



Hematology Analyzer from V3.0.x

Output Format for Host Connection

Ref: RAA085BEN

Output Format for Host Connection



Contents

1. Foreword.....	1
1.1. Document Update.....	1
2. Connection.....	2
2.1. Serial Connection (RS232).....	2
2.2. Ethernet Connection.....	3
3. ASTM Format.....	5
3.1. Introduction.....	5
3.2. Connection Specifications (LIS01-A2).....	6
3.3. Records General Format Specifications (LIS2-A2).....	8
3.4. Special Characteristics for HORIBA Medical Data.....	17
3.5. Curves and Matrix Transmission.....	21
3.6. Example of Data Frame.....	24
4. HL7 Format.....	53
4.1. Protocol Description.....	53
4.2. Message Segments.....	56
4.3. Special Characteristics for HORIBA Medical Data.....	68
4.4. Curves and Matrix Transmission.....	72
4.5. Laboratory Testing Workflow Examples.....	85
4.6. References.....	106
5. Appendices.....	107
5.1. Error Management.....	107





1. Foreword

1.1. Document Update

1.1.1. Revisions

Internal Reference	Software Version used for Documentation	Document Date Issued
RAA085AEN	3.0.x	06/2022
RAA085BEN	4.0.x	06/2024

This document applies to the latest software version listed and higher versions.

1.1.2. What's New?

Update	Chapter
	ASTM
	Order Record
	Comment Record
	Data Presentation
	Curves and Matrix
	Histograms
	Example of a Query With the Response
	Example of Patient Result Sent by the Instrument
	Example of QC Result Sent by the Instrument
	Example of Data Frame for Histograms
	HL7
	Data Presentation
	From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host
	OBR - Observation Request Segment
Selection of curves and matrix to send added	To Configure the RS232 Connection Mode
ASTM field 7.35 removed and definition reported to field 8.21	Patient Record
	Order Record
Analysis profile CHILD8 added	Order Record
	From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host with the SPM Segment
Possibility to run multiple tests: example added	Order Record
Alarm names and suspected pathologies updated	Analytical Alarms
Addition of ESR alarms	
Possibility to send curves and matrix in HL7 format	Curves and Matrix
Possibility to send QC in HL7 format	Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host standard result

2. Connection

2.1. Serial Connection (RS232)

2.1.1. RS232 Connection Overview

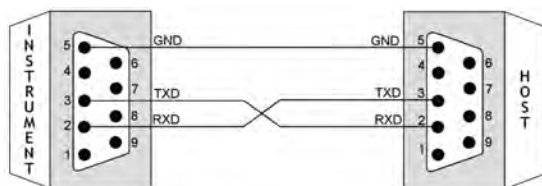


The RS232 connection mode is available only for the ASTM format on the Yumizen H500 OT/CT / Yumizen H500E OT/CT.

Communications can use the RS232 communication protocol, based on the Electronics Industries Association (EIA) standard RS232-C. As part of the conformance to this standard, the Yumizen H500 OT/CT / Yumizen H500E OT/CT Data Management System is configured as Data Terminal Equipment (DTE).

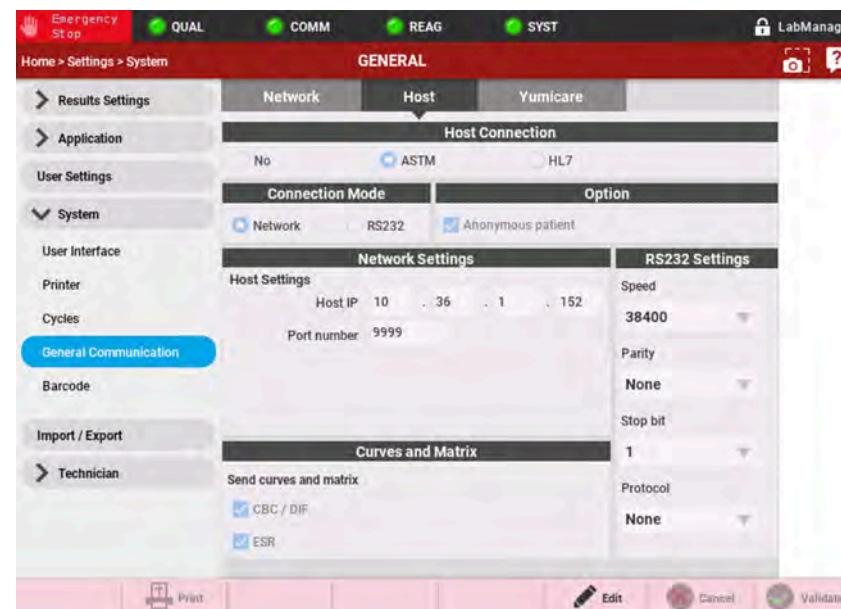
The Yumizen H500 OT/CT / Yumizen H500E OT/CT should be connected to the Host via the DB-9 connector of the instrument computer connection.

Pin (DB-9) data management	Host port configuration	Host cable must provide
2	RXD	TXD
3	TXD	RXD
5	Ground	Ground



2.1.2. To Configure the RS232 Connection Mode

Access: **Home > Settings > System > General Communication > Host**

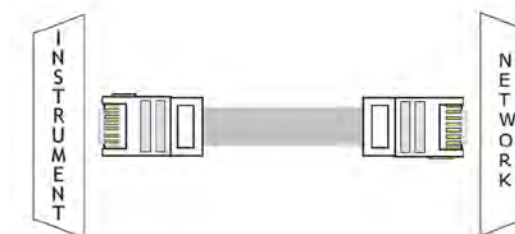


1. Press **Edit** in the contextual toolbar.
2. Select the **ASTM** connection format and select the **RS232** connection mode.
3. Configure the instrument communication port in the **RS232 Settings** area.

Option	Function	Default value
Speed	Speed transmission selection	38400
Parity	Parity selection	None

Option	Function	Default value
Stop bit	Stop bit selection	1
Protocol	Protocol selection	None

- Select the curves and matrix to send.
- Press **Validate** in the contextual toolbar.



2.2. Ethernet Connection

2.2.1. Ethernet Connection Overview



The network connection mode is available for the ASTM and HL7 formats on the Yumizen H500 OT/CT / Yumizen H500E OT/CT.

The implementation of network-based communication is based on the Windows Socket standard.

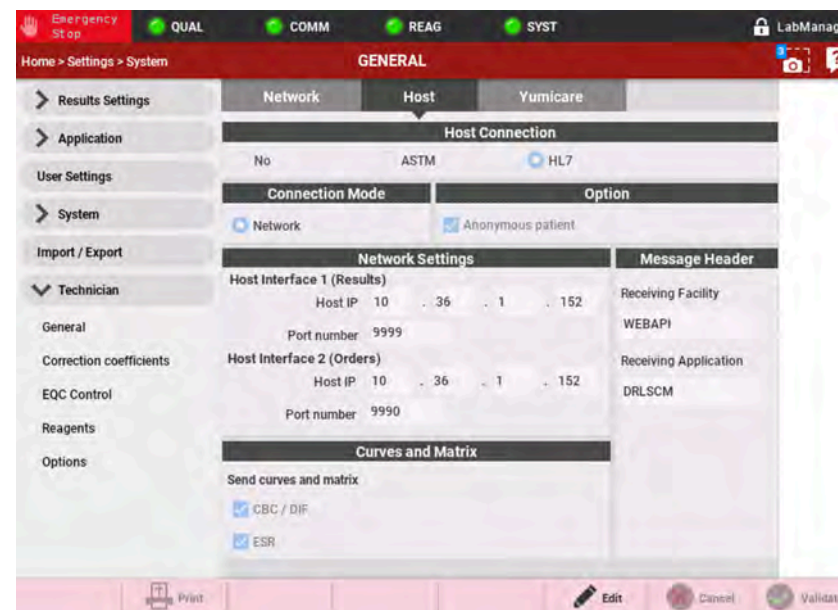
The data transmitted between the client and the server takes the form of ASTM or HL7 high level packets.

This connection is made through the RJ45 connector on the instrument.

The keepalive feature is activated on the Yumizen H500 OT/CT / Yumizen H500E OT/CT. The instrument sends a keepalive signal to the Host every 15 minutes in order to preserve the connection.

2.2.2. To Configure the Network Connection Mode

Access: **Home > Settings > System > General Communication > Host**



1. Press **Edit** in the contextual toolbar.
2. Select the **ASTM** or **HL7** connection format and select the **Network** connection mode.
3. If the **ASTM** connection format is selected, configure the IP address and the port number where the Host is awaiting connection in the **Host Settings** area.
4. If the **HL7** connection format is selected, configure the IP address and the port number to send results to the Host in the **Host Interface 1 (Results)** area and those to receive orders from the Host in the **Host Interface 2 (Orders)** area.
5. If the **HL7** connection format is selected, configure the receiving facility and the receiving application in the **Message Header** area
6. From the **Network** tab, in the **Analyzer Settings** area, configure the instrument network settings:
 - **Connection Mode**
 - **Analyzer Name**
 - **IP address**
 - **Subnet mask**
 - **Default gateway**
 - **Primary DNS** (optional)
 - **Secondary DNS** (optional)
7. Select the curves and matrix to send.
8. Press **Validate** in the contextual toolbar.

3. ASTM Format

The HORIBA Medical analyzers format corresponds to the ASTM specifications LIS01-A2 & LIS2-A2:

- LIS01-A2: Standard specification for low level protocol to transfer messages between clinical and laboratory instruments and computer systems.
- LIS2-A2: Standard specification for transferring information between clinical and laboratory instruments and computer systems.

