

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

1) General information

Assignment name	Provision of Haematology Laboratory equipment.
Beneficiary	Medical Research and Care Centre of the University of Mosul
Country	IRAQ
Total estimated number of days	90 calendar days

2) Context and justification of the need

Support to Medical Care and Research Centre of the University of Mosul (MRCC) PROJECT aims to improve the health conditions of the population of Nineveh Governorate, including vulnerable populations, by providing a range of currently inaccessible diagnostics and health care and strengthening medical training with a view to national excellence. The Project involves the joint efforts of AFD and Expertise France and of the Iraqi partners, including the University of Mosul and the Department of Health of Ninawa Governorate for the proper operation of the Centre.

MRCC requires medical equipment tailored to the specific needs of each specialized block. The MRCC could help improve the quality and accessibility of healthcare services in the Nineveh governorate and improve the UoM's medical education and research.

3) Objectives and desired results

1) General objective

The overall objective for the work package is to enhance the MRCC's continuity of care services through rehabilitation and provision of biomedical equipment, improving the delivery of services and increase access to health care by public. The assignment also supports capacity building for healthcare cadre with the newest biomedical equipment, to ensure safety and compliance with international standards to create a step change in the quality of services.

2) Specific objectives

- Provision of required equipment purchases and rehabilitations of MRCC departments is implemented.
- Increased access to and utilization of quality health services for the public

3) Anticipated results

- Assignment enables opening MRCC LAB and diagnostics services associated with outpatient consultations and healthcare. It is aligned with MRCC priorities reflected in their strategies, as per agreed plans, as the capacity of local health providers is enhanced to deliver quality health service.
- Development of a maintenance guideline to ensure that the medical equipment is regularly serviced and maintained.

- Documentation and record-keeping to ensure that all necessary maintenance and repairs are carried out and that the equipment is always in optimal working condition.

4) Description of the assignment

1) Planned activities.

The service provider must comply with the following conditions:

- The eligibility for participation in this tender is limited to applicants who possess the "Manufacturer's Authorization" and certification as an official distributor. Additionally, they must be registered in the Ministry of Health (MOH) of either the Federal Government of Iraq or the Kurdistan Region Authority and authorized to import medical equipment to Iraq.
- All items should be registered and recognized by Iraqi ministry of health with certifications.
- Applicants must have technical teams capable of traveling to or being based in Mosul. These teams will be responsible for installing and training medical staff in the MRCC.
- By submitting a proposal, the applicants agree to fully and unconditionally accept the special and general conditions governing this proposal request and the proposed request for proposal.
- The applicant acknowledges that these conditions, serve as the sole basis for this procurement process. The applicants hereby waive any other sales conditions. Bidders/companies must carefully review and adhere to all instructions, forms, contract provisions, and specifications provided in the tender dossier.
- It is strongly advised to thoroughly read and comprehend the tender rules document and its annexes. Failure to adhere to the procedures outlined therein may result in disqualification from the evaluation process.

Assignment preparation

The procurement process allows the contracting authority to hold discussions with the applicant businesses (bidders/companies/suppliers) in order to identify and select the best offer, based on principles of equity and transparency, in order to guarantee the medical equipment provision of the MRCC is according to standards defined in the tender technical specifications.

- The period of validity of the offers is set at **90 days** from the tendering closing date. The contracting authority will make its best effort to award the contract within this period. The pricing model quoted in the applicant's proposal will remain valid for the duration of the contract.
- Your Offer shall comprise the following three sets of documents:
 - Administrative documents
 - Technical Offer
 - Financial Offer
- As part of this activity, the following medical equipment will be supplied with after-sale services for the following:
 - Provision of Haematology Laboratory equipment.

List of items is on [Annex-I](#)

Phase I: Obtaining and screening general Requirements of the applicants

1) Provision, delivery, installation and commissioning the services include:

- Preparatory work/checks for the installation

- Supply, delivery, installation. Assembly and commissioning and calibration of devices
- The restoration of all damage caused during the delivery and assembly of the devices.
- Administrative procedures, on-site inspections, and tests (regulatory or necessary for commissioning) including the required consumables for these tests.
- Warranty including preventive and curative maintenance (travel, handwork, and parts)
- Training of technicians, engineers and END USERS. This training will include travel and accommodation if necessary. Following this training, engineers and technicians will be authorized to intervene on medical devices within the limits specified by this authorization (Handling and commissioning the equipment) and will have to receive training materials.
- The supplies datasheet, user manual and certificate in English (also Arabic If available)

2) The administrative documents include the experiences and the registration soundness. Applicants (company or scientific bureau) should provide the following valid documentation:

- Tax ID/ clearance
- Tax ID/ clearance
- Bank account details (specify an alternative international bank account in case of withdrawal issues)
- Ministry of Health / Directorate General of Health approved the importation of the proposed medical equipment.
- ISO, FDA and CE certifications

3) The applicant is strongly advised to visit (if necessary/ requested) and inspect the site for goods contracts that involve installation, commissioning, networking, or similar services. This visit will allow the applicant to gather all the information needed to prepare the bid and finalize a contract for supplying goods and associated services.

