

STANDARD OPERATING PROCEDURE

Seamaty Analyzer

TCP/IP Setup, ASTM/HL7 Communication and Result Processing

Document ID	Revision	Effective date
SOP-SEAMATY	1.0	Upon approval

1. Purpose

This SOP defines the controlled registration, connection, validation, routine operation and troubleshooting of a Seamaty analyzer connected to Analyzer Interface. It covers TCP/IP listener endpoints, ASTM and HL7 message exchange, parameter mapping and LIS verification.

2. Responsibilities

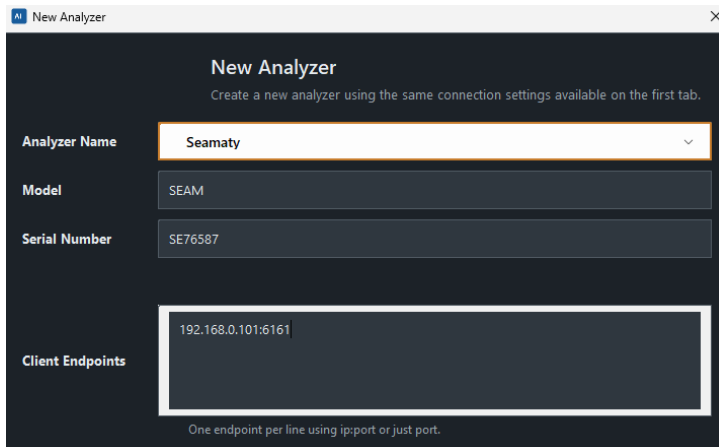
Role	Responsibility
Analyzer operator	Confirm readiness, transmit controlled samples, observe connection status and escalate errors.
Interface administrator	Configure endpoints, validate protocol exchange, map learned parameters and maintain connectivity.
Laboratory supervisor	Approve validation, go-live and material changes.
Quality officer	Control SOP, training, deviations and review cycle.

3. Prerequisites

- Analyzer Interface is installed and can access its database and LIS endpoints.
- The Seamaty analyzer has a fixed/reliable network, it can either be wireless or Ethernet.
- The selected TCP port is permitted through the host firewall and is not already bound or Firewall be switched off completely.
- Approved Seamaty-to-LIS parameter mapping and verification samples are available.

4. Register the Seamaty in the Analyzer Interface

1. **Select analyzer:** Open Create Analyzer or New Analyzer and select Seamaty.
2. **Enter identity:** Record the approved model and analyzer serial number.
3. **Enter endpoints:** In Client Endpoints, enter one listener endpoint per line using ip:port, hostname:port or port-only format.

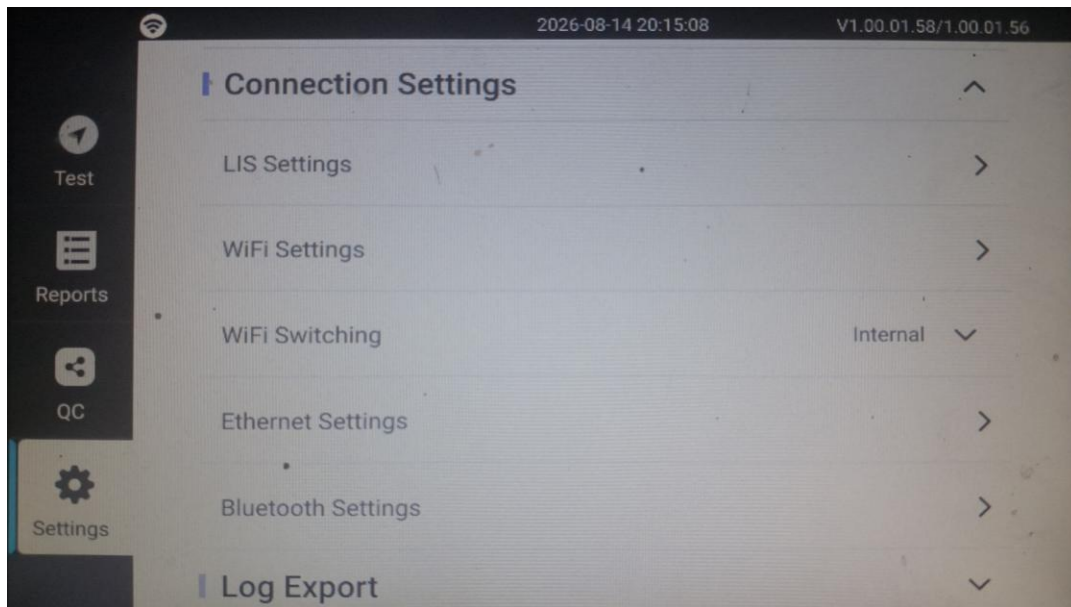


4. **Create:** Save the registration and confirm immediate listener startup in Logs.
5. **Configure analyzer:** Set the Seamaty host destination to the interface address and matching listener port.
6. **Connect:** Start or enable host communication and confirm the Seamaty client-connected message.

