

STANDARD OPERATING PROCEDURE

Humastar 600

Analyzer Interface Setup, ASTM Communication and Result Processing

Document control	Value
Document number	SOP-HUMASTAR600-001
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Applies to	Humastar 600 connected to Analyzer Interface by RS-232
Owner	Laboratory Systems Support

Controlled document: Complete the approval section before clinical use. Local analyzer settings and the manufacturer manual take precedence where they differ.

1. Purpose and scope

This SOP describes how to register, connect, verify and operate a Humastar 600 with the Analyzer Interface. It covers the configurable RS-232 connection, ASTM session handling, AI-assisted result extraction, parameter mapping, monitoring and troubleshooting.

2. Responsibilities

Role	Responsibility
Laboratory operator	Run samples or QC, transmit results and confirm the correct sample ID and values.
System administrator	Register the analyzer, enter serial settings, map parameters and verify LIS delivery.
IT / biomedical support	Provide the correct cable, COM-port driver and analyzer host configuration.

3. Safety and prerequisites

- Use a validated RS-232 cable or USB-to-serial adapter appropriate for the analyzer.
- Obtain the Humastar 600 host communication settings from the analyzer configuration or manufacturer documentation.
- Ensure the Analyzer Interface is installed and the user can register analyzers and configure mappings.
- Record the analyzer serial number, assigned machine ID and Windows COM port.

Important: Do not assume a universal baud rate, parity, data-bit or stop-bit value. The interface is configurable; its values must exactly match the Humastar 600 host settings.

4. Physical connection

1. Stop any other LIS or terminal program using the intended COM port.
2. Connect the Humastar 600 host serial port to the interface computer.

3. Open Windows Device Manager and note the adapter's COM port.
4. Confirm the analyzer's baud rate, data bits, parity and stop bits.
5. Confirm the analyzer host output is enabled and configured for ASTM transmission.

5. Register the analyzer

6. Open Analyzer Interface and navigate to analyzer registration/setup.
7. Add or edit the machine and select Humastar600 as the analyzer name/profile.
8. Select the serial/RS-232 connection type.
9. Enter the Windows COM port and the exact baud rate, data bits, parity and stop bits from the analyzer.
10. Enter the analyzer serial number and save the record.

New Analyzer

Create a new analyzer using the same connection settings available on the first tab.