4) Health and safety aspects in particular construction safety and hazardous materials handling:

- Indicating the main measures planned to ensure safety on-site, respect of the labor law, and prevention against child work.
- Indicating the measures taken regarding environmental protection (waste management, resource protection, etc.)
- The restoration of all damage caused during the delivery and assembly of the devices

5) Language of the proposal will be in English only

6) The applicant is required to submit a Financial Offer in IQD currency

7) Maintenance and operation of equipment is considered in precise manner of the preventive and curative maintenance plan, especially with specific contracts or teams available for the follow-up on-site.

8) Insurances and Guarantees: A minimum of **2 years** should be guaranteed. The applicant must contract all insurances and guarantees mentioned in the Contract for the Provision of the assignment.

9) Availability of at **least 3 years' maintenance contract** and warranty including preventive and curative maintenance (travel, handwork and parts)

Phase II: Timeline and Delivery

The applicant will be responsible for providing detailed delivery, installation and training schedule, which shall be validated by the contracting authority. Deliverables are phased and subject to acceptability in sequence of submission.

The schedule of deliveries, from the date of signing of contract, or contractor's mobilization to the field should be stated for each required output in clear and unambiguous manner, that includes delivery, installation, commission, training and reporting

- Contract duration for delivery and closing is: 190 days

Phase III: Implementation

The date of effectiveness of the contract, is upon duly signing date and it is considered commencement of execution. Applicant shall provide an executive summary defining the overall approach to managing and operating all required supplies and estimated duration of services from the date of commencement to the date end-user receives and accepts deliverables. Should clearly show a consistent timeframe and periodic schedule for submission of:

- Service job reports for the installation process (frequency will be per each lot or delivered batch, and applicant, technical entity and end-user sign the report)
- Training report for each equipment or session (per equipment, signed by the applicant, technical entity and end users)

Post-assignment follow-up:

- User manuals, certifications, references and training curricula is handed over to end users
- Intellectual of knowledge and data is contracting agency property, including the characteristics of the propose training curricula, approaches and methods.

1) Anticipated deliverables

Deliverables	End date
1. Equipment shipping and Order confirmation documents issued by the manufacturer or supplier. • Packing List • Bill of Lading or Airway bill (if not available in stock) • Certificate of Origin (if not available in stock)	55 days
2. Transport and delivery to the site	5 days
3. Installation: • Service job report for installation for each equipment • Equipment installation (images and captions shall be included) • Function test results according to the manufacturer recommendation (images and captions shall be included) • Calibration, test or adjustments performed. • Serial numbers	5 days
4. Test of equipment, diagnoses, and corrective measures	5 days
5. On-site training and orientation for end-user technical staff	5 days
6. A training report shall be provided for each training session conducted on individual medical equipment.	5 days
7. Handover: • Final Service job report	5 days

The preventative maintenance schedule, other routine maintenance, and instructions procedures for the end user as per the manufacturer's recommendation	
8. Contract close-out	5 days
Total	90 days

2) Place, duration and terms of performance

- 1) **Implementation period: 90 days**
- 2) **Start date: 19 August 2026**
- 3) **End date: 22 December 2026**
- 4) **Effective duration per assignment: 90 days**
- 5) **Schedule/programme:** *The provisional programme for assignment implementation is as follows:*

Activity	Place	Period	Duration (man/days)
Equipment order and shipping	Mosul	55	1 Team / Days
Installation	Mosul	15	1 Team / Days
Training	Mosul	10	1 Team / Days
Handover	Mosul	10	1 Team / Days
Total		90	Days

3) Required expertise and profile

- 1) **Number of experts per assignment:** 1-2 authorized biomedical engineers

2) Profile of the designated expert(s) responsible for contract execution

A. Qualifications and skills:

- Holder of a postgraduate university degree in biomedical engineering, project management or equivalent experience.
- Excellent qualities/capacities in:
 - Communication
 - Teamwork and interpersonal skills
 - Knowledge transfer
 - Analysis and reporting
 - Problem identification and resolution
 - Decision-making and taking initiatives.
- High proficiency in written and spoken Arabic and English.

