suresh S.R. Assistant Director (Documents) , FSL, Tvm- co opted
7. Smt. Veena .V.S Scientific Officer (Documents), FSL, Tvm- co opted

Ref:

1. Letter No. H9--134085/2026/PHQ Tvpm, Dated 13-08-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL Tvpm, Dated 19.08.2026

As directed in the reference above, the Specification Committee met on 22/08/2026 at 02.30 PM at SFSL, TVPM to formulate the specifications for **CELLEBRITE INSEYETS ON LINE PRO KIT SOFTWARE FOR RFSL KANNUR, RFSL THRISSUR & RFSL ERNAKULAM under 'Operation Toofan - The Narco Hunt . Shri. Suresh S.R. Assistant Director (Documents) , FSL, Tvm FSL, Thiruvananthapuram and Smt. Veena .V.S Scientific Officer (Documents), FSL, Tvm** have been co opted . The following technical specifications were finalized by the committee for consideration

TECHNICAL SPECIFICATIONS

S.No 1	Advanced Mobile Extraction Capabilities for unlocked devices
	• The solution should provide advanced access extraction capabilities to provide Full-File System extraction from unlocked File-based encryption devices and Physical extraction from unlocked Full-disk encryption devices from leading vendors like Samsung, Huawei, Xiaomi, Motorola, LG, Nokia, ZTE, OnePlus, Alcatel, Pixel, Realme, Vivo, Oppo, Pixel and others. • The solution should allow data to be extracted in a forensically sound process. • The solution should include all necessary adapters, cables, and accessories to perform the supported advanced access operations on the iOS and Android devices.


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- The solution should come with all the relevant documentation including supported devices, user manual, release notes and video tutorials.
- The solution should allow user to perform selective extraction at the level of the individual installed applications for both iOS and Android devices.
- The solution should work in a secured environment in a client – cloud exploit server mode.
- The solution must provide advanced access capabilities from a Central SaaS exploit server located on AWS cloud premises to multiple extraction end points.
- The solution shall support multiple client endpoints working in parallel to the central AWS SaaS exploit server.
- An advanced security mechanism should be available to allow the advanced exploit to be pushed down from the AWS SaaS exploit server to the client endpoints only on need basis.
- The solution should be supported to run on an active internet connection with a recommended speed of a minimum of 100 mbps.
- The solution should be regularly updated to support additional operating system versions and devices during the valid license and support period.
- The solution should also have the ability to upgrade the license in future to provide the device unlocking capability using brute-force for the supported locked Android and iOS devices.
- The solution should also allow Full File-system extraction of unlocked iOS devices with greater data extraction.
- It should support Full File-system extraction from unlocked iOS devices running on chipset A8 to A13 for iPhone 6 to 11.
- The solution should be able to conduct Full File-system extraction from unlocked iPhone 11, 12, 13, 14 with chip running on A13, A14, A15 to the A16.
- The solution should be able to conduct Full File-system support for unlocked iPhone 15.
- Solution should provide an automated capability to streamline the extraction, decoding and reporting functions of the entire end-to-end process.
- It should allow the user to define a workflow in the beginning of the process to ensure the complete decoding, enrichment and reporting functions are automated without need of any human intervention.
- There should be capability to automatically search for relevant device information during the access phase of the device based on the device state.
- Solution should be able to provide information related to device identifiers like IMSI, device name and IMEI along with device user identification information
- The automated workflow and searching device information capabilities should be available for the advanced access extractions for both iOS and Android devices.


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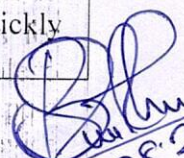
2	Mobile Extraction Capabilities
	• The solution should be able to extract forensic evidence from supported mobile devices including mobile phones, handheld tablets, portable GPS devices and drones. • It should provide users with all physical, file system and advanced logical extraction capabilities for different devices and different Operating Systems as well as allow extraction of Cloud Data source tokens accessed by the Mobile Phone. • It should support more than 32,000 device profiles, 12,700 different mobile application versions and 400+ total unique applications. All the supported mobile device models and device profiles must be tested and verified by the OEM's R&D Team. • It should support automatic detection of supported devices. It should also support manual search for devices by manufacturer, model and IMEI number. • It shall have the ability to offer dynamic profiles of phones, based on IMEI, OS type, version and chipset. • It should come with a compact and lightweight case with necessary cables for the supported phones and operating systems. A multi-SIM adapter with support for Micro, Nano and standard SIM cards should be supplied. • Support Android, iOS, Blackberry, Bada, Symbian & Windows mobile device and generic capabilities for certain chipsets like MTK and Qualcomm, to obtain decrypted Physical Extractions. • The solution should be capable of cloning the SIM ID, which allows to extract phone data while preventing the mobile device from connecting to the network. Ability to perform SIM data extraction from a SIM or USIM card. • The software should be able to categorize the applications and group these categories for applications found in mobile devices and user should be able to filter by category. This capability should be available for supported Android as well as iOS devices. • The software should have a workflow guidance widget to help managers and administrators to guide, control and enforce working procedures. • The software should include a copy functionality which allows selection of specific files such as images, videos, audio and documents from any unlocked device such as Android & iOS phones or removable drives. • The software should have the capability to allow the user to stop the Android File System extractions (except for Android Backup and APK downgrade) before they complete to save the partial extraction up to that point. • The solution must use custom-made OEM proprietary boot loaders instead of the 3rd party bootloaders. • There should be a consent-based collection capability without the need to select the device profile and extraction method, solution should automatically use the relevant device access method and present available extraction options to the user. This capability should allow user to perform other extractions at the same time. • The software should allow examiners to perform a quick selective

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	extraction of specific applications or files, while doing Selective File System extraction for supported Android as well as iOS devices. • The software should also allow selective extraction of only cloud tokens from the phone while doing Selective File System extraction. • The software should also be able to quickly capture the chat data, by automatically taking screenshots from any Android device. It should also allow the user to perform a text search on the captured screens as well. This should support applications like WhatsApp, Signal, Instagram and Snapchat • Users should be able to open a Support Ticket directly from the software GUI.
3	Extraction Support • It should support advanced unlocking capability to perform Full File-System extraction from locked Samsung Exynos FBE and FDE devices with Secure start-up. This capability should support devices S8, S9, S10, and A10-A50 series, running up to the Android 13. It should allow users to upload their own custom dictionary to enhance the unlocking process to make the process easier and faster. • There should be a capability which allows lock bypass and get full file system & physical data collection from Samsung S8, S8+, S9, Note8 and Note 9 models with Qualcomm chipset. As part of full file system extraction, there should also be ability to extract Samsung Secure Folder. • The software should support Full File System extraction for the latest unlocked Samsung Exynos high-end devices like S20, S21, S22 running on Android 11. S21 should be supported with Android 12 as well. • Full File-System extraction from latest Samsung devices like Galaxy A04, A04s, A04e, A14, A24, A34, A54, M04, M14, M54, F04, F14 and F54 • Full File-System extraction from the latest devices with Snapdragon 8 Gen 2, Snapdragon 4 Gen 1 and Snapdragon 7 Gen 1 chipsets. • The software should support extraction of Full File System data from unlocked Qualcomm chipset-based Samsung devices like S9, S10, S20, S21, S21 Ultra 5G, S21 Plus, S22 devices running on latest security patch level and up to the most recent Android 11. • The software should allow full file system extraction for unlocked Huawei Kirin devices running Android 9 and higher. • The software should allow collection of data from applications like Signal Private Messenger, Samsung Health and Proton Mail that leverage keystore for additional security using methods like full file system extraction for wide range of Android devices. • The software should have support for a generic Full File System or Physical Extraction for unlocked high-end Android devices with Qualcomm chipsets. This capability should be available for the popular devices from major Android vendors such as Samsung, Huawei, Xiaomi, OPPO, OnePlus, VIVO, as well as devices from Nokia, LG and Motorola, running on Android Versions from 7 up to 11. • There should be support for Full File system extractions from latest high-end Android Qualcomm devices such as Samsung Galaxy S21, S21 Ultra 5G and S21 Plus, Xiaomi Mi 11, One Plus 9, Redmi K40 pro, and others.