3.1. Introduction

A connection between a computer (host) and a HORIBA Medical instrument can be performed when the protocol, the format description and the connection mode have been properly setup.

Term	Definition
<ACK>	Acknowledgment (ASCII decimal 6)
[C1]	The most significant character of checksum
[C2]	The least significant character of checksum
[DATA]	The data contents of the record
<ENQ>	Inquire (ASCII decimal 5)
<ETB>	End of transmission block (ASCII decimal 23). For use only when a single record is too large to fit into one frame.
<ETX>	End of text (ASCII decimal 3). Required at the end of each record.
[frame number]	Single digit frame number "0" to "7", starts with "1".
<LF>	Line feed (ASCII decimal 10).
<NAK>	Negative acknowledgment (ASCII Decimal 21).
<STX>	Start of frame (ASCII decimal 2).

Term	Definition
Communications packet	All framing required for transmission of data. This framing includes: <STX>[frame number][DATA] [<ETB> or <ETX>][C1][C2] <LF>
Component Field	One of several related pieces of information within a field.
Field	A specific location within a record for a piece of information, indicated by a field delimiter and position.
Frame	A complete communications packet.
LIS	Laboratory Information System
Message	A collection of related information; a group of records that begins with a "Header" record and ends with a "Terminator" record. A single record could theoretically constitute a message, but within this context, a message always contains multiple records.
<EOT>	End of transmission (ASCII decimal 4)
<CR>	Carriage return (ASCII decimal 13)
Record	In reference to the low level protocol, a record is the message data (shown as [DATA]) as described within the communications packet. If the data is longer than 240 characters, then it must be split in two (or more) parts and sent in two (or more) communications packets. The intermediate packet uses the <ETB> character, and the ending packet uses the <ETX> character. No single communications packet contains more than one record. In reference to the message layer, a record can be one of the following codes: H (header), P (patient), O (order), R (result), L (terminator), C (comment).
Session	A total unit of communication activity used in this standard to indicate the events starting with the establishment phase and ending with the termination phase.
Test	A determination of a single analyte or a combination of values from other determinations or observations from which a variable or gradable result is derived.

3.2. Connection Specifications (LIS01-A2)

3.2.1. Hardware and Software Characteristics

The default format for emitted character is 1 bit start, 8 data bits, No parity, 1 bit stop.

The default communication speed is 38400 bauds.

Hardware settings of the interface:

- RS232 connection via a DB9 connector
- Ethernet connection via an RJ45 cable

3.2.2. Output Data Characteristics

- Characters: ASCII
- Maximum message length: 247 characters
-
- The numerical values must use the character "." as decimal separator
- Xon/Xoff protocol

3.2.3. Communication Protocol

Standard control characters

Control String	Hexadecimal value
<ENQ>	\$05
<ACK>	\$06
<NAK>	\$15

Control String	Hexadecimal value
<STX>	\$02
<ETX>	\$03
<ETB>	\$17
<CR>	\$0D
<LF>	\$0A
<EOT>	\$04

Typical discussion between the instrument and the host

Instrument	<>	Host
<ENQ>	>	
	<	<ACK>
<STX>1...Data...<CR><ETX>xx <CR><LF>	>	
	<	<ACK>
<STX>2...Data...<CR><ETX>xx <CR><LF>	>	
	<	<ACK>
<EOT>	>	

Typical discussion between the host and the instrument

Instrument	<>	Host
	<	<ENQ>
<ACK>	>	
	<	<STX>1...Data...<CR><ETX>xx <CR><LF>
<ACK>	>	
	<	<STX>2...Data...<CR><ETX>xx <CR><LF>
<ACK>	>	
	<	<EOT>

Discussion with conflict between the instrument and the host

No answer from Host for an <ENQ>

- Timeout: 15 seconds
- In case of conflict: 1 second before a new transmission, up to 3 transmissions. Host timeout: 20 seconds
- In case of negative answer <NAK>: No time before a new transmission, up to 6 transmissions

Instrument	<>	Host
<ENQ>	>	
	<	<ENQ>
Wait 1 second		Wait 20 seconds
<ENQ>	>	
	<	
	...	
<EOT>	>	

Defect packet during discussion between instrument and host

Instrument	<>	Host
<ENQ>	>	
	<	<ACK>
<STX>1...Data...<CR><ETX>xx <CR><LF>	>	
	<	<NAK>
<STX>1...Data...<CR><ETX>xx <CR><LF>	>	
	<	<ACK>
<STX>2...Data...<CR><ETX>xx <CR><LF>	>	
	<	<ACK>
<EOT>	>	

3.2.4. ASTM Data Frame Format

A sequential number located after the <STX> character is inserted into each data frame. The frame number is set to 1 when the transfer phase is initialized and is incremented by 1 for each frame up to 7 and then returns to 0.

The frame number allows the receiver to distinguish new and re-transmitted frames. In case of re-transmitted frame (after a <NAK> response from the host), the frame number is not incremented: <STX>1...Data...<CR><ETX>xx<CR><LF>.

Frame format

ASTM field	Definition	Transmitted data	# of bytes	Comments
0	STX	\$02	1	
1	Frame number	1 to 7, 0, ...	1	Frame number is set to 1, incremented by 1 for each frame up to 7, and then returns to 0
2	Data message		240 max.	Header, Patient, Order, Result and Comment messages
3	End of data message ETX if end frame		1	
4	Checksum		2	
5	CRLF	\$0D \$0A	2	

Frame checksum

According to LIS01-A2, the frame checksum (<STX>1...Data...<CR><ETX>xx<CR><LF>) is defined as modulo 256 of ASCII values sum between <STX> not included and <ETX> included characters: 1...Data...<CR><ETX>.

3.3. Records General Format Specifications (LIS2-A2)

Data frames encapsulate records defined by the LIS-A2 norm, records themselves encapsulate ASTM fields.

Record ID	ASTM Definition
H	Header
P	Patient
O	Order
R	Result
C	Comment
Q	Query (Request information order)
M	Manufacturer information
L	Terminator record

3.3.1. Structure of Records

Structure of records for order transmission

- H (Header)
- P (Patient)
- .. C (Patient Comments) optional
- .. O (Order)
- ... C (Order Comments) optional
- L (Terminator)

The transmission of an order without patient record, even if not allowed in LIS2-A2, is accepted and managed in the Yumizen H500 OT/CT / Yumizen H500E OT/CT.

Instrument patient file modification by host

- H (Header)
- P (Patient)
- .. C (Patient Comments) optional
- L (Terminator)

Structure of records for result transmission

- H (Header)
- P (Patient)
- .. C (Patient Comments) optional
- .. O (Order)
- ... C (Order Comments) optional
- ... C (Run Alarms) optional
- ... M (Curves and Matrix points)
- ... M (Curves and Matrix points)
- ... R (Result)
- C (Flag Result) optional
- ... R (Result)
- C (Flag Result) optional
-
-
- ... R (Result)
- C (Flag Result) optional
- L (Terminator)

3.3.2. Description of Records

Only fields described with their specified length are used by HORIBA Medical instruments.

The length of a field can be less than the maximum value but must not be more.

Delimiters must be used even if a field is empty.

Field inside records are separated by "|" (ASCII \$7C).

Component inside fields are separated by "^" (ASCII \$5E).

Repeated fields inside records are separated by "\".

3.3.2.1. Alphanumeric Data

UTF-8 encoding is used for alphanumeric fields.

When alphanumeric data is sent, all the characters below 0x20 are replaced by an escape sequence with the following format: &Xhhh&.

"hhh" is the hexadecimal value of ASCII character completed with zero on 4 digits.

For example, <ETB> should be replaced by: <&X0017&>.

When alphanumeric data is received, the escape sequence &Xhhhh& is converted to the corresponding characters.

When alphanumeric data is transmitted, all delimiters characters they can contain must be replaced by their corresponding escape sequence as below:

Delimiter	Escape sequence
Field delimiter	&F&
Component delimiter	&S&
Repeat delimiter	&R&
Escape delimiter	&E&

3.3.2.2. Records to Send

Fields that are not used are sent empty.

When sending records, the instrument sends only non-empty components, i.e. without component delimiters for the last empty components of the field.

3.3.2.3. Received Records

If a field value, length, delimiter of a received record does not correspond to the required input type, the instrument generates an error log, and can ignore the record and its following ones (depending on the error and the message).

For more information about errors and messages, refer to the *Appendices > Error Management* chapter.

3.3.2.4. Header Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
6.1	Record Type	H	1	Fixed	No	Yes
6.2	Delimiters definition	idem standard: <ul style="list-style-type: none"> ■ field delimiter ■ \ Repeat delimiter ■ ^ Component delimiter ■ & Escape delimiter 	4	Text	No	Yes
6.3	Message Control ID					
6.4	Access Password					
6.5	Sender Name (from instrument to host)	InstrumentCode^SerialNumber^Software version Instrument codes list: H500/H500E	42 (15^15^10)	Fixed^Alphanumeric^Fixed	No	Yes
6.5	Sender Name (from host to instrument)	Host name	32	Alphanumeric	No	No
6.6	Sender Address					
6.7	Reserved					
6.8	Sender Telephone Nb					
6.9	Characteristics of Sender					
6.10	Receiver ID (from instrument to host)	Host name	32	Alphanumeric	No	No

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
6.10	Receiver ID (from host to instrument)	InstrumentCode^SerialNumber^Software version Instrument codes list: H500/H500E	42 (15^15^10)	Alphanumeric^ Alphanumeric^ Alphanumeric	No	No
6.11	Comments or Special Instructions					
6.12	Processing ID	P: Patient message Q: Quality control message D: Technician	1	Fixed list	No	Yes
6.13	ASTM Version Nb	LIS2-A2	9	Fixed	No	Yes
6.14	Date and Time of message	YYYYMMDDH HMMSS	14	Date and time	No	No

There should not be the field delimiter between 6.1 and 6.2 fields (as it is in the 6.2 field value).