B. General professional experience

- Install and commission the new equipment and accessories for the designated department.
- Conduct preventative maintenance on the equipment to ensure proper functioning and safety within the 3 months or according to manufacturer recommendation.
- Troubleshoot and repair any issues that arise with the equipment.
- Upgrade or retrofit the equipment with new components or technology.

- Provide technical support and training to the personnel who operate and maintain the equipment.
- Maintain accurate records of maintenance and repairs for regulatory and quality assurance purposes.
- The manufacturer technical support is responsible for providing technical support for their products, including assistance with installation, maintenance, and repair work. They are also required to provide local training programs for personnel who operate and maintain the equipment.

3) Similar performed work of medical equipment supplies good performances and contract execution.

4) Assignment reports

A report following the model provided must be forwarded by e-mail on conclusion of the assignment: it must correspond with the deliverable summary and validated job reports.

5) Monitoring-evaluation

Performance indicators

Deliverables	Immediate effects	Intermediate effects	Verification sources
1. Equipment order and shipping 2. Installation 3. Training 4. Handover			Packing lists Vouchers Certificate of origin Service Job reports Photos

Annex-I

Hematology Laboratory :-

No.	Item	Parameter	Minimum Required Specification
1	Benchtop Microhematocrit (PCV) Centrifuge	Type	Benchtop Microhematocrit (PCV) Centrifuge for routine clinical laboratory use
		Intended Use	Suitable for determination of hematocrit (Packed Cell Volume) using standard microhematocrit capillary tubes
		Capacity	Minimum 24 capillary tubes
		Maximum Speed	≥ 13,000 rpm
		Maximum Relative Centrifugal Force (RCF)	≥ 16,000 × g
		Run Time	Programmable from 1–99 minutes with continuous operation
		Control System	Microprocessor-controlled operation
		Display	Digital LCD or LED display showing speed, RCF, time, and operating status
		Rotor	Dedicated microhematocrit rotor supplied with the instrument
		Tube Compatibility	Compatible with standard plain and heparinized microhematocrit capillary tubes
		Motor	Maintenance-free brushless induction motor
		Acceleration / Braking	Automatic rapid acceleration and deceleration
		Safety Features	Automatic lid locking during operation, imbalance detection, overspeed protection, and emergency lid release
		Noise Level	≤ 60 dB
		Construction	Chemical-resistant housing with corrosion-resistant centrifuge chamber
		Reading System	Integrated hematocrit reading scale/evaluation disc or equivalent system
		Power Supply	220–240 VAC, 50/60 Hz
		Compliance	CE Marked and compliant with IEC/EN 61010 laboratory safety standards
		Accessories	Supplied complete with dedicated hematocrit rotor, capillary tube holders, reading scale, power cable, and operating manual

		Parameter	Minimum Required Specification
2	Blood Culture analyzer	Type	Fully automated continuous-monitoring Blood Culture Analyzer
		Intended Use	Automated detection of bacteria, yeasts, and fungi from blood culture bottles
		Detection Technology	Continuous automated colorimetric or equivalent non-invasive microbial growth detection technology
		Sample Capacity	Minimum 120 culture bottles with continuous random access loading
		Bottle Loading	Continuous loading and unloading without interrupting incubation
		Incubation Temperature	Automatically maintained at 35–37°C
		Monitoring	Continuous real-time monitoring of all culture bottles throughout incubation
		Detection Time	Automatic positive detection with immediate visual and audible alarm
		Culture Bottles	Compatible with aerobic, anaerobic, pediatric, and specialized blood culture bottles from the same manufacturer
		Workflow	Random access operation allowing bottle insertion and removal at any time
		User Interface	Integrated color touchscreen display
		Barcode System	Integrated barcode reader for automatic sample identification
		Data Management	Internal database with patient/sample information, event log, and result storage
		Connectivity	Bidirectional LIS/HIS connectivity via Ethernet using HL7 or equivalent protocol
		Software	Real-time monitoring, result management, audit trail, and customizable reports
		Quality Control	Built-in self-diagnostics and automatic system monitoring
		Alarm System	Visual and audible alarms for positive cultures, instrument status, and system errors
		Power Supply	220–240 VAC, 50/60 Hz
		Compliance	CE Marked and compliant with IEC/EN 61010 and IVD regulations
		Accessories	Supplied complete with all required accessories for operation, barcode scanner (if external), power cable, software, and operating manuals