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	• The software should at least provide the following extraction methods to the user: Selective Filesystem Extraction, Selective App data extraction, Selective cloud token extraction, EDL extraction with decryption, Unisoc Live, Kirin Live, Exynos Live, MTK Live, Qualcomm Live, Smart ADB, Samsung Qualcomm, Samsung Decrypting Exynos, Samsung MTK, Samsung Spreadtrum, Samsung Exynos Physical Bypass, Generic Android Unlock using Lockpick, APK Downgrade (Android 6 & above), Huawei Kirin extraction, LG LAF, Advanced ADB, TWRP, Coolsand chipset extraction. • The software should provide capability to perform Full File System or Physical extraction from unlocked MTK 64-bit devices running Android 9 and above for devices like Oppo A55, Realme 7, Vivo Y19, Xiaomi 11T and others with chipsets like mt6732, mt6735, mt6738, mt6763, mt6768, mt6769, mt6771, mt6781, mt6785, mt679, mt6983, mt8161, mt8163, mt8165, mt8732 and mt8752 • The software should support vendor built-in backup for LG and Huawei for extraction of personal data like contacts, text message, call history, installed application data and system settings. • The software should provide capability to perform Full File System or Physical extraction from unlocked Exynos 64-bit devices running Android 9 and above for devices. It should support all Exynos chipsets up to Exynos 2200. • It should provide capability for Nokia feature phones with proprietary Nokia OS and MTK & Spreadtrum chipsets to get physical extraction from Nokia 105, 110, and 130 families. • The software should have support to bypass pattern, password and pin locks and overcome encryption challenges for a wide range of Qualcomm EDL, Qualcomm and Exynos based supported Samsung, Motorola, LG and Sony devices. • The software should retract a range of data e.g., Call Logs, Contacts, Calendar SMS, MMS, Video, Image, Apps Data, GPS Trail, Chat, E-mails etc. • It should have support for data extraction, decoding and analysis for unlocked devices running up to iOS 17.0.1. The software should be able to support full file system extraction using Checkm8 capability for Apple iPhone 7, 7+, 8, 8+ and X for iOS 15.7.3 depending on the iPhone device supported based on Apple official release.
4	Decoding and Analysis Capabilities • Capability to provide powerful decoding and analysis solution for the extracted device data. • Should have Case Management capability which allows users to create and manage cases and to provide case details and exhibit information. It should enable users to include multiple extractions and to apply the different enrichments. • Should include dashboard view to provide quick visual overview and display insights into the extracted data including commonly used applications, the most recent messages and enable investigator to quickly and easily drill down into the data of interest.


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- Dedicated location analysis view to clearly categorize the location records like device visited locations, locations of some significance, media derived locations and any other location data for detailed user analysis.
- Capability to identify the origin of media items found within the device data to collect various metrics about a media item and apply logic to try to identify how the item originated, providing the user with information about the determined origin and the reasoning for that determination.
- Should have the capability to parse windows computer data like DD, E01, RAW, L01,001 or BIN images in the same application.
- Should have Registry Viewer to enable viewing of all Registry hives in a UI similar to the native Windows Registry Editor
- Should be built on a database architecture to reopen cases quickly without having to reprocess the data.
- Should have internal cryptocurrency enrichment to automatically identify the usage of cryptocurrencies and to detect wallet addresses and transactions within the device data.
- It should also have an external cryptocurrency enrichment ability to provide a detailed analysis of the cryptocurrency assets associated with detected wallet addresses and highlight potential illicit activity. The enrichment should further provide risk severity and graphs on currency sent and received insights. This crypto enrichment result should be exportable to a report for individual wallet addresses.
- Function to allow view of cloud data in the platform with a valid cloud extraction license. Users can review the device data and cloud data through a single software interface with a unified experience, for a seamless and simplified review process.
- Enable highlighting of the exact position for each decoded content entry, enabling full tractability between the analyzed data and the Hex.
- Support for image carving to recover deleted image files and fragments when only remnants are available. Also support for advanced location carving, by decoding more location data from unallocated spaces and unsupported databases.
- It should perform an on-demand searches for viruses, spyware, Trojans and other malicious payloads in files.
- Enable the user to identify the usage of cryptocurrency and detect addresses or transactions within the device data to provide coin data including value, currency type, artifact type and model type. Support for parsing of the crypto wallet apps like Coinbase Wallet, Metamask, BitPay, Trust Wallet and MyEtherWallet
- Media classification capability to detect and categorize images and video frames into key categories. This capability should be selectable, allowing user to decide if he wants to run the media classification on a particular case.
- The media classification capability based on machine learning to automatically identify media files related to 20+ key categories like Cars, Credit cards, Documents, Drugs, Faces, Photo ID, Flags, Food, Gatherings, Screenshots, Handwriting, Maps, Money, Nudity, Tattoos, Weapons and Suspected CSA (Child Sexual Abuse).
- It should also be able to segregate the different media classifications into


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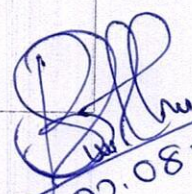
relevant groups like people, textual etc. to make the data review simpler and more efficient.

- Capability to convert geographical location information to corresponding address directly from the software.
- Decode network usage information to record the sending and receiving of information via various network connections.
- Capability to identify unsupported apps in databases and surface data from them. It should leverage Artificial Intelligence to perform automatic analysis of any application database, and decode chats, contacts, user accounts and location artifacts without any prior knowledge of the application.
- Support parsing of the Samsung wiped data to get the device factory reset data and also able to detect the time of last iOS data-wipe.
- Support parsing of Apple pay data to get Apple wallet transactions and location data. Data should be available for transactions from both Safari and iMessages.
- Capability to verify file integrity with use of MD5 and SHA 256.
- Support applications such as WhatsApp, Skype, Facebook Messenger, Azar, Telegram, Discord, Tiktok, Wechat, Wickr, Reddit, Signal, Viber, Zalo, Cash App, imo, DuckDuck Go browser, Plus Messenger and WhatsApp dual mode.
- Support the parsing of messages, calls and user accounts for the secure messaging app Threema for Android devices.
- Support the parsing of messages, calls and user accounts for the secured Session Private Messenger for both iOS and Android devices.
- It should have a built-in SQLite Viewer. Ability to save the queries created by the wizard and then run them again when the same application is encountered in other extractions.
- Capability to match files extracted against Hash Databases and it should have built-in support for Project VIC and CAID hash databases.
- Capability to allow user to include Case ID as well as other relevant case-related information as part of the extraction report and allow filtering based on specified date range.
- Support viewing of all locations on a single map. Enable viewing of extracted locations using offline maps even without an Internet connection with an option to connect to offline maps from a shared central location.
- Support viewing of text files including file information, content, and Hex.
- Ability to generate and customize reports in different formats e. g. PDF, HTML, XML, Excel and Word. Global setting to select/unselect items in a report with ability to password protect the reports.
- Provide a separate report with device information and user account information for quick reference of users.
- It should enable chat messages to be exported in conversation format, in PDF reports. Support exporting of selected emails to EML format.
- Support hash verification to ensure the extraction decoded is the same extraction received from the device.
- Ability to merge multiple extractions in a single unified report for efficient reporting and investigation.
- Option to adjust the timestamp according to the time zone and offset.