In case of a response to a request (query, ...), the field 6.5 should be an exact copy from the 6.10 field sent in the request.

3.3.2.5. Patient Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
7.1	Record Type	P	1	Fixed	No	Yes
7.2	Sequence Nb	1, 2, ...	2	Numeric	No	Yes
7.3	Practice Assigned Patient ID					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
7.4	Laboratory Assigned Patient ID	Patient Id	25	Alphanumeric	No	No
7.5	Patient ID No 3					
7.6	Patient Name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	Name^First name	41 (20^20)	Alphanumeric	No	No
7.7	Mother's Maiden Name					
7.8	Birth date This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	YYYYMMDD^A GE^U <ul style="list-style-type: none"> ■ YYYYMMDD: Date of birth ■ AGE: Patient age ■ U: Unit of Age (Y, M, D or H for Year, Month, Day or Hour) 	20 (14^3^1)	Date^Numeric^ Fixed List	No	No
7.9	Patient Sex	M = Male F = Female U = Unknown	1	Fixed list	No	No
7.10	Patient Race-Ethnic Origin					
7.11	Patient Address					
7.12	Reserved					
7.13	Patient Telephone Nb					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
7.14	Attending Physician ID This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	PhysicianID^PhysicianName	20^30	Alphanumeric^Alphanumeric	No	No^No
7.15	Special Field 1					
7.16	Special Field 2					
7.17	Patient Height					
7.18	Patient Weight					
7.19	Patient's Known or Suspected Diagnosis					
7.20	Patient Active Medication					
7.21	Patient's Diet					
7.22	Practice Field 1					
7.23	Practice Field 2					
7.24	Admission and Discharge Dates					
7.25	Admission Status					
7.26	Location			Alphanumeric Max length: 20	No	No
7.27	Nature of Alternative Diagnostic Code and Classifiers					
7.28	Nature of Alternative Diagnostic Code and Classifiers					
7.29	Patient Religion					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
7.30	Marital status					
7.31	Isolation Status					
7.32	Language					
7.33	Hospital Service					
7.34	Hospital Institution					

3.3.2.6. Order Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
8.1	Record Type	O	1	Fixed	No	Yes
8.2	Sequence Nb	1, 2, ...	2	Numeric	No	Yes
8.3	Sample ID	SampleID	16	Alphanumeric	No	No
8.4	Instrument Specimen ID					
8.5	Universal Test ID	^^^Testname (CBC, DIF or ESR)	41 (^^^10)	Fixed list	Yes	From instrument to Host: yes From Host to instrument: no
8.6	Priority	R: routine S: STAT	1	Fixed list	No	No
8.7	Requested/Ordered Date and Time	YYYYMMDDH HMMSS	14	Date and time	No	No
8.8	Specimen Collection Date and Time	YYYYMMDDH HMMSS	14	Date and time	No	No
8.9	Collection End Time	YYYYMMDDH HMMSS	14			
8.10	Collection Volume					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
8.11	Collector ID					
8.12	Action Code	From instrument to Host: not used From Host to instrument: A: add on existing order N: new order C: cancel order	1	Fixed list	No	From instrument to Host: no From Host to instrument: yes
8.13	Danger Code					
8.14	Relevant Clinical Information					
8.15	Date/Time Specimen Received	YYYYMMDDH HMMSS	14	Date and time	No	No
8.16	Specimen Descriptor	SpecimenType ^^SpecimenLiquid SpecimenType: <ul style="list-style-type: none"> ■ BLOOD ■ CONTROL SpecimenLiquid: <ul style="list-style-type: none"> ■ CTRL LOW ■ CTRL MEDIUM ■ CTRL HIGH 	42 (20^^20)	Fixed list^^Fixed list	No	No^^No
8.17	Ordering Physician This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
8.18	Physician Tel Nb					
8.19	User Field 1					
8.20	User Field 2					
8.21	Dosage Category	AP^CHILD1 AP^CHILD2 AP^CHILD3 AP^CHILD4 AP^CHILD5 AP^CHILD6 AP^CHILD7 AP^CHILD8_W OMAN or CHILD8_MAN AP: Analysis Profile	2^20	Fixed list	No	No
8.22	Laboratory Field 2					
8.23	Date and Time Results reported or last modified					
8.24	Instrument Charge to Computer System					
8.25	Instrument Section ID					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
8.26	Report Types	From instrument to Host: F: final X: order cannot be done From Host to instrument: Q: response to request information Z: no record for this patient Y: no test for this record	1	Fixed list	No	Yes
8.27	Reserved					
8.28	Location or Ward of Specimen Collection					
8.29	Nosocomial Infection Flag					
8.30	Specimen Service					
8.31	Specimen institution					

The order must follow the following conditions, otherwise, the received order is ignored:

- Sample ID data of Specimen ID field (8.3) match the Sample ID data of the pending query
- At least one of Universal Test ID field (8.5) shall contain a TestName data
- In case of several Universal Test ID field (8.5), with at least one with a "DIF" TestName, and at least another one with a "CBC" TestName, the requested analysis is set to DIF
- Action code field (8.12) is "N" (New order)
- Report Types field from Host (8.26) is one of the following values: Q, Z, Y

If a received order contains a Universal Test ID (field 8.5) with a TestName different from CBC or DIF, the Yumizen H500 OT/CT / Yumizen H500E OT/CT will send back the order with the record type field set to "X" and the received order will be ignored.

Several tests can be run for a same sample. Example of a multitest frame DIF + ESR: O|1|0124||^DIF^ESR|R||19900522035000||||N|||BLOOD|||||||Q

3.3.2.7. Result Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
9.1	Record Type	R	1	Fixed	No	Yes
9.2	Sequence Nb	1, 2, ...	2	Numeric	No	Yes
9.3	Universal Test ID	^^^English result name^LOINC LOINC: From instrument to Host: code associated with the result frame, if available From host to instrument: not used	24 (^^^10^10)	^^^Open list^Open list^Numeric	No	^^^Yes^No
9.4	Data or Measurement Value	Test result or --- or +++	16	Alphanumeric	No	No
9.5	Unit or Set of units	Unit text (ISO 2955 or specific)	10	Open list	No	Yes but No if observation

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
9.6	Reference Ranges	From instrument to Host: Ranges^RangeDescription Ranges: lower limit to upper limit RangeDescription: ■ REFERENCE_RANGE From host to instrument: not used	20^15	Alphanumeric^ Fixed list	Yes	No
9.7	Result Abnormal Flag	From instrument to Host: L: below low normal H: above high normal LL: below panic normal HH: above panic normal <: below absolute low >: above absolute high A: rejected N: normal X: invalid value >>: above absolute visibility From host to instrument: not used		Fixed list	No	Yes
9.8	Nature of Abnormality Testing					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
9.9	Result Status	From instrument to Host: W: warning (suspicion on validity) X: order cannot be done (result) F: final result From host to instrument: not used	1	Fixed list	No	Yes
9.10	Date of Change in Normative Values or Units					
9.11	Operator Identification	From instrument to Host: Login^^User profile or LastName FirstName^^User profile User profile: TECHNICIAN / LABMANAGER / USER From host to instrument: not used	63 (41^^20)	Alphanumeric^^ Alphanumeric	No	Yes
9.12	Date/Time Test Starting	YYYYMMDDHHMSS	14	Date	No	Yes
9.13	Date/Time Test Completed	YYYYMMDDHHMSS	14	Date	No	No
9.14	Device Identification	From instrument to Host: 9380BDED579C From host to instrument: not used	15	Alphanumeric	No	Yes

3.3.2.8. Comment Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
10.1	Record Type	C	1	Fixed	No	Yes
10.2	Sequence Nb	1, 2, ...	2	Numeric	No	Yes
10.3	Comment Source	I: Clinical instrument system	1	Fixed list	No	Yes
10.4	Comment Text	From instrument to Host: For result comment (after R frame): alarm	200	Alphanumeric	Yes	Yes
		For order comment (after O frame): AlarmType^MeasurementType^AlarmMain^AlarmDetail	103 (20^20^30^30)	Open list^Open list^Open list	Yes	Yes^No^Yes^No
		For patient comment or sample comment (after P or O frame): free text This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	200	Alphanumeric	Yes	Yes
10.5	Comment Type	From Host to instrument: comments	200	Alphanumeric	No	Yes
		I: Instrument flag comment	1	Fixed list	No	Yes

Alarms specifications

The Comment Text (10.4) field can contain an alarm type data as follows:

- **CONDITIONS** for alarms linked to analysis conditions such as blank failed, reagent expired, ...
- **D** or **S** for alarms linked to the calculation of data such as Channel unstable measure, High linearity. **D** (Device) indicates an alarm linked to an instrument technical problem. **S** (Sample) indicates an alarm linked to the blood sample.
- **SUSPECTED_PATHOLOGY** for suspected pathologies alarms such as Leukocytosis or Large Immature Cells.
- **CONTROL_FAILED** for alarms due to bad control result.

The Comment Text (10.4) field can contain a measurement type data as follows:

- **WBC** if the alarm is linked to the white blood cells count.
- **DIFF** if the alarm is linked to the white blood cells differential.
- **PLT** if the alarm is linked to the platelets measurement.
- **RBC** if the alarm is linked to the red blood cells measurement.
- **RBC_OTH** if the alarm is linked to other measurements such as HGB and HCT.
- **ESR** if the alarm is linked to the erythrocyte sedimentation rate

The Comment Text (10.4) field can contain an alarm data as follows:

- One of the analytical alarms or suspected pathologies specified in [Analytical Alarms](#) in case of **D**, **S** or **SUSPECTED_PATHOLOGY** alarm type.
- The default condition in case of **CONDITIONS** alarm type.
- The reason of the control failure in case of **CONTROL_FAILED** alarm type.

