

 Tarangnan Community Hospital Clinical Laboratory	Document No.: WI-H-002-A-V0	CONTROLLED COPY Do not copy or remove
	Parent Document: SOP-H-002, Sections 5.2–5.8 Version: V0	
Applies to: Medical Technologists and Laboratory Aides Effective Date: MM-DD-YYYY Supersedes: None		

HORIBA ABX Pentra XL 80 Daily Startup, Difftrol QC & Shutdown Card

Hematology Section | Automated 5-Part Differential Analyzer Routine Operation & Maintenance

1

LABORATORY AIDE / MT Pre-Power Fluid, Waste & Reagent Inspection
Inspect dedicated reagent levels: ABX Diluent, ABX Basolyse II, ABX Lysebio, ABX Eosinofix, and ABX Cleaner. Empty external liquid waste carboy. Verify reagent inventory storage at 18–25 °C.
SOP-H-002, Section 5.2.1, 5.2.2

2

Power-On Sequence & Automated Startup Prime
Switch on main power and computer terminal. Log into Pentra XL 80 software. Click **Startup** icon on toolbar; the analyzer automatically primes fluidics, zeroes optics, and runs background counts.
SOP-H-002, Section 5.3.1

3

Verify Startup Background Blank Acceptance Counts
Verify background counts meet strict limits: **WBC** < 0.3 × 10³/μL, **RBC** < 0.02 × 10⁶/μL, **HGB** < 0.3 g/dL, **PLT** < 10 × 10³/μL. If high, repeat startup once or execute **Backflush / Miniclean**. Never test if blanks fail.
SOP-H-002, Section 5.3.2, 5.3.3

4

Daily Tri-Level ABX Difftrol Quality Control Run
Equilibrate Difftrol Low, Normal, and High vials at 18–25 °C for 15 minutes. Mix thoroughly by gentle rolling and inversion. Analyze in **Quality Assurance > Control > Difftrol**. Verify all parameters within ± 2 SD.
SOP-H-002, Section 5.4.1

⌚ 15 min eq

5

Patient Specimen Processing (Rack Loader / STAT Mode)
Mix K2EDTA tubes on mechanical rotator ≥ 2 min + 8–10 inversions. Check for clots. Load 10-tube racks (barcodes outward) and press green **Start**, or aspirate pediatric / urgent tubes via manual STAT door.
SOP-H-002, Section 5.5.1–5.5.3

6

End-of-Day Shutdown Enzymatic Cleaning (ABX Cleaner)
Remove sample racks from loader deck. Clean exterior aspiration needles with alcohol wipe. Click **Shutdown** icon; analyzer draws **ABX Cleaner** to digest protein deposits and enters standby mode.
SOP-H-002, Section 5.7.1

7

Weekly Concentrated Cleaning with ABX Minoclair (MANDATORY)
Every Friday at shift close: Navigate to **Services > Maintenance > Concentrated Cleaning**. Aspirate 3.0 mL undiluted **ABX Minoclair** via manual port. Timed 15-min soak digests debris, followed by auto-flush.
SOP-H-002, Section 5.8.1, 5.8.2

⌚ 15 min soak

STARTUP BLANK LIMITS & DEDICATED REAGENTS <table><tr><th>Parameter</th><th>Acceptable Blank Limit</th><th>Corrective Action</th></tr><tr><td>WBC</td><td>< 0.3 × 10³/μL (< 0.3 × 10⁹/L)</td><td>Repeat startup cycle</td></tr><tr><td>RBC</td><td>< 0.02 × 10⁶/μL (< 0.02 × 10¹²/L)</td><td>Execute aperture Backflush</td></tr><tr><td>HGB</td><td>< 0.3 g/dL (< 3 g/L)</td><td>Run optical Miniclean</td></tr><tr><td>PLT</td><td>< 10 × 10³/μL (< 10 × 10⁹/L)</td><td>Inspect diluent / bubbles</td></tr></table> 6 Closed Reagents: ABX Diluent (isotonic sheathing), ABX Basolyse II (basophil differentiation), ABX Lysebio (cyanide-free HGB lyse), ABX Eosinofix (LMNE matrix dye), ABX Cleaner (enzymatic daily shutdown), ABX Minoclair (weekly hypochlorite).	Parameter	Acceptable Blank Limit	Corrective Action	WBC	< 0.3 × 10 ³ /μL (< 0.3 × 10 ⁹ /L)	Repeat startup cycle	RBC	< 0.02 × 10 ⁶ /μL (< 0.02 × 10 ¹² /L)	Execute aperture Backflush	HGB	< 0.3 g/dL (< 3 g/L)	Run optical Miniclean	PLT	< 10 × 10 ³ /μL (< 10 × 10 ⁹ /L)	Inspect diluent / bubbles	WESTGARD RULES & MAINTENANCE PROTOCOL 1_{2p} (Warning): 1 control > ± 2 SD. Review reagents, proceed with caution. 1_{3p} / 2_{2p} / R_{4p} / 10_x (Rejection): Multirule violation. Halt patient testing immediately. Re-mix control, re-run; open fresh vial if needed (SOP-H-001 Section 5.9). Calibration (ABX Minocal): Perform 5 replicates (CV < 1.5%) after major maintenance, optical overhaul, or persistent drift. Requires CMT/Pathologist sign-off. Documentation: Log startup blanks, Difftrol QC, daily shutdown, and weekly Minoclair on F-H-002-A-V0 Checklist.
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Prepared by: Chief Medical Technologist Signature: _____ Date: _____	Reviewed by: Pathologist Signature: _____ Date: _____	Approved by: Hospital Director Signature: _____ Date: _____														