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setting on the device.

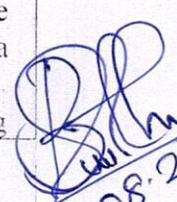
- Should provide a file format viewer which allows users to view, search and copy readable content from various file types like plist, bplist, etc.
- Capability to extract Google advertisement ID (AD-ID) on advanced logical extraction and iOS advertisement ID on iPhones.
- Allow playback of WhatsApp audio files in analysis software. Provide indication of reply for WhatsApp messages in application and reports generated.
- Support decoding and review of secret messages from Facebook Messenger in Android, with support for vanish mode (self-destructing messages).
- Support for parsing WhatsApp's disappearing messages and iOS "view once" media. Support for parsing of Signal iOS messages which were set to self-destruct at a specified date-time.
- Support for parsing WhatsApp messages received while the device was locked and not yet written to the main WhatsApp database.
- It should be possible to validate the image hash directly from the software GUI.
- Ability to extract memory from Samsung devices to decrypt Samsung Health DB and support for Samsung Digital Wellbeing.
- Decrypt and decode location information from Samsung Rubin service.
- Support Samsung browser passwords and allow user to review the decrypted password data of the device owner.
- Ability to parse the artifacts supported by iOS Biome service like wireless connection artifacts and device events like airplane mode status, lock status, orientation change plugged-in status, location and notes content.
- Support for decoding of Snapchat stories to get location and media files uploaded by the user.
- The software should support the following decoding capabilities:
 - Decode the powering events, decode Samsung passwords manager and Samsung locked notes
 - Decode iOS CashApp to parse user account, transactions, contacts, and credit card data
 - Decode Microsoft Teams to parse chats, calls, contacts, user account, calendar events, and web artifacts
 - Decode encrypted media from iOS Private Photo vault including location and transaction data, should include transactions done with Safari and iMessages
 - Decode SkyPhone application to parse account information, address book and call history
 - Decode Google Archive Files
 - Decoding of backups for MTK based Android phones.
 - Decoding of warrant return packages from WhatsApp, Facebook, Google, Snapchat, Instagram, Apple iCloud, Discord, TextNow and SkyECG
 - Decoding of physical activity data from health and wellness applications
 - Decoding of different WhatsApp variants like


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	WhatsApp2Plus, obwhatsapp, ob2whatsapp, ob3whatsapp and ob4whatsapp ○ Seamless process for cloud data decoding ○ Automatic decoding of data from .zip and TAR files ○ Decoding of the iCloud backup production set obtained from Apple devices and Instagram production set from other devices ○ Decoding of Huawei backup and Huawei HiSuite backup. ○ Decoding of ADB backup, MTK backup, iTunes backup, Blackberry 10 backup, Google Takeout (Google Archive) and LG backup ○ User should be able to save and abort decoding process. ○ Decoding of Berla ivx files ○ Keyword search capability to search within the decoded data and also in the contents • of the files such as docx, pds, xls, DB, txt, plist and XML which are present in the extracted device.
5	Cloud Data Extraction Capability • Should allow access to remote cloud data sources to obtain, decode, save and perform analysis of this data. • There should be a single software interface in which users can review device data and cloud data through a single tool and with a unified experience, for a seamless and simplified review process. • The data from the cloud sources should be from the private domain, including data from social-media applications, instant messaging applications, lifestyle applications, web pages, file storage sources and other content available on cloud using a process which is forensically sound. • The Software should allow access to remote cloud data sources using cloud login keys from mobile devices supporting iOS and Android. It should also identify & leverage cloud tokens & passwords from computer & browser to expand available cloud sources to investigate. • Support extraction of different content types from the data sources which includes messages, images, videos, files, contacts, calls, user profile, locations, user activities and backups. • Provide visibility of the cloud extraction progress to the user. It should provide a view of the current status of each data source extraction with option to cancel the process if required. • Allow users to gather private user data with appropriate legal authority from over 60 of the most popular social media and cloud-based sources, i.e. Facebook, Telegram, WhatsApp, Viber, Twitter, Gmail, AOL Mail, Dropbox, Uber, Skype, Instagram, , TikTok, Line, LinkedIn, SnapChat messages, LinkedIn Public, Discord, Google Drive, etc., using login credentials provided by the subject, cloud login keys extracted from mobile devices or PCs, retrieved from personal files or via other discovery means to gain access to time-sensitive evidence. • Capability to create cloud tokens from manually entered credentials for future cloud extractions.

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- Allow extraction of Facebook location history data to provide information about location of a device or account.
- Support extraction of Samsung backup files, including photos, calls, messages and notes.
- Allow use of cloud login keys from the Mobile device and using cloud keys it should result in mimicking the mobile device thus leaving minimal login traces and generating little or no alerts to the end user. Also allow extraction from a variety of remote cloud data sources using known username and password.
- Support 2FA authentication when accessing cloud data using username and password for at least Facebook, Google, Twitter and Dropbox
- Support creation of PC browser tokens for Facebook, Google, Instagram and LinkedIn. It should also support creation of PC apps token for iCloud and One Drive.
- Support reduction of extraction time from Cloud storage sources such as Google Drive, Dropbox, One Drive, etc. by pre-selection of specific files and directories for extraction
- Support extraction of several files revisions from Cloud storage sources such as Google Drive, iCloud Drive, Dropbox, OneDrive, Outlook 365, Office 365, Box, and Magenta Cloud application
- The software should support iCloud backups for iOS16. Support retrieving iCloud backups using iCloud login keys with support for 2FA.
- Support downloading of WhatsApp & Viber cloud backup from iCloud and Google Drive. WhatsApp data download should also work for iCloud with 2FA.
- Should display the location events chronologically. It should enable viewing of extracted locations using online as well as offline maps even without an internet connection.
- Should automatically collect and hash digital evidence such as media files.
- Allow access to user requests over popular IOT devices like Amazon Alexa and Google Home.
- Support for extraction of Samsung Cloud backups.
- Support Google's backup and extraction features saved notes on Google Keep, Google My Activity, Google passwords, Google recent devices from Google servers.
- Ability to attach a photocopy or document that contains the legal authority search warrant for the cloud extraction for each case. Ability for first time users to acknowledge that the method is used thoughtfully and with proper authority.
- Reporting of extracted data from the Cloud to human readable format such as PDF, Word, Excel, HTML and XML. It should provide global setting to select/unselect items in a report. The software should provide additional security for protecting the reports. It should also allow to password protect the reports.
- Should have the media classification capability to detect and categorize images and video frames into key categories. This capability should be selectable, and user should be able to decide if he wants to run the media classification on a particular case.
- The media classification capability should be based on machine learning


