1.1. Haematology Analysers

Facility Level	Type / Model	Throughput (tests/hr)	Reagent System	Key Specifications	Data Management
Health Centre	Compact benchtop 3-part differential (semi-automated)	20–40	Open or closed; max 3 cocktail reagents	Robust; low power ≤150 VA; operable on solar/battery; 16–34°C; built-in printer	Basic onboard storage or USB export
Level 1 Hospital	Fully automated 5-part differential	40–60	Closed or open; barcode reagent ID; max 3 cocktail reagents	Robust; surge-protected; 90–240 V AC; abnormal cell flagging; built-in printer	LIS connectivity preferred
Level 2 Hospital	Fully automated 5-part differential with optional reticulocyte module	60–100	Open or closed with barcode reagent ID	Robust; UPS backup; 90–240 V AC; auto-sampler; abnormal cell flagging	LIS integration and data export
Level 3 Hospital (Tertiary/Referral)	High-throughput 5-part differential with optional reticulocyte module	100+	Fully closed; automatic reagent recognition	Dedicated power line with generator and UPS; 15–30°C; continuous loading; QC traceability	Full LIS/HIS integration; remote access; quality audit trail

1.2. Chemistry Analysers (Without ISE)

Parameter	Health Centres	Level 1: District Hospitals	Level 2: General/Provincial	Level 3: Tertiary/Teaching	Notes
Type	Portable/POC Analyzer	Compact Bench-Top	Medium-Throughput	High-Throughput	—
Throughput (tests/hr)	10	50	100	300+	Without ISE module installed
Analysis Method	Spectrophotometry (colorimetry and turbidimetry)	Spectrophotometry (colorimetry and turbidimetry)	Spectrophotometry (colorimetry and turbidimetry)	Spectrophotometry (colorimetry and turbidimetry)	—
Sample Type	Serum, plasma, urine	Serum, plasma, urine, CSF, homogeneous fluids	Serum, plasma, urine, CSF, homogeneous fluids	Serum, plasma, urine, CSF, homogeneous fluids	—
Power	Battery or solar compatible	220–240V AC, UPS backup	220–240V AC, stabilizer	220–240V AC, stabilizer	—
Data Management	USB / Bluetooth	LIS/HIS/SmartCare compatible	LIS/HIS/SmartCare compatible	LIS/HIS/SmartCare compatible	—
Training Required	User training at installation	User training at installation	User training + advanced training	User training + advanced + data integration training	—

1.3. Electrolyte Analysers

Electrolyte analysers are not required at Health Centre level. Requirements for Level 1–3 facilities are as follows: Level 1 (Compact Bench-Top, 60 tests/hr, Na+/K+/Cl-/pH/Ca2+); Level 2 (Compact Bench-Top, 60 tests/hr, same analytes); Level 3 (High-Throughput Flow, 80 tests/hr, same analytes). All levels require potentiometry with direct/indirect ISE module; 220–240V AC with stabilizer; LIS/HIS/SmartCare compatibility; and documented user training with advanced and data integration training for Level 3.

1.4. Chemiluminescence Immunoassay (CLIA) Analysers

CLIA analysers are not required at Health Centre level. Level 1 requires semi/fully automated CLIA, 50–150 tests/hr, covering routine hormones and cardiac/tumour markers. Level 2 requires fully automated random-access CLIA, 100–300 tests/hr, expanded endocrine/oncology/cardiac/infectious markers. Level 3 requires high-throughput modular CLIA, 300+ tests/hr, full specialty and research assay menu. All levels require 220–240V AC (UPS at Level 1; stabilizer at Levels 2–3), LIS/HIS/SmartCare integration, and documented user training with progressive advanced requirements at higher levels.

1.5. CD4 Analysers

Health Centres require portable/POC CD4 devices (5–10 tests/hr; whole blood finger prick or venous; battery or solar compatible; cartridge-based reagents; USB/Bluetooth connectivity). Level 1 requires compact bench-top CD4 (20–50 tests/hr; venous whole blood; 220–240V AC with UPS; liquid reagents; USB/LAN). Level 2 requires medium-throughput CD4 (100–200 tests/hr; 220–240V AC; LAN/LIS compatible). Level 3 requires high-throughput flow cytometer (300+ tests/hr; LIS/HIS/SmartCare compatible; full LIS integration). Training requirements escalate from user training at installation (Health Centre/Level 1) to advanced and data integration training at Level 3.

2. Bid Evaluation Criteria

Evaluation of submitted EOIs will be conducted by the ZAMMSA procurement committee based on the following criteria:

- Eligibility compliance: Satisfaction of all mandatory eligibility requirements listed in Section 7.
- Technical responsiveness: Alignment of proposed Equipment with the Technical Specifications in Section 8; evidence of ISO and WHO prequalification certification.
- Service capacity: Demonstrated ability to deliver, install, and maintain Equipment across all designated facilities, including evidence of in-country technical support infrastructure.
- Local support and supply chain: Availability of in-country spare parts stock, local service engineers, and responsive helpdesk capability.
- Cost-effectiveness: Value for money across the full cost of supply, reagent rental, maintenance, and training over the contract period.
- Data integration capability: Demonstrated ability to integrate with SmartCare, DHIS2, and the national LIS; evidence of previous integrations in similar settings.