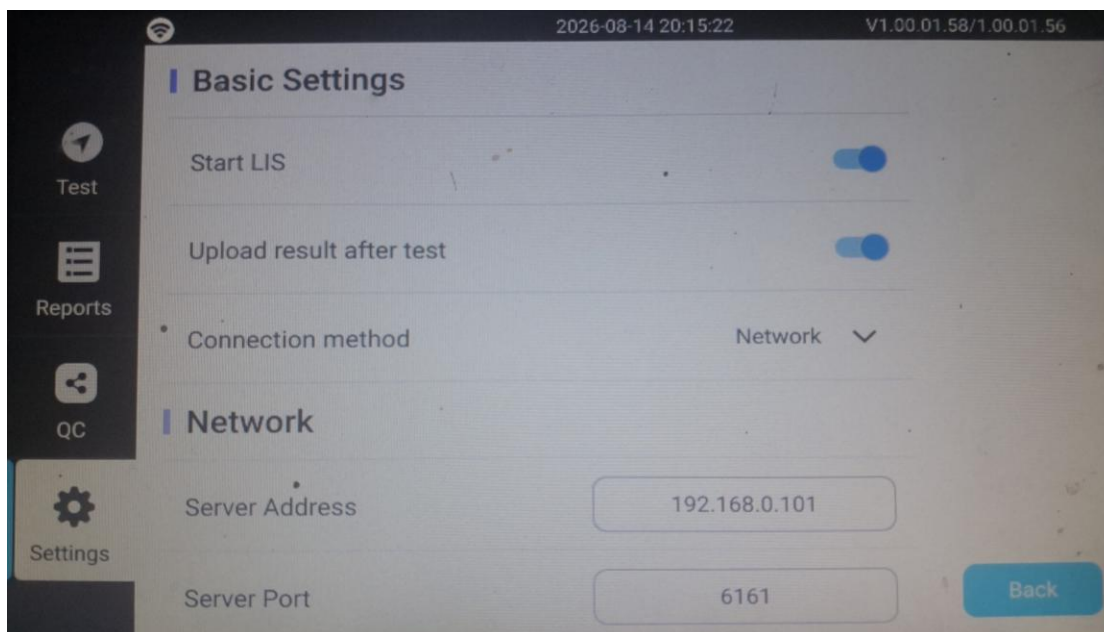
Endpoint example	Meaning
6161	Listen on all local interfaces at TCP port 6161.
192.168.0.101:6161	Configured host/address and port endpoint.

5. Configuring The Seamaty Interface

1. Open the Seamaty Interface.
2. Click on **Settings -> Connection Settings**



3. Connect to either Wireless (**Wifi Settings**) or Ethernet (**Ethernet Settings**).
4. Click **LIS Settings** -> **Connection Method** -> **Network**



5. Enter the **Server IP Address** and **Port Number**

6. Parameter mapping

1. On the Analyzer Interface, under LIS Details -> Enter the URL for ALIS URL -> <http://lims.moh.gm>
2. The tests from ALIS will be loaded.
3. **Transmit validation sample:** Use a sample that contains the full expected Seamaty test panel.
4. **Open Mapping Settings:** Select the registered Seamaty analyzer and review learned parameters.

Map Test - Seamaty

Seamaty
Selected from Mapping Settings

LIS Test

LFT|65

Test Parameters

Alkaline Phosphatase|205
ALP

Albumin|206
ALB

Total Protein|207
TP

Bilirubin Direct|208
DB

Save Cancel

5. **Map:** Assign every parameter to the approved LIS system code; verify units, range and flags.

Map Test - Seamaty

Seamaty
Selected from Mapping Settings

LIS Test

LFT|65

Test Parameters

Alkaline Phosphatase|205
ALP

Albumin|206
ALB
ALB
ALP
ALT
AMY
AST
BUN
CK
CRP

6. **Retest:** Transmit normal, abnormal and flagged samples and compare analyzer, interface and LIS values.

7. Troubleshooting

Symptom	Likely cause	Corrective action
Listener will not start	Port missing, invalid or already in use	Correct endpoint; stop conflicting process; permit firewall access; restart listener.
Analyzer cannot connect	Wrong host/port, route or firewall	Verify analyzer destination, ping/routing where permitted, and host firewall rule.
No results saved	No R/OBX records, missing specimen ID or incomplete record	Review Logs for record counts and skipped-record warnings; compare transmitted layout.
Wrong specimen ID	O/OBR field layout differs from expected configuration	Stop release, retain evidence and validate field placement before parser change.
Unmapped parameter	New analyzer code or missing mapping	Map the learned parameter and repeat validation.
Disconnect/reconnect cycling	Network instability or analyzer host restart	Check switch/cable/IP conflicts and analyzer host service; verify stable session.

12. Downtime and recovery

1. **Contain:** Stop automatic result release when connection, identity or mapping integrity is uncertain.
2. **Notify:** Inform the laboratory supervisor and interface support according to escalation policy.
3. **Use downtime process:** Report results only through the approved downtime workflow with required independent checks.
4. **Restore:** Correct endpoint/protocol/mapping, restart the listener and send controlled verification samples.
5. **Reconcile:** Check missing and duplicate results before routine operation resumes.