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	to automatically identify media files related to 35+ key categories like Cars, Credit cards, Documents, Drugs, Faces, Photo ID, Flags, Food, Gatherings, Screenshots, Handwriting, Maps, Money, Nudity, Tattoos, Weapons and Suspected CSA (Child Sexual Abuse). • Capability to use the QR code scan of the unlocked phone to access and extract the Telegram Web data including contacts, calls, user account, chats, channels data, instant messages including attachments, shared contacts and locations. • Capability to access WhatsApp Web data through QR code scan of the unlocked device to extract data including contacts, user account, chat data and chat instant messages. • Ability to validate data artifacts from iCloud data, iCloud drive, iCloud Photos, iCloud keychain, google contacts, calendar, task and photos. Support WhatsApp Google backup allowing extraction of WhatsApp backups using a Google User account, password and a mobile device.
6	• The solution should contain a USB 3.2 Forensic Card Reader which should be switchable from Read-Only to Read-Write operation and can be used to read (and optionally write) to the following multimedia card formats: ○ Compact Flash Card (CFC) ○ MicroDrive (MD) ○ Memory Stick Card (MSC) ○ Memory Stick Pro (MSP) ○ Memory Stick Pro Duo (MSPD) ○ Secure Digital Card (SDC, SDHC and SDXC) ○ MicroSD ○ MultiMedia Card (MMC) The solution should also have a RF isolation bag for collecting Mobile having External Size: 8.2" x 7.8" Operational area of 4.25" x 7.5" (+/- 10 percent) and tablets having External Size: 16" x 9.5" Operational area of 11.25" x 8.25" (+/- 10 percent) – quantity 01 (One) each and should have Quad-layer Faraday Fabric Construction and the Multi-layer Faraday construction and • should provide advanced shielding and Should have wear- resistant outer shell and double layered construction improves product durability.
7	Product should carry 01 Year onsite Warranty. • All software updates and upgrades will be provided during the warranty period.
8	Product offered should be of International Repute & Brand.
9	Bidder/ OEM should have supplied Offered Solution in last 3 Years to various Central/ State Government Agencies for Training/ Investigation purpose.
10	The bidder should have at least 01 (One) Technical trained resource having International Mobile forensic certification who can hand hold and provide support during installation, OEM certified online training during warranty period. Training should be provided by qualified international Mobile Certified Trainer


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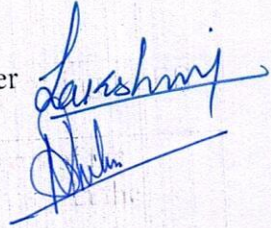
11	Should provide 16 TB Hard Disk (4TBx4 or 2TBX8 Nos) for storing UFED, Data Extraction backups.
12	Tender Specific Authorisation Certificate from the OEM in favor of the Indian Distributor/ Reseller/ Bidder is mandatory for participation in the tender.
13	Should provide 3 Year Subscription License
14	Additional cables may also provide <u>during license period</u> if required

Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman

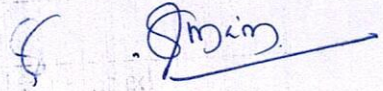


2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member



3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member

4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member



5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member



6. Shri. Suresh S.R. Assistant Director (Documents), FSL, Tvm- co opted



7. Smt. Veena .V.S Scientific Officer (Documents), FSL, Tvm- co opted



**REPORT OF THE COMMITTEE FOR SPECIFICATION OF ROTARY
EVAPORATOR FOR RFSL KOCHI under 'Operation Toofan - The
Narco Hunt**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

Ref:

1. Order No : H9-134085/2026/PHQ Tvpm, Dated 13-08-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL Tvpm, Dated 19.08.2026

As directed in the reference above, the Specification Committee met on 03/09/2026 at 03.30 PM at SFSL, TVPM to formulate the specifications for **ROTARY EVAPORATOR under Operation Toofan – The Narco Hunt for RFSL KOCHI . Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Thiruvananthapuram and Smt. Seethal.P Scientific Officer (Chemistry), FSL, Thiruvananthapuram** have been co opted. The following technical specifications were finalized by the committee for consideration.

SPECIFICATION FOR ROTARY EVAPORATOR, VACUUM PUMP AND CHILLER

- Operating Voltage / Frequency: 220-240 V, 50 Hz
- Heating Power Consumption: 1300 W or better.
- Motor Lift with safety stop function.
- Clockwise and counter clock wise rotation with interval option.
- The system should have Rotation Speed from 10-280rpm or better.
- Manual control of heating bath, Vacuum pump, chiller and drive rotation speed.
- System should have 4 or 5" color touch pictogram display for controlling the entire system including vacuum & chiller temperature.
- Parameters should be entered through touch display or knobs and desired function of the knobs can be set by user.
- **System should have integrated expandable solvent library for adjustment of vacuum.**
- System should have provision to save processes with ramp function as favourites.
- System should have the data log function and save process parameters.
- **The system should accommodate 50 ml to 5000 ml with single joint size.**


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- **The system should have Separate knobs for heating bath and rotation**
- **The system should have Locking facility for set temperature, rotation speed and Vacuum to prevent accidental change in set conditions during process**
- The system should indicate Stand-by mode with display of residual heat for higher safety
- Vacuum Seal should be highly resistant material and durable PTFE Vacuum seals for many years of continuous operation.
- **The system should have IP42 Detachable panel to safeguard all electronic components against splashes and thermal damages.**
- **The system should be supplied with Detachable Panel for holding device allows quick and easy operation even outside closed fume hoods.**
- System should have Universal heating bath for oil & water from ambient to 210°C with accuracy of $\pm 1^\circ\text{C}$
- Heating bath can be accommodated up to 3 to 4 Litres of evaporation and receiving flask.
- **System should have Protection Class IP 67 power cable to protect the heating bath from short-circuits & corrosion.**
- **System should have heating bath metal base support to avoid instability.**
- **System should have Clamping sleeve to allow easy removal of vapor tube from drive.**
- System should have Vertical condenser with 1400cm² surface area or better with indication of maximum condensation level.
- System should have Grease free ventilation cap for maximum tightness and avoid glass breakage.
- Auto solvent filling provision should be available
- **Automatic evaporation dynamic mode should be available for auto distillation**
- System should be supplied with 1000ml evaporation flasks three (3) numbers and 1000ml Receiving flask three (3) numbers.
- CE, ISO certification

Vacuum Pump

- Two stage chemical resistance diaphragm pump or better.
- Suction Capacity at least 2m³/hour or better and efficiently work with two Rotary Evaporator
- Final vacuum 5 $\pm$ 2 mbar or better for quicker drying of samples
- Power Input 180W
- The equipment should be CE certified.
- Hoses for connecting Vacuum pump and chiller.

Recirculating Chiller

- Recirculating chiller with capacity minimum 5 Liter or better.
- The temperature range should be -20°C ~ 20°C (or room temperature).
- Circulation pump flow rate(flux) 6L/Min or better.
- Cooling capacity at -20°C should be 900w or better.
- Should be PID temperature controller for accurate and reliable temperature control.
- Large LCD backlit screen to display set and actual temperature, compressor working, timer, alarms & warnings at the same time for user-friendly operation.


03.09.2026

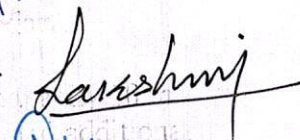
- Easy to set Adjustable Timer; (1 minute to 5,999 minutes).
- Both heater and bath chamber should be made of corrosion-resistant stainless steel.
- Liquid level display window, through which can be intuitively observe the liquid level in the tank.
- Should have automatic restart function when power failure/return.
- Should have audible & visible alarms for temperature deviation, over current, water level and over current protection.
- Should be CFC free R404 refrigerant.
- Power consumption less than/equal 550W.
- Independent temperature protection, safety meets DIN 12880 International standard.
- The equipment should be CE certified.
- **Vendors having service Centre in Kerala, is preferable and details to be provided.**
- **Three Years warranty for Rotary Evaporator, Vacuum pump and for Recirculating Chiller**
- Equipment should be supplied with suitable extracting flasks having capacity 10 ml, 25ml, 50ml, 100ml, 250ml, 500ml and 1000ml with suitable adaptors and additional suitable clips should be supplied.
- Should have provided with CE certificate.
- All relevant accessories should be provided to ensure trouble free working of the instrument.
- Should have a good after sale service / technical support.
- The vendor should substantiate all claims about their model using the original brochure and other documents.

Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman


03.09.2026

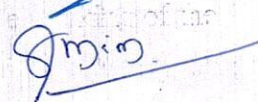
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, TvpM – Member



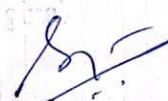
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, TvpM – Member



4. Smt. Suja J.S, Scientific Officer (Biology), FSL, TvpM – Member



5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member



6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted

7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted



**REPORT OF THE COMMITTEE FOR SPECIFICATION OF FIVE
DIGIT SEMI MICRO ANALYTICAL BALANCE WITH RELATIVE
DENSITY KIT FOR RFSL KOCHI ,KANNUR AND THRISSUR under
'Operation Toofan - The Narco Hunt'**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

Ref:

1. Order No : H9-134085/2026/PHQ Tvpm, Dated 13-08-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL Tvpm, Dated -19.08.2026

As directed in the reference above, the Specification Committee met on 03/09/2026 at 03.50 PM at SFSL, TVPM to formulate the specifications for **FIVE DIGIT SEMI MICRO ANALYTICAL BALANCE WITH RELATIVE DENSITY KIT under Operation Toofan – The Narco Hunt for FOR RFSL KOCHI ,KANNUR AND THRISSUR**. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Thiruvananthapuram ,and **Smt. Seethal.P** Scientific Officer (Chemistry), FSL, Thiruvananthapuram have been co opted The following technical specifications were finalized by the committee for consideration.

**SPECIFICATION FOR FIVE DIGIT SEMI MICRO ANALYTICAL BALANCE WITH DENSITY
DETERMINATION KIT**

1. Capacity: 220 g
2. Readability: 0.01 mg for all range up to 220 g
3. Display: 5 inch/better High-resolution OEL display
4. Weight should not be more than 9 kg/better
5. Pan Size should be 80 mm/ better
6. Sensitivity stability against Temperature: 1.5 to 2.0 ppm/°C between 10°C and 30°C or better
7. Operating Temperature/Humidity Range should be 5 to 40°C at 20 to 85% or better
8. Integrated or built-in ionizer function should be Included
2. Clock-CAL function should be Included
3. Inspection Support Function should be Included
4. USB Device (Type B) should be Included

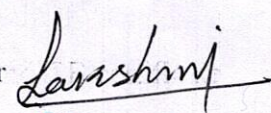

03.09.2026

5. USB Host (Type A) should be Included
6. Response Time should be: 2 sec or better
7. Response Time for race Measurements should be: 2 sec or better
8. Linearity: ± 0.1 mg or better for all range up to 220 g
9. Repeatability: ± 0.015 mg to 0.02 mg or better
10. Built-in internal calibration
11. Input/Output Terminal: RS-232C (D-sub9P plug) USB host (Type A) USB or better
12. device (Type B) Ionizer
13. Draft shield must be provided (Sliding windows: two sides and top)
14. Suitable good quality dust free cover must be provided for keeping the balance dust free.
15. Density determination kit (should be of the same company make) for solid and liquid should be provided along with the balance (Glass beaker, glass plummet, sinker glass, brackets, platforms, holders, thermometer with holder and NABL approved calibration certificate, etc)
16. Suitable statistics printer should be provided with one revolving chair.
17. 0.6 KV UPS or higher with back up of 15 minutes must be provided.
18. Should be provided with calibration certificate, Traceability certificate and CE certificate as per NABL requirements.
19. All relevant accessories/consumables should be provided to ensure trouble free working of the instrument
20. Should have a good after sale service/ technical support.
21. 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
22. Warranty : 5 years

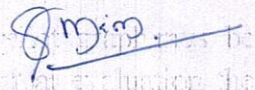
Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

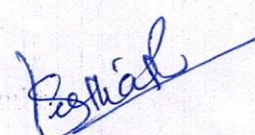

03.09.2026











**REPORT OF THE COMMITTEE FOR SPECIFICATION OF
FOURIER-TRANSFORM INFRARED SPECTROSCOPY
(FTIR) FOR DFSL KOZHIKODE under 'Operation Toofan - The Narco
Hunt**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr. Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvpm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvpm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvpm- co opted

Ref:

1. Order No : H9-134085/2026/PHQ Tvpm, Dated 13-08-2026

2. Order No : H9-134085/2026/PHQ Tvpm, Dated 18-08-2026

3. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

4. Endt No. C1-5591/2026/FSL Tvpm, Dated 19.08.2026

As directed in the reference above, the Specification Committee met on 08/09/2026 at 03.00 PM at SFSL, TVPM to formulate the specifications for **FOURIER-TRANSFORM INFRARED SPECTROSCOPY (FTIR) under Operation Toofan – The Narco Hunt , for DFSL Kozhikode.** Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Thiruvananthapuram , and **Smt. Seethal.P** Scientific Officer (Chemistry), FSL, Thiruvananthapuram have been co opted. The following technical specifications were finalized by the committee for consideration.

SPECIFICATION OF FOURIER TRANSFORM INFRARED SPECTROPHOTOMETER (FTIR)

<i>FTIR should be software controlled and fully automated complete system with Mid-IR capability</i>	
Spectral Range	• 7800 to 350 cm⁻¹ or better
Source	• Source suitable for Spectral range, Long- life source with user replaceable facility • 3 years of warranty/ more
Spectral resolution	Spectral resolution ≤ 0.50 cm ⁻¹ or better


08.09.2026

Wave number accuracy	$\pm 0.1 \text{ cm}^{-1}$ /better
Signal to Noise Ratio	at least 60000:1 peak-peak for 1 min scan or better
Interferometer	• Michelson type with 30° incidence angle. • Sealed and airtight with a built-in automatic dryer to remove the moisture inside the interferometer. • Built-in advanced auto-dynamic alignment function and aligned during scanning. • Automatically alignment of the beam splitter, optimized and stable constantly. • Interferometer window plate must be KBr with a moisture-resistant protective coating and user can exchange it. • KRS-5 type window in sample compartment. • 5 years of warranty/more
Beam splitter	Germanium coated KBr beam splitter
Beam splitter- window	• KBr/KRS, KRS window preferred / better
Light Source	• High intensity long life laser source with easy replicability by user • 5 years of warranty/more
Optics	• Suitable alignment free optics • All should be effectively coated to ensure high performance
Detector	• DLaTGS/DTGS Detector
Attenuated Total Reflection (ATR)	• Single reflectance High-performance Diamond ATR system, with all accessories needed for measurement • Should have monolithic diamond crystal plate • Should cover full spectral range for Mid IR measurements ($7800 \text{ to } 350 \text{ cm}^{-1}$).
Desiccant/Instrument	• Instrument must come with rechargeable desiccant cartridges with a visible desiccant lifetime indicator/better. • Instrument must have Optics Guard system for extended desiccant life and additional optical component protection. /better • Instrument must have Atmospheric compensation to minimize effect of atmospheric water and carbon dioxide on the sample spectra without the need for reference or calibration spectra/better
Purge	Instrument should not use with any purge gas


08.09.2026

Software	Latest software for measurement and analyses compatible with latest version of Windows Operating system. Detailed description of software features with both experimental and post-experimental analysis. Free update for the software for at least 5 years
FTIR Spectral Libraries	• Standard Licensed library with more than 10,000 Spectra for Polymers, Organic compounds, Biochemicals, Inorganic compounds and associated compounds and Georgia state crime library/ BIORAD, etc. for Drugs, Narcotics, Poisons, Explosives etc. must be quoted. • No pirated libraries will be accepted • Library upgradation should also be provided for 5 years after installation free of cost.
Computer & Software	• Latest branded PC of suitable configuration (suitable large HD flat panel monitor). with Multifunction ink tank colour printer should be quoted • Compatible branded PC with Intel Core i5 processor or higher and minimum 16 GB memory. • Licensed MS Windows OS
Sample preparation kit	• KBr pelleting accessories such as KBr Die (Local die should not be supplied), KBr Pellet press, KBr Powder (IR Spectroscopy grade), agate mortar, pestle and other necessary items for pellet making. • Sample holder for solid, liquid and semi solid.
Application	• Analysis of Drugs (NDPS- both legal & illegal) & Poisons, from various types of exhibits in the form of mixtures, crystalline compounds, adsorbed papers, powder, paste, granules, microcrystalline materials, resins, liquids, etc. • Analysis of Explosives (High & low), Polymers, Dyes & Inorganic compounds
UPS	3 KVA UPS/better. Battery backup for use during power supply failure. Minimum 2 hours back-up. All necessary pre installation requirements for the installation of the ups are under vendor scope.
Dehumidifier & Hygrometer	Suitable for the installation site
Accessories	All accessories for the proper operation of instrument should be included as standard supply