Analyzer Name: Humastar600

Model: H600

Serial Number: 32ESD SERIAL

Serial Port: COM8

Baud Rate: 19200

Data Bits: 8

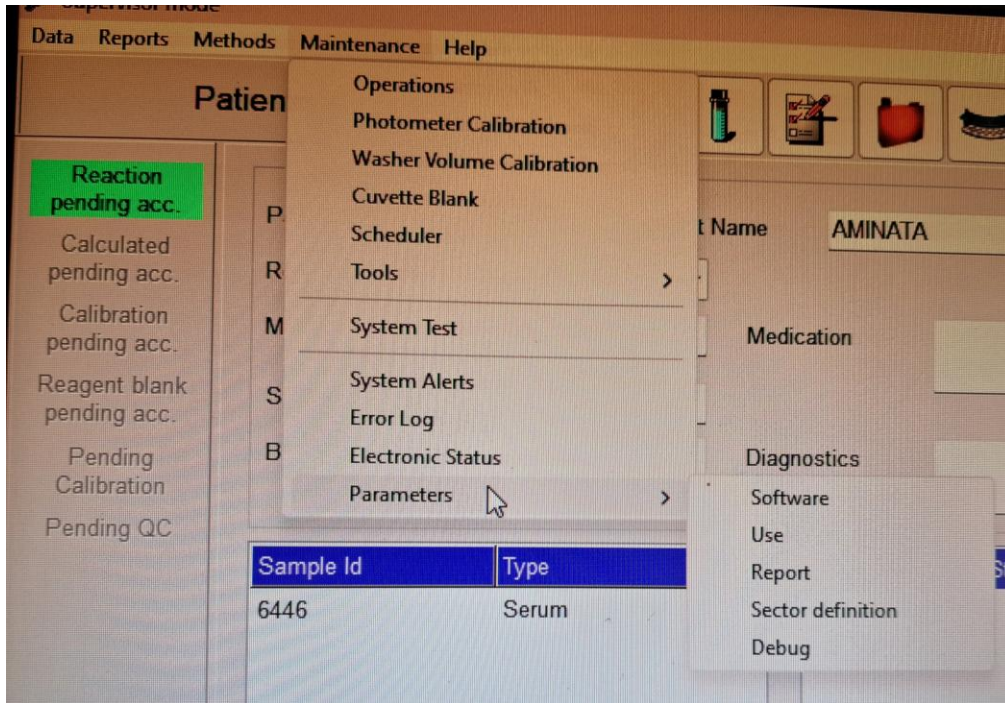
Stop Bits: 1

Parity: None, Odd, Even

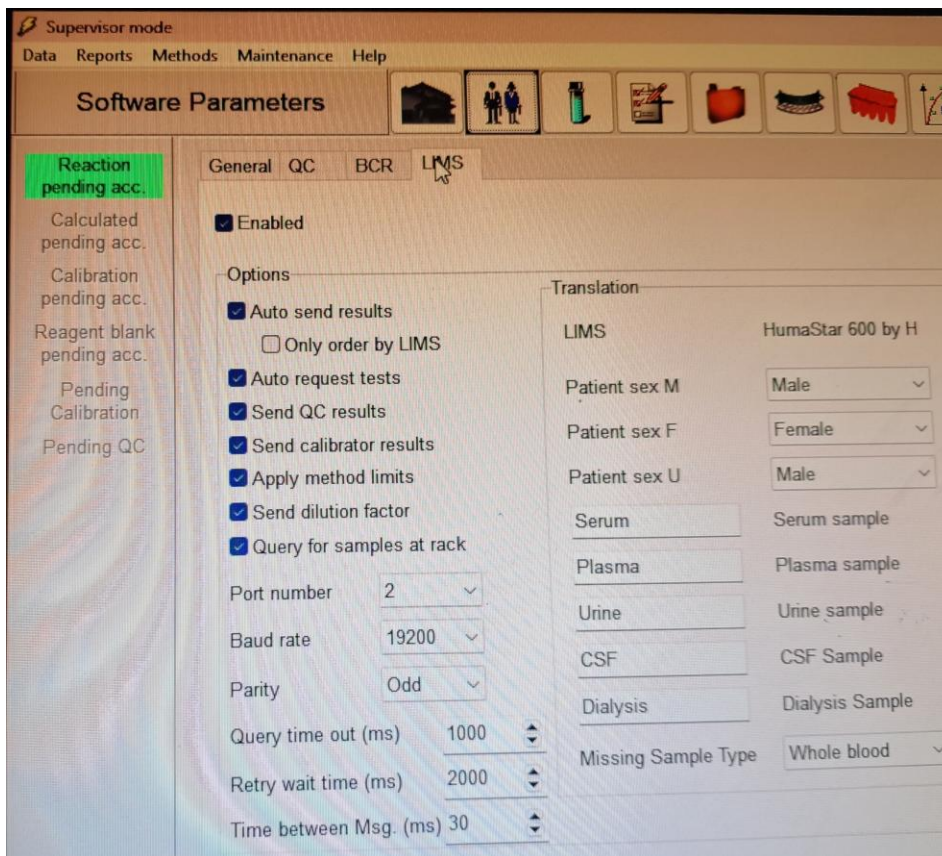
11. Restart or start the analyzer listener if it is not started automatically.

6. Configuring the Humastar600 for Transmission

1. Login as Supervisor On The Humastar600 Software.
2. Navigate to **Maintenance -> Parameters -> Software.**



3. Under **Software Parameters** -> **Select LIMS**.



4. **Click Enabled**
5. Ensure the Baud Rate and Parity are the same as the ones registered in **Step 5**

7. Parameter mapping

1. Transmit a complete patient or QC result from the Humastar 600.
2. Open the machine parameter mapping screen.
3. Map every machine test code to the correct LIS parameter/measure ID.

Note: Map Each Test Independently

Map Test - Humastar600

Humastar600
Selected from Mapping Settings

LIS Test

LFT|65

Test Parameters

Alkaline Phosphatase|205
Select mapping

Albumin|206
Select mapping

Total Protein|207
Select mapping

Bilirubin Direct|208
Select mapping

Save Cancel

4. Save the mapping and transmit a second known result.

9. Verification before clinical use

- The correct COM port opens without an access-denied or port-in-use error.
- The Logs tab reports the configured baud rate, data bits, stop bits and parity.
- ENQ, ACK, frame and EOT activity is visible during a transmission.
- A known sample produces the expected ASTM R-record results.
- Sample ID, parameter, value, unit and flag match the analyzer printout/screen.
- All required parameters are mapped to the correct LIS measures.
- The result reaches the LIS without duplication.

10. Routine operation

5. Start the Analyzer Interface before transmitting results.
6. Confirm the Humastar600 listener reports a successful connection in Logs.
7. Run patient samples or QC according to the analyzer's operating procedure.
8. Transmit results from the analyzer host/LIS function.
9. Review the Logs tab and results queue for successful extraction and saving.
10. Resolve unmapped parameters or failed uploads before closing the shift.

11. Troubleshooting

Problem	Corrective action
COM port will not open	Close other serial/LIS software, confirm the COM number and driver, reconnect the adapter, then restart the listener.
Parameter is unmapped	Open machine mappings, associate the machine code with the correct LIS measure and resend a validation sample.
Wrong sample ID/value	Stop clinical upload, retain the raw message and compare P/O/R fields with the analyzer display before remapping or retrying.
Com PORT	1. Open the Start Menu, type cmd, right-click Command Prompt, and choose Run as administrator. 2. Type set devmgr_show_nonpresent_devices=1 and press Enter. 3. Type start devmgmt.msc to launch the Device Manager. 4. In the top menu, click View and select Show hidden devices.

12. Approval

Role	Name / signature	Date
Prepared by		

Reviewed by		
Approved by		