

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

1) General information

Assignment name	Provision of Biochemistry 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 Biochemistry 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

Biochemistry Laboratory -:

		Parameter	Minimum Required Specification
1	Spectrophotometer	Type	Research Grade Benchtop Double Beam UV-Visible Spectrophotometer
		Optical System	Double beam optical system with high-performance Czerny-Turner monochromator or equivalent
		Wavelength Range	190–1100 nm
		Spectral Bandwidth	Variable selectable bandwidth from 0.5–5 nm or better
		Wavelength Accuracy	±0.3 nm or better
		Wavelength Repeatability	±0.1 nm or better
		Wavelength Resolution	0.1 nm
		Photometric Range	–4.0 to +4.0 Abs
		Photometric Accuracy	±0.003 Abs or better
		Photometric Repeatability	±0.0015 Abs or better
		Baseline Stability	≤0.0005 Abs/hour
		Baseline Flatness	±0.0005 Abs
		Stray Light	≤0.03% T at 220 nm
		Noise Level	≤0.00005 Abs RMS
		Light Source	Long-life Xenon Flash Lamp or Deuterium and Tungsten-Halogen lamps with automatic switching
		Detector	Dual matched silicon photodiodes or equivalent
		Scan Speed	Variable from 1 to ≥4000 nm/min
		Measurement Modes	Absorbance, %Transmittance, Concentration, Spectrum Scan, Kinetics, Multi-Wavelength, Quantitation, DNA/Protein Analysis, Photometric and Time Scan
		Display	Integrated color touchscreen and full PC software operation
		Software	Comprehensive software for quantitative analysis, kinetics, spectral processing, peak detection, spectral overlay, instrument validation, GLP/GMP reporting, and audit trail
		Sample Compartment	Large sample compartment supporting standard 10 mm cuvettes and expandable for future accessories
		Accessories Compatibility	Compatible with Peltier temperature controller, sipper system, multicell holder, and auto cell changer
		Connectivity	USB, Ethernet, and printer support
		Data Storage	Internal memory and USB export capability

		Instrument Validation	Automatic wavelength, photometric, and performance validation routines
		Compliance	CE Marked and compliant with IEC/EN 61010 and applicable IVD/Laboratory standards
		Accessories	Supplied complete with quartz cuvettes, PC software, USB cable, dust cover, operating manual, and power cable
		Power Supply	220–240 VAC, 50/60 Hz

		Parameter	Minimum Required Specification
2	Automated Chemistry analyzers	Type	Fully Automated Random Access Clinical Chemistry Analyzer, Benchtop
		Throughput	Minimum 100 photometric tests/hour (excluding ISE)
		Methodology	Random Access, Discrete Photometric System
		Test Menu	Minimum 50 onboard assays
		Sample Types	Serum, Plasma, Urine, CSF, Whole Blood (where applicable)
		Sample Capacity	Minimum 40 sample positions with continuous loading
		Reagent Capacity	Minimum 30 refrigerated reagent positions with barcode identification
		Reagent Cooling	Continuous refrigerated reagent compartment (2–12°C)
		Sample Identification	Integrated barcode reader with positive sample identification
		Reagent Identification	Automatic reagent barcode recognition
		Sample Volume	Programmable from 2–50 µL
		Reaction Volume	Automatic programmable reaction volume
		Reaction Temperature	37 ± 0.1°C
		Photometer	Multi-wavelength photometer with minimum 12 wavelengths
		Wavelength Range	340–800 nm
		Cuvette System	Automatic reusable or disposable cuvette system with automatic washing
		Calibration	Automatic multi-point calibration with calibration curve storage
		Quality Control	Multi-level QC with Levey–Jennings charts, Westgard rules, and automatic QC monitoring
		STAT Samples	Dedicated STAT position with priority processing

		Probe System	Automatic liquid level detection, clot detection, collision protection, and probe washing
		Carryover	Automatic carryover prevention system
		Data Storage	Minimum 100,000 patient results including QC and calibration records
		Software	Integrated software with audit trail, reagent management, delta check, reflex testing, automatic rerun, and customizable reporting
		Connectivity	Bidirectional LIS/HIS connectivity (HL7), Ethernet, USB
		Maintenance	Fully automated startup, shutdown, cleaning, and preventive maintenance programs
		Display	Integrated color touchscreen
		ISE Capability	Upgradeable to integrated ISE module (Na⁺, K⁺, Cl⁻) or supplied with integrated ISE module
		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 starter reagents, calibrators, QC materials, cuvettes (if applicable), operating software, manuals, and power cable

		Parameter	Minimum Required Specification
3	Benchtop Centrifuge	Type	Benchtop General Purpose Laboratory Centrifuge
		Control System	Microprocessor-controlled with digital programming
		Maximum Speed	≥ 15,000 rpm
		Maximum Relative Centrifugal Force (RCF)	≥ 21,000 × g
		Maximum Capacity	Minimum 4 × 200 mL
		Rotor Compatibility	Compatible with both fixed-angle and swing-out rotors
		Rotor Recognition	Automatic rotor recognition with overspeed protection
		Speed Setting	Adjustable in 10 rpm increments or better
		Timer	Programmable from 1 second to 99 hours with continuous operation
		Short Spin	Pulse/Short Spin function
		Program Memory	Minimum 20 programmable user methods
		Display	Digital LCD/TFT display showing RPM, RCF, rotor type, time, and operating status

		Motor	Maintenance-free brushless induction motor
		Chamber	Stainless steel centrifuge chamber
		Lid System	Motorized lid lock with automatic opening at end of run
		Safety Features	Automatic imbalance detection, overspeed protection, motor overheat protection, emergency lid release, and lid interlock
		Noise Level	≤58 dB
		Cooling	Air-cooled (Refrigerated model acceptable if offered)
		Acceleration/Deceleration	Minimum 9 acceleration and 9 braking profiles
		Applications	Suitable for blood collection tubes, urine tubes, conical tubes (15/50 mL), microtubes, cell culture tubes, microplates, and cytology accessories
		Connectivity	USB and/or Ethernet for software updates and service diagnostics
		Power Supply	220–240 VAC, 50/60 Hz
		Compliance	CE Marked and compliant with IEC/EN 61010 laboratory safety standards
		Accessories	Supplied complete with one swing-out rotor, one fixed-angle rotor, tube adapters, aerosol-tight lids (where applicable), operating manual, and power cable