3.3.2.9. Request Information Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
11.1	Record type ID	Q	1	Fixed	No	Yes
11.2	Sequence number	1..99	2	Numeric	No	Yes
11.3	Starting Range ID Number	^SampleID	17 (^16)	^Alphanumeric	No	No
11.4	End Of identifier List					

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
11.5	Universal Test ID	ALL	3	Fixed	No	Yes
11.6	Time limits					
11.7	Time Max limits					
11.8	Time Min limits					
11.9	Physician Name					
11.10	Telephone Number					
11.11	Reserved for User					
11.12	Reserved for User					
11.13	Request Information Status Codes	O: request for test information	1	Fixed	No	Yes

3.3.2.10. Traceability Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
14.1	Record type	M	1	Fixed	No	Yes
14.2	Sequence number	1..99	2	Numeric	No	Yes
14.3	Message type	"REAGENT" "QC" "XB" "STARTUP" "SETTING"	10	Closed list	No	Yes

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
14.4	Traceability name	"REAGENT": reagent name (CLEANER, DILUENT, LYSE) "SETTING": setting name (RUO, WBCDIFF)	20	Open list	Yes	Yes
14.5	Traceability Information	"REAGENT": ReagentID^Loaded date/time^Expiration Date 120130H1*^20120327151737^20120727 "QC", "XB", "STARTUP": status "SETTING": setting value ■ RUO: TRUE, FALSE ■ WBCDIFF: 5, 6	39 (15^14^8) 20 20	Alphanumeric^Date and Time^Date Open list Alphanumeric	Yes Yes Yes	Yes^No^Yes Yes Yes

3.3.2.11. Terminal Record

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
12.1	Record type	L	1	Fixed	No	Yes
12.2	Sequence number	1	1	Fixed	No	Yes
12.3	Termination code	N: Normal	1	From instrument to host: fixed From host to instrument: not used	From instrument to host: No From host to instrument: not used	From instrument to host: Yes From host to instrument: not used

3.4. Special Characteristics for HORIBA Medical Data

3.4.1. Data Presentation

The CBC, DIF and ESR codes correspond to the Universal Test ID field 9.3 and the units correspond to the Unit field 9.5.

3.4.1.1. Parameters

LOINC Code: Logical Observation Identifiers Names & Codes

CBC Codes	LOINC Code	Definition
RBC	789-8	Red Blood Cells
HGB	718-7	Hemoglobin Concentration
HCT	4544-3	Hematocrit
MCV	787-2	Mean Corpuscular Volume
MCH	785-6	Mean Corpuscular Hemoglobin
MCHC	786-4	Mean Corpuscular Hemoglobin Concentration
RDW-SD	21000-5	Red Distribution Width Standard Deviation
RDW-CV	788-0	Red Distribution Width
MIC	X-MIC	Microcytic Red Blood Cells percentage (versus RBC)
MAC	X-MAC	Macrocytic Red Blood Cells percentage (versus RBC)
PLT	777-3	Platelets
PCT	51637-7	Plateletcrit
PDW	51631-0	Platelets Distribution Width
MPV	32623-1	Mean Platelet Volume
P-LCC	96354-6	Platelets - Large Cell Count
P-LCR	48386-7	Platelets - Large Cell Ratio
WBC	6690-2	White Blood Cells

DIF Codes	LOINC Code	Definition
LYM#	731-0	Lymphocytes absolute value
LYM%	736-9	Lymphocytes percentage
MON#	742-7	Monocytes absolute value
MON%	5905-5	Monocytes percentage
NEU#	751-8	Neutrophils absolute value
NEU%	770-8	Neutrophils percentage
EOS#	711-2	Eosinophils absolute value
EOS%	713-8	Eosinophils percentage
BAS#	704-7	Basophils absolute value

DIF Codes	LOINC Code	Definition
BAS%	706-2	Basophils percentage
IMG#	53115-2	Immature Granulocytic cells absolute value
IMG%	71695-1	Immature Granulocytic cells percentage
IMM#	X-IMM#	Immature Monocytic cells absolute value
IMM%	X-IMM%	Immature Monocytic cells percentage
IML#	X-IML#	Immature Lymphocytic cells absolute value
IML%	X-IML%	Immature Lymphocytic cells percentage
ALY#	43743-4	Atypical Lymphocytes absolute value
ALY%	42250-1	Atypical Lymphocytes percentage
LIC#	55432-9	Large Immature Cells absolute value
LIC%	55433-7	Large Immature Cells percentage

ESR Codes	LOINC Code	Definition
ESR	82477-1	Erythrocyte Sedimentation Rate

3.4.1.2. Units

Default unit system:
Conventional

Codes: CBC	SI (international)	Conventional	mmol/L	Japan	China
RBC	10 ¹² /L	10 ⁶ /mm ³	10 ¹² /L	10 ⁴ /μL	10 ¹² /L
HGB	g/L	g/dL	mmol/L	g/dL	g/L
HCT	L/L	%	L/L	%	%
MCV	fL	fL	fL	fL	fL
MCH	pg	pg	fmol	pg	pg
MCHC	g/L	g/dL	mmol/L	g/dL	g/L
RDW-SD	fL	fL	fL	fL	fL
RDW-CV	%	%	%	%	%

Codes: CBC	SI (international)	Conventional	mmol/L	Japan	China
MIC	%	%	%	%	%
MAC	%	%	%	%	%
PLT	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ⁴ /μL	10 ⁹ /L
PCT	%	%	%	%	%
PDW	fL	fL	fL	fL	fL
MPV	fL	fL	fL	fL	fL
P-LCC	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ⁴ /μL	10 ⁹ /L
P-LCR	%	%	%	%	%
WBC	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L

Codes: DIF	SI (international)	Conventional	mmol/L	Japan	China
LYM#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
LYM%	%	%	%	%	%
MON#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
MON%	%	%	%	%	%
NEU#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
NEU%	%	%	%	%	%
EOS#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
EOS%	%	%	%	%	%
BAS#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
BAS%	%	%	%	%	%
IMG#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IMG%	%	%	%	%	%
IMM#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IMM%	%	%	%	%	%
IML#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IML%	%	%	%	%	%
ALY#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
ALY%	%	%	%	%	%

Codes: DIF	SI (international)	Conventional	mmol/L	Japan	China
LIC#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
LIC%	%	%	%	%	%

Codes: ESR	SI (international)	Conventional	mmol/L	Japan	China
ESR	mm/h	mm/h	mm/h	mm/h	mm/h

3.4.2. Alarms and Pathologies

3.4.2.1. Suspicion and Reject

When a result is suspected of being abnormal or false, it is not reliable and the instrument returns a flag in field 9.9.

Refer to [Description of Records](#).

3.4.2.2. Normal and Panic Ranges

Flags when result exceeds normal or panic ranges are transmitted through field 9.7, they should be compared, to obtain a full result information, to the ranges set by the user.

Refer to [Description of Records](#).

3.4.2.3. Analytical Alarms

Analytical alarms and suspected pathologies are transmitted in field 10.4.

Transmitted analytical alarms list:

Alarm type	Measurement type	Transmitted data	Description
D	DIFF	ANA_ERR^BUBBLE_DIFF	DIFF channel bubble?
S	DIFF	WBC_ABN_MAT^ABN_NEU	Abnormal NEU
S	DIFF	WBC_ABN_MAT^BLAST	Blasts?
S	DIFF	WBC_ABN_MAT^NEU_NOISE	Presence of a significant large population of cells located on the left-hand side of the neutrophil area
S	DIFF	WBC_ABN_MAT^NRBC	NRBC?
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON	Separation threshold is not found between the lymphocytes and monocytes areas
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON	Presence of a significant large population of cells located in the separation area between lymphocytes and monocytes
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON WBC_ABN_MAT^SEP_MON_IMM	LYM/MON MON/IMM
S	DIFF	WBC_ABN_MAT^SEP_LYM_NEU	Separation threshold is not found between the lymphocytes and neutrophils areas
S	DIFF	WBC_ABN_MAT^SEP_LYM_NEU	Presence of a significant large population of cells located in the separation area between lymphocytes and neutrophils
S	DIFF	WBC_ABN_MAT^SEP_MON_NEU	Separation threshold is not found between the monocytes and neutrophils areas
S	DIFF	WBC_ABN_MAT^SEP_MON_NEU	Presence of a significant large population of cells located in the separation area between monocytes and neutrophils
S	DIFF	WBC_ABN_MAT^SEP_NEU_EOS	Separation threshold is not found between the eosinophils and neutrophils areas