08.09.2026

Terms & Conditions	• System performance should be demonstrated with necessary standards and calibration kits • All system components supplied, should have warranty for three years from date of installation (except mentioned earlier). • List of consumables that are not covered under warranty should be mentioned. • Good technical support should be provided after the installation of the instrument and the service engineer should be able to attend unlimited breakdown calls and should visit the installation site within 24 hours without fail. • Training on troubleshooting the issues associated with instrumentation or application should be provided free of cost whenever required by the user. • Pre- Installation visit should be done • Should provide Calibration as per NABL/ IQ/OQ certificate
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 in installation • Instrumentation and Application Training as and when required free of cost.

Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman

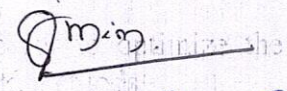

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2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, TvpM – Member

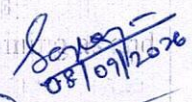
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, TvpM – Member



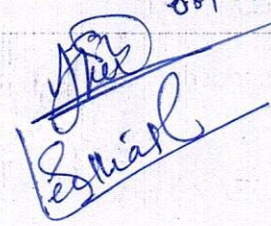
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, TvpM – Member



5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member


08/09/2026

6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted



7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

**REPORT OF THE COMMITTEE FOR SPECIFICATION OF TLC
PLATE COATER WITH COMPLETE SYSTEM FOR RFSL THRISSUR
under 'Operation Toofan - The Narco Hunt'**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, TvpM – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, TvpM – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, TvpM – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

Ref:

1. Order No : H9-134085/2026/PHQ TvpM, Dated 13-08-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL TvpM, Dated 19.08.2026

As directed in the reference above, the Specification Committee met on 03/09/2026 at 02.30 PM at SFSL, TVPM to formulate the specifications for **TLC PLATE COATER WITH COMPLETE SYSTEM under Operation Toofan – The Narco Hunt for FOR RFSL THRISSUR**. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Thiruvananthapuram, and Smt. Seethal.P Scientific Officer (Chemistry), FSL, Thiruvananthapuram have been co opted. The following technical specifications were finalized by the committee for consideration.

TLC SYSTEM WITH COATER- SPECIFICATION DETAILS

Sl No	Item	Specification	Quantity
1	Chromatogram Development Chambers	• All glass, molded, one piece, bubble free chamber for TLC. - Bottom divided into two equal halves with a sloping divider. • Twin Trough Chamber with stainless steel rust proof lid • Chamber top and bottoms should be perfectly parallel to each other.	2 Numbers


03.09.2026

		• Suitable Size for 20 × 20 cm plates	
2	Chromatogram Development Chambers	All glass, molded, one piece, bubble free chamber for TLC. Bottom divided into two equal halves with a sloping divider. • Twin Trough Chamber with stainless steel rust proof lid • Chamber top and bottoms should be perfectly parallel to each other. • Suitable Size for 10 × 10 cm plates	1
3	TLC Sprayer	All-glass reagent sprayer with 100 mL Erlenmeyer flask • Should produce Uniform Spray • High quality chemical resistant glass	2
4	TLC plate coater	• TLC Plate spreading device: Coating thickness adjustable 0.1 to 2mm/ better • spreading table – simultaneously coating 5 plates or better • leveling device with spreading template 20cm x20cm	1
5	TLC precoated plates	TLC Silica gel 60 F254 TLC Aluminium Sheet/better, • size 20 × 20 cm	2 Box (25 plate each)
6	TLC Plates	• Plain Glass Plates, • size 20 × 20 cm	5

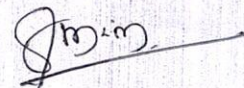
Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, TvpM – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, TvpM – Member


03.09.2026



4.Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member



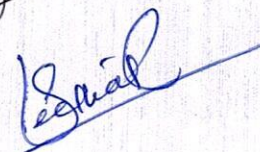
5.Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member



6.Shri.Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted



7.Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted



**REPORT OF THE COMMITTEE FOR SPECIFICATION OF UV
VISIBLE SPECTROPHOTOMETER FOR DFSL KOZHIKODE under
'Operation Toofan - The Narco Hunt'**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted

Ref:

1. Order No : H9-134085/2026/PHQ Tvpm, Dated 13-08-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL Tvpm, Dated 19.08.2026

As directed in the reference above, the Specification Committee met on 03/09/2026 at 03.00 PM at SFSL, TVPM to formulate the specifications for **UV VISIBLE SPECTROPHOTOMETER under Operation Toofan – The Narco Hunt , for DFSL Kozhikode.** Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Thiruvananthapuram , and Smt. Seethal.P Scientific Officer (Chemistry), FSL, Thiruvananthapuram have been co opted. The following technical specifications were finalized by the committee for consideration.

SPECIFICATION OF UV VISIBLE SPECTROPHOTOMETER

General Specification

- PC based double beam spectrophotometer with windows-based spectroscopy software for UV Vis data processing
- Monochromator with blazed holographic diffraction with/Lo-Ray-Light diffraction grating/ Czerny-Turner monochromator
- Ultra low stray light: Maximum limit within 0.00035 % (340 nm, NaI) OR BETTER
- Measuring wavelength range from 190 to 900 nm. or BETTER
- Detector – Photomultiplier
- Wavelength accuracy: ± 0.015 nm (656.1nm D2) or BETTER


03.09.2026

- Wavelength repeatability: $\pm 0.01\text{nm}$ OR BETTER Resolution up to 0.1nm
- Scanning Speed: Wavelength scan rate 3900 to 0.8 nm/ min or BETTER
- Operation modes: Photometric Mode: Absorbance (Abs), Transmittance (%), Reflectance (%), Energy (E)
- Variable spectral bandwidth selection from 0.1 nm to 5 nm
- L2/L5 for low stray light mode for critical samples
- High Dynamic photometric range up to 5 Abs
- Photometric accuracy: 0.002 Abs (0.5 Abs) OR BETTER
- Photometric repeatability: 0.003 Abs (0.5 Abs) or BETTER
- Baseline Flatness: 0.0002 Abs OR BETTER
- Base line Stability: 0.0002 Abs or BETTER
- Noise level: 0.000015 Abs RMS (500nm)
- Upgradeable for Integrating Sphere attachment

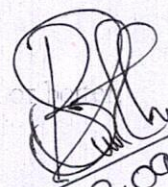
Software: Modes: Spectrum with comparisons of spectra, Photometric with Quantitation in single and multi wavelength, K-factor, single point, multi point, Simultaneous display of standard sample table, Kinetics mode with Time course measurement mode, Report generation and validation support. Should have facility for complete control and validation of the instrument.

