

 Tarangan Community Hospital Clinical Laboratory	Document No.: WI-C-002-A-V0	CONTROLLED COPY Do not copy or remove
	Parent Document: SOP-C-002, Sections 5.2–5.7 Version: V0	
Applies to: Medical Technologists and Laboratory Aides Effective Date: MM-DD-YYYY Supersedes: None		

Mindray BS-240 Daily Startup, Calibration, IQC & Special Wash Bench Card

Clinical Chemistry Section | Automated Photometric Testing & Maintenance Protocol

1

LABORATORY AIDE / MT

Pre-Power Fluid & Temperature Inspection

Verify DI water tank level and diluted alkaline wash solution tank per safety rules. Verify waste tanks are empty (< 25% full); empty if needed. Confirm probe wash bottle at position D1/40 is filled with dedicated cleaner (≥ 20 mL). Ensure reagent carousel reads 2 °C to 12 °C.
SOP-C-002, Section 5.2.1

2

Power-On Sequence & Software Login

Turn on main power switch (rear left) and operating switch (right panel). Power on computer and monitor; launch Mindray BS-240 software and enter authorized login credentials. Verify mechanical homing and cuvette pre-wash self-tests pass.
SOP-C-002, Section 5.2.2

3

Optical & Thermal Equilibration Warm-Up

Allow mandatory 15 to 20 minute warm-up period for the halogen photometer lamp to reach thermal stability and reaction carousel to equilibrate to 37.0 ± 0.1 °C. Verify status bar indicators (temperature, water pressure, optical blank) turn GREEN before testing.
SOP-C-002, Section 5.2.3

15–20 min

4

Daily Two-Level IQC & Calibration Check

Load Level 1 (Normal) and Level 2 (Pathological) control sera into assigned positions. Run IQC across all active channels; apply Westgard rules — 1:2s = warning only (investigate); 1:3s / 2:2s / R:4s = reject: halt patient testing and troubleshoot. No patient results until QC passes. Execute calibration for new reagent lots, lamp change, or Westgard rejection.
SOP-C-002, Section 5.3.2, 5.3.3

5

Routine & STAT Sample Processing with Auto-Rerun

Inspect centrifuged serum (no clots/hemolysis). Load primary tubes or microcups (≥ 100 µL dead vol). Click STAT for urgent samples. If result triggers LIN (above linearity) or PRO (prozone), execute automated 0.9% saline rerun with dilution calculation.
SOP-C-002, Section 5.4.1–5.4.5

6

Daily End-of-Shift Shutdown Special Wash

Inspect probes, mixing paddles, and wash wells for salt crusting. Execute automated Shutdown Wash from the software interface to decontaminate probes, mixers, and cuvettes before powering down the operating switch. Record on F-C-002-A-V0.
SOP-C-002, Section 5.5 (Table 10.5)

7

Weekly CD80 Special Wash & Cuvette Blank Check

Place concentrated CD80 alkaline wash solution in designated wash position; run Special Wash from Maintenance menu. Access **Utility > Maintenance > Check > Cuvette Check** to measure blanks across 340–670 nm. Replace cuvettes exceeding optical limits.
SOP-C-002, Section 5.5

WEEKLY

SOFTWARE REACTION FLAGS & BENCH ACTION <table><tr><th>Flag</th><th>Clinical Meaning</th><th>Required Bench Action</th></tr><tr><td>LIN</td><td>Exceeds upper linearity limit</td><td>Auto-Rerun with 0.9% saline dilution; verify factor</td></tr><tr><td>PRO</td><td>Prozone / antigen excess</td><td>Dilute specimen 1:2 or 1:5; repeat analysis</td></tr><tr><td>HIL Flags</td><td>Interference (Hemolysis / Icterus / Lipemia)</td><td>Check serum index; reject hemolyzed K+/AST</td></tr></table>	Flag	Clinical Meaning	Required Bench Action	LIN	Exceeds upper linearity limit	Auto-Rerun with 0.9% saline dilution; verify factor	PRO	Prozone / antigen excess	Dilute specimen 1:2 or 1:5; repeat analysis	HIL Flags	Interference (Hemolysis / Icterus / Lipemia)	Check serum index; reject hemolyzed K+/AST	SAFETY, MAINTENANCE & ESCALATION RULES Reagent Carousel: Power supply stays active 24/7 to maintain 2–12 °C cooling. Probe Safety: Wipe probe gently with 75% ethanol weekly; never bend probe tip. Westgard Failure: Halt patient runs on channel; recalibrate per SOP-C-002 Section 5.3.2. Escalation: Log persistent errors on F-C-002-A-V0; notify Chief Medical Technologist.
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Prepared by: Chief Medical Technologist Signature: _____ Date: _____	Reviewed by: Pathologist Signature: _____ Date: _____	Approved by: Hospital Director Signature: _____ Date: _____
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