Alarm type	Measurement type	Transmitted data	Description
S	DIFF	WBC_ABN_MAT^SEP_NEU_EOS	Presence of a significant large population of cells located in the separation area between neutrophils and eosinophils
S	DIFF	WBC_ABN_MAT^SUSP_NB_ALY0 WBC_ABN_MAT^SUSP_NB_ALY1 WBC_ABN_MAT^SUSP_NB_ALY2 WBC_ABN_MAT^SUSP_NB_ALY3 WBC_ABN_MAT^SUSP_NB_ALY4 WBC_ABN_MAT^SUSP_P_ALY	Presence of a significant large population of cells in the atypical lymphocytes area
S	DIFF	WBC_ABN_MAT^SUSP_NB_IML WBC_ABN_MAT^SUSP_P_IML	Presence of a significant large population of cells in the lower part of the large immature cells area
S	DIFF	WBC_ABN_MAT^SUSP_NB_IMM WBC_ABN_MAT^SUSP_P_IMM	Presence of a significant large population of cells in the middle part of the large immature cells area
S	DIFF	WBC_ABN_MAT^SUSP_NB_LIC0 WBC_ABN_MAT^SUSP_NB_LIC1 WBC_ABN_MAT^SUSP_NB_LIC2 WBC_ABN_MAT^SUSP_P_LIC	Presence of a significant large population of cells in the large immature cells area
D	PLT	ANA_ERR^CLOG_PLT	PLT channel clog?
D	PLT	ANA_ERR^UNST_PLT	PLT channel unstable measure
S	PLT	OOR_PLT^LOQ	Result out of LoQ (Limit of Quantitation)
S	PLT	PLT_INTERF^PLTAGR	PLT aggregates?
S	PLT	PLT_ABN_HIST^ABN_PDW	Abnormal PDW
S	PLT	PLT_ABN_HIST^SEP_RBC_PLT	RBC/PLT
S	PLT	WBC_ABN_MAT^NRBC_PLTAGR	PLT aggregates or NRBC?
D	RBC	ANA_ERR^BAL_RBC_HGB	RBC/HGB channel balance
D	RBC	ANA_ERR^CLOG_RBC	RBC channel clog?
D	RBC	ANA_ERR^UNST_RBC	RBC channel unstable measure
S	RBC	OOR_PLT^LINEARITY	Result out of linearity range

Alarm type	Measurement type	Transmitted data	Description
S	RBC	OOR_PLT^VISIBILITY	Result out of visibility range
S	RBC	OOR_RBC^LINEARITY	Result out of linearity range
S	RBC	OOR_RBC^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC	OOR_RBC^VISIBILITY	Result out of visibility range
S	RBC	PLT_CONCENT	PLT Concentrate Mode
S	RBC	RBC_ABN_HIST^INTERF	Interference?
S	RBC	RBC_ABN_HIST^INTERF_RBC_WBC	RBC/WBC interference
D	RBC_OTH	ANA_ERR^UNST_HGB	HGB blank measurements out of the intensity ranges
D	RBC_OTH	ANA_ERR^UNST_HGB	Intensity instability during the three HGB blank measurements
D	RBC_OTH	ANA_ERR^UNST_HGB	Intensity instability during the nine HGB measurements
S	RBC_OTH	HGB_MEAS_BIAS^INTERF_HGB_WBC	HGB/WBC interference
S	RBC_OTH	OOR_HCT^LINEARITY	Result out of linearity range
S	RBC_OTH	OOR_HCT^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC_OTH	OOR_HCT^VISIBILITY	Result out of visibility range
S	RBC_OTH	OOR_HGB^LINEARITY	Result out of linearity range
S	RBC_OTH	OOR_HGB^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC_OTH	OOR_HGB^VISIBILITY	Result out of visibility range
S	RBC_OTH	PLT_ABN_HIST^SCH_MACRO_PLT	Schistocyte / Macro PLT?
S	RBC_OTH	RBC_ABN_HIST^ABN_DISTRI	Abnormal distribution
S	RBC_OTH	RBC_ABN_HIST^DBL_POP	Double population?
D	WBC	ANA_ERR^CLOG_DIFF	DIFF channel clog?
D	WBC	ANA_ERR^LIGHT_BEAM_DIFF	DIFF channel light beam error
D	WBC	ANA_ERR^UNST_DIFF	DIFF channel unstable measure

Alarm type	Measurement type	Transmitted data	Description
D	WBC	ANA_ERR^UNST_DIFF	Low correlation between the resistive and optical measurements on the matrix
D	WBC	ANA_ERR^UNST_DIFF	No cells counted in the flowcell
S	WBC	OOR_WBC^LINEARITY	Result out of linearity range
S	WBC	OOR_WBC^LOQ	Result out of LoQ (Limit of Quantitation)
S	WBC	OOR_WBC^VISIBILITY	Result out of visibility range
S	WBC	WBC_ABN_MAT^INTERF_TNC	Counted WBC abnormally low
S	WBC	WBC_ABN_MAT^INTERF_WBC	WBC interference
S	WBC	WBC_ABN_MAT^NEU_EOS_NOISE	NEU+EOS/Noise
S	WBC	WBC_ABN_MAT^SEP_LYM_NRB_C	Presence of a significant large population of cells located in the separation area between the background noise low and lymphocytes areas
D	ESR	ANA_ERR^UNST_ESR	ESR channel unstable measure
S	ESR	ESR_ABN_SYLLEC^HIGH_SHIFT	ESR high shift
S	ESR	ESR_ABN_SYLLEC^RECOV_SHAPE_DELAY	Recovery Shape Delay
S	ESR	ESR_ABN_SYLLEC^INTERF_HCT_ESR	HCT/ESR interference
S	ESR	OOR_ESR^ABOVE_MAX_VAL	Above max value

Transmitted suspected pathologies list:

- Leukocytosis
- Leukopenia
- Lymphocytosis
- Lymphopenia
- Neutrophilia
- Neutropenia
- Extrem neutropenia
- Eosinophilia

- Monocytosis
- Basophilia
- Large Immature Cells
- Atypical Lymphocytes
- Pancytopenia
- Aplasia
- Erythrocytosis
- Anemia
- Macrocytosis
- Microcytosis
- Hypochromia
- Anisocytosis
- Poikilocytosis
- Cold agglutinins
- Thrombocytosis
- Thrombopenia
- Malaria P. falciparum?
- Malaria P. vivax?
- Dengue?

3.5. Curves and Matrix Transmission

3.5.1. Curves and Matrix

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
14.1	Record type	M	1	Fixed	No	Yes
14.2	Sequence number	1..99	2	Numeric	No	Yes
14.3	Message type	"HISTOGRAM" "MATRIX"	10	Closed list	No	Yes

ASTM field	Definition	Transmitted data	Field max. length	Input type	Repeat delimiter	Mandatory
14.4	Measurement type	"RBC" "PLT" "WBC" "DIFF" "ESR"	10	Open list	No	Yes
14.5	Name	Graphic name	20	Alphanumeric	No	Yes
14.6	Thresholds	Encode Type^Threshold data "FLOATLE-stream/deflate:base64"		Alphanumeric^ Alphanumeric	Yes	No^Yes
14.7	Points	Encode Type^Graphic data		Alphanumeric^ Alphanumeric	Yes	No^Yes

3.5.2. General Decoding

The image data must be uncompressed using first the *base64* and secondly the *deflate* algorithms.

The data must be converted from binary to text format.

3.5.3. DIFF Matrix

Matrix manufacturer message record is as follows:

- The Message type field (14.3) is set to "MATRIX".
- The Measurement type field (14.4) is set to "DIFF".
- The Name field (14.5) is set to LMNERESABS.
- The Thresholds field (14.6) contains the "Encode Type" data. The Threshold data of Thresholds field (14.6) contains the FLOATLE-stream/deflate:base64 coded value of the DIFF matrix polygons.
- The Points field (14.7) contains the "Encode Type" data. The Graphic data of Points field (14.7) contains the FLOATLE-stream/deflate:base64 coded value of the DIFF matrix.

Matrix thresholds

DIFF matrix polygons thresholds data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE FLOATLE : IEEE 754 floating point value transmitted in Little Endian byte order (Intel)	X min value for Matrix start
4	X display max	FLOATLE	X max value for Matrix end
4	Y display min	FLOATLE	Y min value for Matrix start
4	Y display max	FLOATLE	Y max value for Matrix end
4	NumberOfList = 3	FLOATLE	One list for X coordinates of polygons, one list for Y coordinates of polygons, one list for box identifiers
4	ListLength	FLOATLE	Always 0

As matrix thresholds are never displayed nor printed, matrix thresholds must not be sent too (ListLength = 0).

Matrix points

DIFF matrix shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Matrix start
4	X display max	FLOATLE	X max value for Matrix end
4	Y display min	FLOATLE	Y min value for Matrix start
4	Y display max	FLOATLE	Y max value for Matrix end
4	X scale NB	FLOATLE	Number of X ticks in the list to display
4 x X scale NB	X scale	FLOATLE	X tick values
4 x X scale NB	Y scale	FLOATLE	Y tick values
4	NumberOfList = 4	FLOATLE	One list for X points, one list for Y points, one list for the number of points for this coordinate, one list for the population to which the point belongs (X, Y coordinates)
4	ListLength	FLOATLE	Number of elements in the list
4 x ListLength	X	FLOATLE	X (Coordinate)
4 x ListLength	Y	FLOATLE	Y (Coordinate)
4 x ListLength	Qty	FLOATLE	Quantity (number of points for the (X, Y) coordinate)
4 x ListLength	Pop	FLOATLE	Population to which the point (X, Y coordinates) belongs

PopulationID shall be set to:

- 0 for LYM box
- 1 for MON box
- 2 for NEU box
- 3 for EOS box
- 4 for IMG box
- 5 for ALY box
- 6 for LL box
- 7 for RN box
- 8 for RM box

- 9 for IMM box
- 10 for IML box
- 11 for LN box
- 12 for BNL box
- 13 for BNH box
- 14 for BASO box
- 15 for LOC box
- 16 for BNBUBBL box
- 100 for NOT_IDENT box

3.5.4. Histograms

Histogram manufacturer message record shall be in accordance with the following specifications:

- The Message type field (14.3) is set to "HISTOGRAM".
- The "Measurement type" field (14.4) is set to one of the following values: RBC, PLT, WBC or ESR.
- The Name field (14.5) is set to one of the following values: RBCALONGRES, PLTALONGRES, WBCALONGRES, TRANSALONGTIME.
- The Thresholds field (14.6) contains the "Encode Type" data. The Threshold data of Thresholds field (14.6) contains one of the following FLOATLE-stream/deflate:base64 coded value of: RBCALONGRES thresholds, PLTALONGRES thresholds or WBCALONGRES thresholds.
- The Points field (14.7) contains the "Encode Type" data. The Graphic data of Points field (14.7) contains one of the following FLOATLE-stream/deflate:base64 coded value of: RBCALONGRES data, PLTALONGRES data, WBCALONGRES data or TRANSALONGTIME data.