Other Requirements:

1. Branded PC with 23 inch monitor (Dell/ HP/ Acer with i5 configuration or better, Windows 10 or better)
2. 2 KVA UPS
3. Multifunctional laser printer
4. Suitable table and chair
5. 1.5 Ton inverter Air conditioner with all necessary fittings

Additional Accessories:

1. Quartz cells 10 mm path length 3.5 mL capacity– 2 pairs
2. Glass Cuvette 10 mm path length–1 pair
3. Cetripur Potassium Dichromate with traceability certificate


03.09.2026

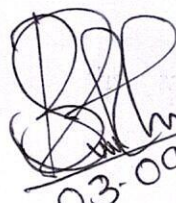
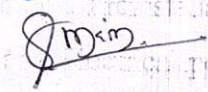
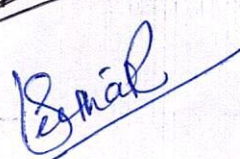
Certification: IQ/OQ certification should be in the vendor scope. Should be provided with calibration certificate and Traceability certificate as per NABL requirements.

Warranty: The instrument should have warranty for 3 years from the date of installation including replaceable Warranty of the components. AMC and CMC rate for 3 years after the warranty period should be quoted.

Training: Should support the users for optimizing the methods as per the standard methods. Instrumentation and application training should be provided free of cost as and when required.

Other Requirements: The vendor should have a good after sale service/ technical support. 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 should be submitted. Preinstallation visit should be done for determination of ideal condition of the instrument. Electrical power points and earthing for UPS shall be arranged.

Members

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman 
03-09-2026
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, TvpM – Member
3. Dr Shubin Mohanan, Assistant Director (Biology), FSL, TvpM – Member 
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, TvpM – Member 
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm – Member 
6. Shri. Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted 
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted 

1506

**REPORT OF THE COMMITTEE FOR SPECIFICATION OF GAS
CHROMATOGRAPH MASS SPECTROMETER (GC-MS)**

**FOR ALAPPUZHA, MALAPPURAM AND KOZHIKODE under
'Operation Toofan - The Narco Hunt'**

Present

1. Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
2. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpm – Member
3. Dr. Shubin Mohanan, Assistant Director (Biology), FSL, Tvpm – Member
4. Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpm – Member
5. Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvpm – Member
6. Shri. Ajeesh .R Assistant Director (Chemistry), FSL, Tvpm- co opted
7. Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvpm- co opted

Ref:

1. Letter No. S3-112474/2026/PHQ Tvpm, Dated 18-07-2026

2. Order No : C1-4726/2025/FSL(1) Dated. 18-05-2026

3. Endt No. C1-5591/2026/FSL Tvpm, Dated 01.08.2026

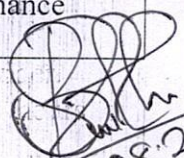
As directed in the reference above, the Specification Committee met on 11/08/2026 at 02.30 PM at SFSL, TVPM to formulate the specifications for **GAS CHROMATOGRAPH MASS SPECTROMETER (GC-MS) under Operation Toofan – The Narco Hunt**, for Alappuzha, Malappuram and Kozhikode. Shri. Ajeesh .R Assistant Director (Chemistry), FSL, Thiruvananthapuram, and Smt. Seethal.P Scientific Officer (Chemistry), FSL, Thiruvananthapuram have been co opted. The following technical specifications were finalized by the committee for consideration.

**TECHNICAL SPECIFICATION FOR
SINGLE QUADRUPLER GAS CHROMATOGRAPH - MASS SPECTROMETER**

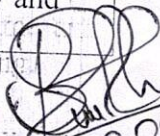
SL. No.	DESCRIPTION	SPECIFICATION
Pre - Installation Visit Should Be Done: To determine the ideal conditions for the instrument. The Bidder shall specify electrical load, UPS/Stabilizer requirements, earthing and other environmental conditions, ventilation, gas requirements, and installation requirements. Other than basic requirements, all the remaining requirements, including civil/electrical, shall be met by the vendor.		
1	COLUMN OVEN	• Temperature Range: Up to 450 °C or higher


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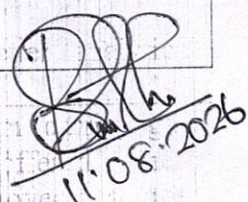
		• Resolution: 0.1 °C or better. • Programmable temperature ramps/ plateaus: 28/30 or more. • Maximum heating rate: ≥ 100 °C/min or better • Oven cool-down (22 °C ambient): 450 °C to 50 °C in ≤ 4 minutes • Should have oven power safety by automatic over-temperature and power-failure protection.
2	GC INJECTION SYSTEM	• Minimum two independent GC injection ports/inlets. • At least one shall be an electronically controlled split/split less capillary inlet, with temperature capability of ≥ 400°C, split ratio of at least 1:1000 or wider, • Mode: Programmable pressure/flow control, suitable for constant-flow/constant-pressure and/or constant-linear-velocity operation, programmable pressure/flow, septum purge and gas-saver functions.
3	PERFORMANCE SPECIFICATION	• Electronic pressure/flow control shall be provided for inlet and detector gases. • Retention-time repeatability shall be $\leq 0.01\%$ RSD or equivalent (< 0.0008 min or better.) demonstrated performance and peak-area repeatability $\leq 1.0\%$ RSD • System shall support manufacturer-compatible column backflush technology.
4	MASS DETECTOR- 1 No	SINGLE QUADRAPOLE WITH EI and UPGRADABLE TO CI if required. High-sensitivity EI source constructed from inert/low-activity materials and suitable for trace analysis. Source shall permit routine cleaning/maintenance and operate at appropriate programmable temperatures. Should have a mechanism to remove the Helium neutrals and unwanted matrices • Mass range shall be at least m/z 1.5–1000 or wider. • Mass-axis stability shall be ≤ 0.1 u over 24 hours or equivalent demonstrated performance • dynamic range $> 10^6$ or better • Transfer line temperature programmable up to 350 °C or better • Emission current should be able to be set up to 200 μA or better • Electron energy should include 70 eV and be adjustable over a suitable range. Electron emission current shall be adjustable. • The Main quadrupole rods are non-coated, homogeneous, metal rods, and cleanable • Automated/self-cleaning or extended-maintenance EI source technology is preferred.


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5	MS ACQUISITION MODES AND SCAN SPEED	- System shall support Full Scan, SIM and simultaneous Scan/SIM acquisition. - Time-segmented SIM with programmable quantifier/qualifier ions and dwell times shall be available. - Scan speed shall be $\geq 10,000$ u/s, with $\geq 20,000$ u/s desirable.
6	MS TRANSFER LINE, VACUUM SYSTEM, TUNING, AND CALIBRATION	- Transfer line temperature programmable to at least 300°C, preferably $\geq 350^{\circ}\text{C}$. Pump: High-capacity turbomolecular pump with appropriate backing pump (pre-vacuum pump) shall be provided; - Turbo pump capacity minimum ≥ 200 L/s or better vacuum performance. - Should have rapid evacuation capability - System shall have automated or software-assisted leak checking, vacuum diagnostics and instrument-health monitoring. - Automated mass calibration and tuning shall be provided.
7	GC-MS SENSITIVITY, INSTRUMENT DETECTION LIMIT (IDL) AND ACCEPTANCE PERFORMANCE	- Sensitivity shall be demonstrated using $1\text{ }\mu\text{L}$ injection of OFN under the manufacturer's standard EI sensitivity test conditions, with helium carrier gas and an appropriate capillary column. - Acceptance criterion, $S/N \geq 2,000:1$ for m/z 272 from approximately 1 pg OFN injected may be specified. An IDL of $\leq 10\text{ fg}$ or better. Supplier shall provide documented IDL with complete test methodology, including standard, concentration, injection volume, column, carrier gas, acquisition conditions and calculation method.
8	AUTOSAMPLER	- Fully automated liquid autosampler - Fully automated, programmable injection volume and programmable pre-/post-injection solvent washing. - Capacity: minimum 100-vial capacity Carryover shall be minimised and documented by the supplier
9	FLAME IONISATION DETECTOR- 1 NO	- Dynamic range: 10^7 - Maximum Temperature range of FID required up to 450°C or better - Minimum Detectable Level (MDL): $< 1.4\text{ pg C/s}$
10	SOFTWARE	- Suitable software for data acquisition, qualitative & quantitative analysis tools. - It should sink seamlessly with the instrument. - Should automatically create SIM ions from acquired Scan data and an optimisation tool for SIM group creation with dwell time for better repeatability and peak profile. Easy GCMS method transfer.


