



Critical Values — Facility List and Notification Procedure

The results that must reach a clinician within thirty minutes, by phone, with read-back — signed by the laboratory director

Test	Adult — low	Adult — high	Paediatric	Test	Adult — low	Adult — high	Paediatric
Haemoglobin	< 70 g/L	> 200 g/L	< 80 / > 220	Sodium	< 120 mmol/L	> 160 mmol/L	< 125 / > 155
Platelets	< 30 ×10 ⁹ /L	> 1000	< 50 / > 1000	Potassium	< 2.8 mmol/L	> 6.2 mmol/L	< 3.0 / > 6.5 (neonate 7.0)
White cells	< 1.5 ×10 ⁹ /L	> 50	< 2 / > 50	Glucose	< 2.5 mmol/L	> 25 mmol/L	< 2.6 / > 20 (neonate < 2.2)
Neutrophils	< 0.5 ×10 ⁹ /L	—	< 0.5	Calcium (adjusted)	< 1.6 mmol/L	> 3.3 mmol/L	< 1.7 / > 3.2
INR	—	> 5.0	> 5.0	Creatinine	—	> 500 µmol/L (or 2× baseline)	> 200
APTT	—	> 100 s	> 100 s	Bilirubin (neonate)	—	per age chart	> 250 µmol/L day 1–3
pH (arterial)	< 7.20	> 7.60	same	Lactate	—	> 4 mmol/L	> 4
pCO ₂	< 20 mmHg	> 70 mmHg	same	Troponin	—	any positive, first time	—
Blood culture	any positive		any positive	CSF microscopy	organisms or WCC > 5		same
Malaria film	any positive		any positive	Acid-fast bacilli	any positive		same

Notification procedure

1. The laboratory phones the requesting clinician, or the ward nurse in charge if the clinician is not reachable, within 30 minutes of the result being available — never only by electronic release.
2. The receiver reads back the patient's two identifiers, the test, the value and the units (Toolkit 5). The laboratory records: time, value, who was informed, read-back confirmed.
3. The receiver records it in the ward log (Toolkit 5 Tool 5) and ensures a clinician acts; the action and time are documented in the patient's record.
4. Not reachable in 15 minutes → the laboratory escalates to the duty doctor, then the medical director. Every escalation is recorded.

Monthly audit: critical values issued ____ · notified within 30 min ____ % (target ≥ 95 %) · read-back documented ____ % · escalations ____ · signed: laboratory director _____ date _____

Thresholds are illustrative and must be set and signed by the laboratory director for the facility's methods and population. Adapted from WHO laboratory quality guidance and common practice (Kost/CAP surveys).

ASF standards: Hospital Standard 4 — critical results (means of verification: signed list, notification records, audit)