Histogram points

ESR histogram, PLT histogram, RBC histogram and WBC histogram data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Histogram start
4	X display max	FLOATLE	X max value for Histogram end
4	Y display min	FLOATLE	Y min value for Histogram start
4	Y display max	FLOATLE	Y max value for Histogram end
4	X scale NB	FLOATLE	Number of X ticks in the list to display
4 x X scale NB	X scale	FLOATLE	X tick values
4	Y scale NB	FLOATLE	Number of Y ticks in the list to display
4 x X scale NB	Y scale	FLOATLE	Y tick values
4	NumberOfList = 2	FLOATLE	Number of list of data. One list for X positions and one list for the Y positions (quantity on each X position)
4	ListLength	FLOATLE	Number of elements in the list
4 x ListLength	X	FLOATLE	X (Coordinate)
4 x ListLength	Y	FLOATLE	Y (Coordinate)

Histogram thresholds

N/A - ESR

PLT histogram, RBC histogram and WBC histogram data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Histogram start
4	X display max	FLOATLE	X max value for Histogram end
4	Y display min	FLOATLE	Y min value for Histogram start
4	Y display max	FLOATLE	Y max value for Histogram end

Number of bytes	Data	Format	Meaning
4	NumberOfList = 2	FLOATLE	Number of list of thresholds. One list for X threshold positions and one list of threshold Identifiers.
4	ListLength	FLOATLE	Number of thresholds in the list
4 x ListLength	X	FLOATLE	X value of the threshold for each threshold
4 x ListLength	ThrsID	FLOATLE	ID of each threshold (listed below)

ThrsID for RBCALONGRES: None (so ListLength = 0)

ThrsID for PLTALONGRES: (ListLength = 3)

Threshold name	ThrsId	Value
Pec	0	3
PltL	1	11
PltRbc	2	Mobile

ThrsID for WBCALONGRES: None (so ListLength = 0)

3.6. Example of Data Frame

3.6.1. Example of a Query With the Response

<- Instrument

-> Host

<- <ENQ>

-> <ACK>

```

<- <STX>1H|\^&||||H500/H500E^112YADH47745^3.0.0.3a|||||P|LIS2-A2|
20210709175737<CR><ETX>A6<CR><LF>
-> <ACK>
<- <STX>2Q|1|^0124||ALL|||||O<CR><ETX>E1<CR><LF>
-> <ACK>
<- <STX>3L|1|N<CR><ETX>06<CR><LF>
-> <ACK>
<- <EOT>
-> <ENQ>
<- <ACK>
-> <STX>1H|\^&|||||P|LIS2-A2|20210709175757<CR><ETX>94<CR><LF>
<- <ACK>
-> <STX>2P|1||0123||NAME^FIRSTNAME||19900522|M||||PHYSICIANNNAME|||||
echotomogr<CR><ETX>20<CR><LF>
<- <ACK>
-> <STX>3C|1||Patient Comment|G<CR><ETX>4E<CR><LF>
<- <ACK>
-> <STX>4O|1|0124||^^^DIF|R||19900522035000||||N||||BLOOD|||||Q<CR><ETX>B9<CR><LF>
<- <ACK>
-> <STX>5C|1||Order Comment|G<CR><ETX>47<CR><LF>
<- <ACK>
-> <STX>6L|1|N<CR><ETX>09<CR><LF>
<- <ACK>
-> <EOT>

```

3.6.2. Example of a Query Without Response

```

<- Instrument
-> Host
<- <ENQ>

```

```

-> <ACK>
<- <STX>1H|\^&||||H500/H500E^112YADH47745^3.0.0.3a|||||P|LIS2-A2|
20210709175737<CR><ETX>A6<CR><LF>
-> <ACK>
<- <STX>2Q|1|^0124||ALL|||||O<CR><ETX>E1<CR><LF>
-> <ACK>
<- <STX>3L|1|N<CR><ETX>06<CR><LF>
-> <ACK>
<- <EOT>
-> <ENQ>
<- <ACK>
-> <STX>1H|\^&|||||P|LIS2-A2|20210709175757<CR><ETX>94<CR><LF>
<- <ACK>
-> <STX>2P|1|<CR><ETX>BB<CR><LF>
<- <ACK>
-> <STX>3O|1|0124||^^^||||N|||||Y<CR><ETX>67<CR><LF>
<- <ACK>
-> <STX>4L|1|N<CR><ETX>07<CR><LF>
<- <ACK>
-> <EOT>

```

3.6.3. Example of Patient Result Sent by the Instrument

DIF

```

<- Instrument
-> Host
<- <ENQ>
-> <ACK>

```

```
<- <STX>1H|\&|||H500/H500E^112YADH47745^3.0.0.3a|||P|LIS2-A2|
20210709175022<CR><ETX>99<CR><LF>
-> <ACK>
<- <STX>2P|1||||^31^Y|M|||||echotomogr|||||MAN<CR><ETX>14<CR><LF>
-> <ACK>
<- <STX>3O|1|0566||^DIF|R|20210707172907|||||BLOOD|||||<CR><ETX>2C<CR><LF>
-> <ACK>
<- <STX>4C|1||CONDITIONS^^REAGENT_EXPIRED^PLT^ABN_HIST^SEP_RBC_PLT
\SUSPECTED_PATHOLOGY^^LARGE_IMMATURE_CELLS
\SUSPECTED_PATHOLOGY^^DENGUE||<CR><ETX>B7<CR><LF>
-> <ACK>
<- <STX>5C|2||This is a comment 567 ?|G<CR><ETX>52<CR><LF>
-> <ACK>
<- <STX>6M|1|HISTOGRAM|RBC|RBCALONGRES|FLOATLE-stream/
deflate:base64^Y2AAgW5nMMUQ5QIkHEAsAA==|FLOATLE-stream/
deflate:base64^bdUNAJtFHMfxU6tVs5eqJXNu08Rt3ToTnLW2cS/2ee6ysbm2pnZ1y3RaZ
+zcHKZadZLNlLattGq2yIIFUG6Qw1ISkUMIYZRhWmUIQIWIUmS9tKUNsEUTaoyifp/
kC<ETB>3D<CR><LF>
-> <ACK>
<- <STX>7TWEAz/ucrn87/nnpclYXy6VbYR
+7xCaJoQO6QQAwi3xwVjJ1TA2V0TcNo0e9Kn0ddS00P0x7RgaJbvNr2nc6WemnbrM3U1OnN0ZT
+gB0Nten2wXWe
+HsqcYU5cT1SfY96Qnum7wNxlOrWYP6a7A1c4Zkr3p2c4blaPuBY49nRP98k8WUwtfSGMnflIot
OSS0ZH3flRPVamYyVS+rKtKyQmb4qQTG3SblGOT+gpHEuNn+tZ<ETB>CB<CR><LF>
-> <ACK>
<- <STX>0D3SaWuS7oBfel7JWuT9cEW7MPYQew27KPYx3HC/
NaO1cHvEbwoc7ox32Peadwe5p7Bfp/5vfgfsp44NT5itf3UOcu6zIerwdo+pt4nrG
+ImsPYSezz2BewR7AvYqewL2F/hn0Z+4vs/kdcX2J/hf0N9hj2t9jY/+AfQX7J+xfscWep7CvYv+K/
Rv2DPbv2H9g/4k9iz2P/Rf2NewF7H84Riib/zrFPquezhTUpq9l2ZM3K<ETB>A4<CR><LF>
-> <ACK>
<-
<STX>1vZcxcel1cTczcppu5Vrb1OJ6kVqpm6xcgeWKK6FSsZK1PzAbcqtul1xXVRqulQZ94yyL1N
cl5WWy7Hwvl6BvRj7Fbd2PdG07Cd2Kux12CvxS7DXoe9HrscwP2fdgubDf2/dgbsR/ArsB+ELsS
+yHsKuxqbA/2w9ibsLdgb8V+BLsGW8PWsSW2wvZib8Pejr0Deyf2o9i7sGux67DrsR/D9mE3YD
+O3YjdhP0E9h7svdh+7<ETB>97<CR><LF>
-> <ACK>
```

```
<- <STX>2H3YT2l/hb0f+2nsZ7CfxT6A/Rx2APt57Bbsg9gvYB/
CPoz9lvYR7Jewg9it2C9jv4Ldhv0q9mvYr2MfxX4DO4R9DPs49pvYJ7BP0g+rma/DfD
+I3FdPMdaugftaqfmWSpZ0ULdDzZd1UrtTebZGqB9RocYU1tCIUoeirCOqRPht1vIONSZ5/
pt5TodJEffPGrKf1Jox3hde4iGVZrvenOcgJUSQv7PPes7Jp5/0khhpJT6zt<ETB>B1<CR><LF>
-> <ACK>
<- <STX>3cYyC5ASlv4no1ou/WbCBX3jnSYs0SytdW6hYx0XZv2NRNNz
+2GsedA8p0k9d46LLPuzmxwh75iBMkp+NPaCPV1MlpNyspk0kBZyjHSx9x/
QnqVNksvkOzLJ2Bztv7TFXqEt9YrRUt7ZK8hq+utoN5AKrwhX025mTKO/
i76PfiP9Pd7se350L6Ef3s33Bvr1ZCf9bbQcF66iddGWMMeagJWIVNzcxTt3wLWSBdUyTn8kYGWVt5
<ETB>88<CR><LF>
-> <ACK>
<- <STX>42kTufVz/whxkhwkTUSRSnlvMd4Vxcb5sB9T5v/
Np2SQxM09ayfNxGfuZ6V5P5WaKTLvKWpVx8ileT8Z1yVqSa85br3XwpbELGPWe67ZMIY4z9rP18j
Xs64hXzc/J7+WwjZm6Q+az8ZlwbMybPmtv6B+q6WftwYtKtZvaEG9z9nLi2ScLMn
+7/8H<CR><ETX>E3<CR><LF>
-> <ACK>
<- <STX>5M|2|HISTOGRAM|PLT|PLTALONGRES|FLOATLE-stream/
deflate:base64^Y2AAAQ4nMMXQA6ldgMjhxW9P+1dqO+3f1Yg7QuQa7EFyAA==|FLOATLE-
stream/deflate:base64^rZV/TJVVGMevcGdQUTBpREYDh0jmiJgSCfE
+23szxqChozF02DBZMhZOpkjGQERTAhKDVAwKEl0qGui/
AglDEUwSliQoC4E8cOgl<ETB>91<CR><LF>
-> <ACK>
<- <STX>6DSEwur7cs9d1xvjnzrju+d9z3me83z3Oe89qFTKsJDngiodMYnwADmySpUPTbB
+TZnbq4nWrfCdt3uW7+221ejfUBy0bhLFP0bpNHIndJwQqoU6pcjNVmXSN7d1VJJQYvEK2TMjz
HJaW+MsKCYpqsaawBpQ1kOIHO7cfpxTAPsqpfS5eWaygxNYCeHg
+m8eAwKq6IoC000WSfhEvtQwIY30/LQg8hJ426qzOQI0VZTtnz<ETB>4A<CR><LF>
-> <ACK>
<- <STX>7aXAg/nlLyT1aDFqSqkm6CzqztPuskRU1pCb/UVKDbhMwwnNpNG2UI5/
O83aXqdQvx4q29NLNiUDFK0bpibrMLRtFBy7C3SnZom7+5Z7K3i/
PMUlhCzZ1ti1k9asEe6vt4i4MVZ3g
+yDVBnjwauYTtk9ivxw731mz4UtS7l9yIEVhjeXLOPBfc7c5e3CV4NcuXbrStbGreKCNDc
+lufOKec8OL5xNW/v8eTwcS8ONvfm5<ETB>EC<CR><LF>
-> <ACK>
<- <STX>0+2e5WeekBh//Fiwhm22rWPzeD+eOuzPN04GcM
+FF7i1OYjrdRu4bDKYixaH8IHIqjndbRMnymEcE/ISR0SFc0jij+yfGcE+Ra/wk1WR7NQaxbb9r/
I9U9t5xjKgx2cu9TsdY2Lo4bNu7h8uh4PrMvgXOP7uXGjitsv4+rRplRYz+Xzh5An4Ocb30lvI40/
I9Evin7zS0D0dXwt8C30Pc1R4Bnof4c273kb/TF6fkgUP7<ETB>D2<CR><LF>
-> <ACK>
```

```
<- <STX>17CceqQ+juEa7XF4yWbXhhPw8y4v7cqBp1y2GnsPvt6f+  
+ZmLD8At5PwVwB2hfD4lfgVwecpMCyG19PgeAZ+PwLLEnguBc  
+P4fsTMNVyxumz4PopJ9ecA9sy3tV2Hnvw8LbBcjCu4E0zleD8GQdaVYN1DUtOteD9OXusqQPzel  
7ufxHcv2C7zQ1gf4nvjkbM/01858AVnEETj2c34xyucn/  
JlziLFv6mrhXn8RWYXQOzNjBrB<ETB>EA<CR><LF>
```