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		• Must be able to library search compounds from a chromatogram and use the information to construct quantitation methods. • Must have built-in reporting functionality to generate standard reports with the ability to customise report templates as necessary Software shall provide customizable reports containing chromatograms, spectra, library-match results, retention data, quantification and QC information. It shall provide secure user authentication, role-based access, audit trail, method/version control, data backup and restoration and protection against unauthorized modification of analytical data. Software shall support external and internal-standard calibration, multi-point calibration curves, weighting options, qualifier/quantifier ions, QC samples, automated integration, batch processing and quantitative reporting.
11	LIBRARY& DATABASE	Latest commercially available libraries • NIST26 Mass Spectral Library including NIST GC Retention Index Database, with valid license. • Forensic drug/toxicology GC-MS library/database shall also be supplied, covering narcotics, drugs of abuse, pharmaceuticals, poisons, pesticides, metabolites and other relevant compounds.
12	COLUMNS	Initial column package shall include at least: 1. 5%-phenyl/95%-dimethylpoly siloxane or equivalent low-bleed MS columns, 30 m $\times$ 0.25 mm $\times$ 0.25 μm; - 1 nos. 2. low-phenyl/dimethylpolysiloxane equivalent column; 30 m $\times$ 0.25 mm $\times$ 0.25 μm - 1 no 3. polar wax/PEG-type column; 30 m $\times$ 0.25 mm $\times$ approximately 1.4 μm - 1 no. 4. 624-type or equivalent column suitable for volatile compounds. 30 m $\times$ 0.25 mm $\times$ approximately 1.4 μm - 1 no. Equivalent columns of comparable/ better analytical performance will be accepted.
13	CARRIER AND DETECTOR GAS SYSTEMS	System shall support high-purity helium carrier gas. Hydrogen-carrier operation may be offered where supported by the manufacturer-approved source/configuration. Appropriate nitrogen, hydrogen and air supplies shall be provided for FID and other applicable functions.
14	GAS PURIFICATION AND REGULATION	Suitable high-purity double-stage regulators and oxygen, moisture and hydrocarbon traps/purifiers shall be supplied for relevant gases. Gas delivery shall comply with applicable safety requirements. • Helium: $\geq 99.9999\%$ purity (6.0 grade) or better. • Nitrogen: $\geq 99.999\%$ • Hydrogen: $\geq 99.999\%$



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		• Air: Zero-grade / GC instrument-grade air suitable for FID. The gas supplied should have a purity grade recommended by the manufacturer or better. ➤ Suitable moisture/oxygen/hydrocarbon traps and a gas purification system shall be supplied. It should be fitted with prefilters. The entire system should be wall mountable. ➤ Cylinders shall comply with the PESO guidelines and be manufactured in the current year of supply. ➤ Cylinders should be supplied with wall mountable facility ➤ Regulator opener and tube cutter should be supplied
15	UPS	• 10KVA or higher capacity UPS for 3 hours backup, with built-in isolation transformer with 3year warranty/better, Suitable for the power factor of the instrument. Should support the reactive load of the instrument. • All necessary pre-installation requirements for the installation of the UPS shall be arranged. • Electrical power points and earthing for UPS and electrical system shall be arranged by the supplier at their cost.
16	TABLE & CHAIR	Standard modular table with granite top and necessary cupboards for the GC-MS with accessories and revolving executive chair to be supplied (Godrej or better brand)
17	AIR CONDITIONER	1.5-ton inverter Air Conditioner with all necessary Fittings to be supplied-2 Nos. with timer delay for enabling long continuous operation
18	COMPUTER AND PRINTER	Latest computer with i5 configuration (Windows 10 or better) (Dell/HP) with minimum 512 GB SSD and 8/16 GB RAM and suitable 27-inch monitor. Branded, best-quality ink tank Printer should be quoted. Warranty should be ensured by the supplier: Warranty: 3 Years - both computer and printer
19	ACCESSORIES TO BE SUPPLIED	1. 10 microliter auto sampler syringe -3 Nos. 2. Auto sampler sample vials and cap with septa- 1000 Nos. 3. Auto sampler solvent washing vials with cap and septa- 10 Nos. 4. Septa for Injector- 50 Nos. 5. Filament for MS- 3 Nos. 6. Ferrules for MS - 30 Nos. 7. Ferrules for Column - 50 Nos. 8. Column Nut - 5 Nos. 9. Vacuum Pump oil -1 L x 2 10. Column cutting tool- 1 No 11. Helium filter-1 No 12. Any certified standards for forensic application

		(especially for drug/toxicological analysis) All relevant accessories/consumables should be provided to ensure trouble-free working of the instrument
20	INSTALLATION, QUALIFICATION AND COMMISSIONING	The item shall be supplied to the installation location at the cost of the supplier. The supplier shall undertake complete installation, configuration, testing, and commissioning. Installation and operational qualification shall be documented. All accessories required for proper operation shall be supplied.
21	SERVICES	Should have good after-sales service/technical support. It shall be supported by providing existing users of the instrument in India, preferably in Kerala and nearby states.
22	CERTIFICATION	IQ OQ must be performed at the time of installation, and thereafter OQ must be performed each year during the warranty period
23	WARRANTY	- The instrument should have a warranty for 5 years from the date of installation, including replaceable components. 3 years CMC rate after the 5-year warranty period should be quoted. 3 Year comprehensive warranty for the computers and printers - All warranty/CMC will start from the date of successful installation. - Note: GC-MS of the latest model should be supplied.
24	PREVENTIVE MAINTENANCE	Comprehensive preventive maintenance shall be carried out at least annually during the warranty period, including appropriate inspection of GC, MS, vacuum system, autosampler, detector, gas-flow systems, software and other relevant components.
25	TRAINING	Vendor to provide both on-site and operator training for users on the system start-up, usage, maintenance, quality control, Method validation, and troubleshooting. - Should support the user to optimize the methods as per the Standard methods. - Should have a good after-sales service/technical support capable of reaching the places where the system is proposed to be installed at short notice, preferably within 48 hrs. Visits and unlimited breakdown calls by service/application support engineers should be attended to immediately without fail. - Troubleshooting training (Instrumentation/ Application) as and when required free of cost. - Complete user manuals, operating procedures, maintenance documentation, software documentation, application notes and specifications shall be supplied.

26	OTHER REQUIREMENTS	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, along with their address and contact Mobile No. should be submitted.
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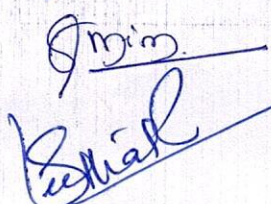
Members

- 1.Smt. Sunitha V B, Joint Director, FSL, TVPM – Chairman
- 2.Shri.Ajeesh .R Assistant Director (Chemistry)), FSL, Tvm- co opted
3. Smt. Lakshmi K.V, Assistant Director (Polygraph), FSL, Tvpmm – Member
- 4..Dr Shibin Mohanan, Assistant Director (Biology), FSL,Tvpmm – Member
- 5.Smt. Suja J.S, Scientific Officer (Biology), FSL, Tvpmm – Member
- 6.Smt. Seethal.P Scientific Officer (Chemistry), FSL, Tvm- co opted
- 7.Dr. Saranya Giridharan, Scientific Officer (Chemistry), FSL, Tvm - Member


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