		Parameter	Minimum Required Specification
3	Benchtop Semi-Automated	Type	Benchtop Semi-Automated Coagulation Analyzer
		Measuring Channels	Minimum 2 independent measuring channels capable of simultaneous testing

	Coagulation Analyzer	Detection Principle	Mechanical clot detection and/or photo-optical (turbidimetric) detection technology
		Intended Use	Routine coagulation testing in clinical laboratories
		Test Menu	Capable of performing PT, APTT, Fibrinogen (Clauss), TT, Coagulation Factors, and Lupus Anticoagulant assays
		Throughput	Minimum 60 PT tests/hour
		Incubation System	Thermostatically controlled incubation at 37 ± 0.5°C
		Incubation Capacity	Minimum 30 cuvette incubation positions and 4 reagent positions
		Sample Handling	Manual sample pipetting with automatic test initiation
		Reagent Handling	Manual reagent pipetting with dedicated reagent incubation positions
		Display	High-resolution LCD or color display showing test status, incubation time, results, and system parameters
		Control System	Microprocessor-controlled operation with programmable assay parameters
		Programming	Pre-programmed assays with user-definable methods
		Calculations	Automatic calculation of PT (seconds), INR, %, Fibrinogen concentration, clotting time, and factor activity
		Calibration	Multi-point calibration with stored calibration/reference curves
		Quality Control	Multi-level QC management with Levey–Jennings charts or equivalent
		Memory	Internal memory for patient results, calibration curves, QC data, and assay parameters
		Timer	Built-in incubation timer with automatic timer start and stop
		Sample Volume	Low sample volume capability (≤100 µL)
		Printer	Built-in thermal printer or capability to connect an external printer
		Connectivity	USB and/or RS-232 and/or Ethernet with LIS/HIS connectivity
		Software	Menu-driven multilingual software with audit trail and result management
		Power Supply	220–240 VAC, 50/60 Hz
		Compliance	CE Marked and compliant with IEC/EN 61010 and applicable IVD regulations
		Accessories	Supplied complete with incubation block, cuvettes, mixing balls (if required), pipetting accessories, printer paper, operating manual, and power cable

		Parameter	Minimum Required Specification
4	Automated 5 PART diff	Type	Fully Automated 5-Part Differential Hematology Analyzer
		Throughput	Minimum 100 samples/hour
		Differential	5-part WBC differential with automated CBC analysis

	Hematology Analyzer	Parameters	Minimum 30 reportable parameters , including CBC, WBC differential, RBC, Platelets, Hemoglobin, Hematocrit, RBC indices, and histograms
		Advanced Parameters	Capable of reporting NRBC and Immature Granulocytes (IG) without additional manual processing
		Measurement Technology	Electrical impedance for cell counting, flow cytometry and/or laser optical technology for WBC differential, and cyanide-free hemoglobin measurement
		Sample Modes	Whole blood and pre-diluted sample modes
		Aspiration Volume	≤ 50 µL in whole blood mode
		Sampling	Open tube and closed tube sampling capability
		Autoloader	Integrated automatic sampler with continuous loading, minimum 50 tubes
		Barcode Reader	Integrated barcode reader for automatic sample identification
		STAT Samples	Dedicated STAT position with priority processing
		Display	Integrated color touchscreen display
		Data Storage	Internal memory for minimum 100,000 patient results including histograms and scattergrams
		Flagging System	Automatic abnormal cell flagging including blasts, immature granulocytes, atypical lymphocytes, NRBC, and platelet abnormalities
		Quality Control	Built-in QC program with Levey–Jennings charts, Westgard rules, and automatic QC monitoring
		Calibration	Automatic and manual calibration with storage of calibration data
		Software	User-programmable reference ranges, audit trail, reagent management, and customizable reports
		Connectivity	Bidirectional LIS/HIS connectivity via Ethernet using HL7 or equivalent protocol, USB ports
		Reagent Management	Automatic reagent monitoring with remaining test estimation and expiry tracking
		Maintenance	Automated daily startup, shutdown, cleaning, and maintenance programs
		Power Supply	220–240 VAC, 50/60 Hz
		Compliance	CE Marked and compliant with IEC/EN 61010 and applicable IVD regulations
		Accessories	Supplied complete with startup reagents, calibration materials (if required), QC materials, waste container, operating software, manuals, and power cable