-> <ACK>

```
<-  
<STX>27OvwawDzDrB7DqYdYHZt2DWDWY9YPYdmH0PZjow6wWzPjD7Acz6wWwAzH4Es0EwG  
wKzYTABAbMbYPYTml2C2RiY/  
Qxmv8z9RmcsfwWzSTC7CWA3wOw3MJsCs9tgNg1mM2D2O5j9AWazYHYHzP4Es7+wrplbO1Ry  
w8ZFCr1ukVy71UyuGjGTy6PN5bJc1kbp5ZLZ9Xjivi/RhLuBMKdsgP  
+i6FsERXZK2EIHlnxD7WS1nrQ<ETB>36<CR><LF>
```

-> <ACK>

```
<- <STX>3lyN+DBkDbiDavHuCk2LvEeh+yEfUaO8O8r6tedErpesv+PUit9HrE+lfGV  
+lejTJTymQNdYf29eEe8VJtKK+zMFqoOOiBgu5taLHBj52Uik5C5YKHGHiEpNHZj1kf7ZUeTW0T/  
PypPKzBlyFc75RjLMGSKJ3CRRmy/+B8zNSfrnuTMT0VBnOMM+o2fTurlodN5Ed38DKro7zjjHsB  
+Z5BiG6V7GvUy/NeN145x5l/27xuB/v<ETB>95<CR><LF>
```

-> <ACK>

```
<- <STX>4j0WHLswv/m8/tcx3x6m52Hqb+H9/gY=<CR><ETX>03<CR><LF>
```

-> <ACK>

```
<- <STX>5M|3|MATRIX|DIFF|LMNERESABS|FLOATLE-stream/deflate:base64^Y2AAggf/  
XRjgtlMDiAkA|FLOATLE-stream/deflate:base64^7ZwJtF1llee/  
FkqZShDQaInkPFGBTRQIQH3kPmQcIqYPACxTxPxQyHOYEEekiATHATMg8QghDCeAIREZFB  
BQbvNgyCallzIRh79//vx9x1erutbp62VW67lrvW+fec8/9<ETB>FC<CR><LF>
```

-> <ACK>

```
<- <STX>6hj3v/973IRJ/3T/2lz+96q+uSnejHUv30v5S3xzzjP7SGd5fmpviel28P6y/tKbG+/i8c3V/  
qXaL7361v3TreH1w3N8pxkXxeljc2s5Kb7DXPFMa2yMuN9Miffj470D  
+kv78nj2iJjryngdo5wfn58V1xviGvM3O8fn58X7EbHGpHi/Ybw/J74/  
Lb4zOea7lu7F91uxt3Jh3GeeLlyda3djnebeD72Xu0dn8c+Suy/2Suu<ETB>6C<CR><LF>
```

-> <ACK>

```
<- <STX>7x8T1aK/RnRPxf4754gyty+J6Tbz/qvdQro3vblhZfi0+uzFebx/  
Xy71edXGMU2KteKaJ73bifb17jlfxf3Z89/i4Bg3LJXHdLr4zOp4ZFe/  
jHXXMXZ2VnwUN6+NNJ2gGjaqYp4I9dWI/  
zedij7F2Nz7rdOL9BTfizVas0Qk6lFi3mR6fQ6/4bntc3AuatEeaZ524Nsd7z  
+1Yt94zng1edGfGvaBVdWK8jjN3ppoOzdnxzJfj<ETB>1B<CR><LF>
```

-> <ACK>

```
<- <STX>0/QzTrDPM67fLJ34fjfmr8bEM7F+E7Row984W31u3L/  
QNGyYE7q0Y46+uBfnroJX9Zlx76qYZ168Pt+OZl4SctaK9TrxWR1nbAXfOsG3wuugQ0H24PXcuA/  
9rjGNCvQ+OedpwbegRQk61HGOerD51oz3/uf1tWY8Nyxunxz3Yp/VIXE/5kXem  
+BRh7MgN7elbB9onIRBkxL3mjhne0KM2F+DPAyybLag/cH+vlKu7P0Ky3wb<ETB>D8<CR><LF>
```

-> <ACK>

```
<- <STX>12uyW5w35rM+xbjUbxDX0o3WRadXhfGms5+WlCYVe15pH9V6WZfhTgn/  
1rnENOevMTBmK8zRV3D/EczaxRjf43uaMO/t+a4LlozrVNGoHTzqXW57ql6yj0Jnvol/  
sRfQOenXiWuJ9BT2nWeY5M8+2kljdLe+t4amv6M6stAPIZNww/2Q9aXaz3nSQvVizPcM6ivy0a  
+teO/jYRcaOSS4EjZrjEPYnhp5iLXrklfmy6aV9hJz<ETB>4B<CR><LF>
```

-> <ACK>

```
<- <STX>2Nbt4TXQN2jZBh3Ka+VSg/R659smevxlq/kNj6IKesUfKpUaXbvS+tKe4FmQBU8K5Y  
+56n7iGnHSCvIXwuM33gsbVJb4in+hevYPPVIK65YB4Hv0Jua/O8PrQr4I52tNsp0p8r  
+yXMhX7r14x/6vB1tkqztSCL8g9urqt7Sef6R4yP9z2sQq9qj6wjDEn32XeGrfjrV51n26zhff/  
t8gXnTHubR9Md1pvfBPNgwvteJZzvj<ETB>36<CR><LF>
```

-> <ACK>

```
<- <STX>3zCf4yXvJwDXmI9a  
+0LpQnxBzTLEdqsulLDLzSXmL3YPmURfRetb45iDrUvYBfS2GhLPHh7fi8/  
qkKHmMPuo5qC005+OsWO8D1mrj7bf0n5H+grvqhM8VwI9LcGfLjZ5IPdhex2twy63g1/  
N17wnzsAaXfT  
+GstwXScPRIhGoCV2DbvX3Gxb17nEA71D7zITE3vv4FOuTtk7zfazi88ImSiXWyxedTX  
+ZX3rZ7ksdePollMd<ETB>E6<CR><LF>
```

-> <ACK>

```
<- <STX>4TcMGep2b8NbytxVlnFoWR1vG1eG2C+z7wbb  
+Y9x70r7CvngR8QeJ6Z8jzRfsAfoFXtH1/EF+H7mrNNnNPhrbHms2451y6EZlwy3vWM/OL4+zfaK/  
dfB9+po76V1g20c/qAVzzb7pB0YZR1vz7bs4xOIM5q9ra  
+yyY08JnYKwajDBIU3Wob5PvqDnWlfnSmWyWor+yrsQ71+8v6ouB/f6V6S9iV42hCL7GKbK/uE/  
UKWLjPv<ETB>A0<CR><LF>
```

-> <ACK>

```
<- <STX>5xlfPojbCXkC/5kzbpHKu14Wv2J0ucUG/z1Wvbl1oOt4zfON8vNfr  
+XzB6ecj7IMVdBNpHUFv9S62H4RXmLvK/zMZPMN+16dnjYee3+N5Qzqd861bpTYb  
+H94ftrkrUDPS9xWXOIdao+0DpQD3XchU6UU/7Ez5xsG4fnwo+zLraeeAOZYM76yPjOUN  
+TzTnHstUcmjvbtlwfTvaaso+c/6Cc/1D7dc1/smO3Oj/nOXwJ8Q5n<ETB>6B<CR><LF>
```

-> <ACK>

```
<- <STX>6QUYUpx6bvj/PyNnro3L+4X6NHcA2Mhf7VEx4sG0KelqwtcQFp9oO4SPLIfZP  
+KImz1YN9b5E98vt52SDL0r7FM9VB+U+8B1XWwaw  
+8xRjrWP4TzQpWqnnz3VvJfs4e9/31fqkPkm/EizkmNKYqs6YhpixKbE+3+NZ9aOa+hWSVGPf//  
XYyQ1aoV12XjHu/39bPVf4vXEdM223sNYplSstrw+YoxNorP8m1N/  
O9aq0Y7CHm<ETB>04<CR><LF>
```

-> <ACK>

```
<- <STX>7LFulvY3XTfifet347DNxXT4+2zxeY49jXxW+iTN80vuuPxLXD8b7DWPEfhvs0RaOe/  
Bj1XrxzJfi+vf+Xh3r1p+P97H3aq88d8Q15b3YV5yz3tJ0qD8Qn3887ocvaMJPntvE+9hfvX  
+ML3htaFW2jvdrxAlaVJ+K95/POVb2mSqe5xwRa5W/  
jRF0aWlvTdiMahmfq3A29sxzMUcNXT7meaAFcZr2AA1jzWpz75czNXHOaou0<ETB>6D<CR><LF>
```

-> <ACK>

```
<- <STX>07+wRypjq6ZV/Yc  
+2akSZ6mXSz6vZ5qwV87YbG66NFv6fFXQtYn1qjhHCR7UQzyPnv2s5yrBsxK0qWI/  
1fLeP7FT2clnKMTYruqVvC/4DH20xiB/  
pwm6lcFJqy28XhX0aQ7wXusNfQadH95WSas4d7NOvP6c1xJd4HPYw7Jpysault8fFnVssJ6dchJx  
TPx/fpjrY/8QMhNHXJTs9Zm3hexDXyuV4vXQecqzkbMX3b2uZm3<ETB>20<CR><LF>
```

-> <ACK>

```
<- <STX>1JhdKH5+vvDbM9w8xPmE6EUdIH7bK/  
cW5yJapG4McB5FblJW9FvpU7WddafYwvZHRZv/UCWi6iWPKErxE55q  
+IOPwBe2p9mnEdsRg5azMZQ6zT8I24KPGfFE0trLaMG0DZyVPx/  
5eZ58hm3Klc5TqsLtlX1ZdZLto2z4CPTpYh1sO/Eh9ruJPZXwJ  
+QK5Gvl8lxXjrWPUqw31jkdQ3Fz0Je8vU18Oca62Rzp+lh4sHt9j9X<ETB>D5<CR><LF>
```

-> <ACK>

```
<- <STX>226aT4+Br8CfKXYgdRqSPZs6z7IM6N6bfie+TT5QJ9mnkF8SMBb8RclPtKnn7xc4/  
OTf5PD52IP4sR9uHKCYcZ7oQv5JHVxIP1PjYOGd7elxvddyOGqT9BOTzCdwDnhHDqncHJiBs1+  
XfN0mc/WLI/pv7GRBV2ekzIR8dkc4XmnVpmvB353mM5lvKOCixjrGfoJ8QzEwOjLd  
+Idsw0jLqzCHXSxfEbEs/C8vtw+sBW8IP4i<ETB>5B<CR><LF>
```

-> <ACK>

```
<- <STX>3v1Vsit+5ynEPPCQ/0p5Yj/iM9Ykjrj9FJ/CH2K7oxw/  
1RGHdCOHINZrRESucoNp0r3K0BE+Xfl78JXYU7+XOfs+BKew7/  
Kj5KHQEdi7DPTN5zqOaC78AjrN1y/QMyyx6avuyyijCdHW9fJVzi/iT0Sq/  
Pd5nTv5wEeSfGRS6labrlA/HFHt5vs579OrlaZ7TIBh+MvlFdda+zTSN25qzfkf80/  
WP7Ya0k8BjMULA4zjqJY<ETB>C4<CR><LF>
```

-> <ACK>

```
<- <STX>4CTm70jLenZHYycXWHfAc9kGsjxhG5gHfcSW6EynO85Av+oJmdM/  
GPFrjymevwbvkuNfcbLy85Dr1jzThp1t3RnjUuNpxCZVx3LH/N25PkNN7rbLcW25r1/xMLwu2J3b4/  
v3GCEOFSR34h45ZXdq6mfQs465u5xzYu5rrHUAaGVFudrufflS8vsf9WzNOJ9Zr5ccV2xP7b80zzVjxb5  
pg35EAI9tiO9SrsaDynPGWebQpnBa8o<ETB>E9<CR><LF>
```

-> <ACK>

```
<- <STX>5C+P1LGNHnYwMNVgh8I3usa1so+/  
znZd3GufsnK3NWpOtS2Bg5IHEhTU6cbVzIbrcYbbPgX1IH8K5kl1bjUuQqzdxrvYY761W9rPabZB9f  
2W2e5k27n2nda1Tny/  
fxfMfyvXgict8vSrf7OAmOdrdh766EY1zqna8V85PdgA8ILb7Rsd4xDtGemHo7yjhSM9NnaJb0C7u  
S/Qs+dWLO9mLTrLPYnkYya1byLWjSAs+akPgi<ETB>21<CR><LF>
```

-> <ACK>

```
<- <STX>6NmmS8ZA6aF2g2V3xbNieJs7WPGw9AN8jtwevrYLe3Xm2T  
+g99oF8CTyDmHkgXia36lzk+9hF5avktNiMq/oix4wxJcbdMR6N  
+OfSGPP69Fk9N8YncX9+XH8a1+ti3Bvjlng/  
LK6XxJgWY3iMhTEeivt3+7vit3GNub4f1yVxvcFz1WPj9YQYM  
+P1WzHui9cvxHgmxi9ixPv64Rgz4vWFuc7UuE6PcWO8vj6usX55Je9dE2NM<ETB>FE<CR><LF>
```

-> <ACK>

```
<- <STX>7DOal12V8jNHeU70gxuXx  
+mrvWeOyuDfJn5XnY9wZY4z3pX3e5TPWi2OMi9fM8XqM0Umj22L895ybc58X15Ex+M5s76P  
+ps9XXorXj8f4I3gd56lZ+80YT+TZ47I6hGITuE6O94/EuCcG5/hJf7Xe61v8j7YT/  
lVjMfyZKx9UYzYe93E++diQGfu3eY59N2Red4b88refhyDfULXK0xbzcXZR5/  
JfYTDII8kXxcl8+yp07S<ETB>3D<CR><LF>
```

-> <ACK>

```
<- <STX>0+iWfr0CL7+V5kYfvWr4031lLz1e4H7ypZya9fpnnDrqXJfmdoGe5MsYPvU690OeG7vWjKQ8  
xZ4Ee98d7xnMp088mn19O/vH9t/298rPkwVMpo/  
+S9ODZ2ryov5XyNT7INj6vg971K96fdGRh8iPOVv8q15+aMjDJ/IGukvegdZikesAT6cU34nrtUjmoJ  
+Qzj+b5r8j935Z8RdbRk9CJ+tkfFwvMSpm4MOXq5hgTPXdbJn+a<ETB>0F<CR><LF>
```

-> <ACK>

```
<- <STX>1fB6d8gufbo33X/d  
+4VX5xvLoTetQvSjIG37PifFL81b6gz1A709LWs1K3Xo1BnOcmfudZb2QfUGuxuRen7IsIVNiPJ3Pxt  
qlY1mrJ6eMPGCBu/P922O8nbZiVu7j0dTdBbYf9YN9tl3p32ZaBmCj+URry  
+9nGD6cVbx4vWbyUPRqZMjOvRU908dtxfdLPif7PpaxDH/hyecrqaZB/eu4sjbP/o/  
UhbFJg2kpJ7OWyoyk<ETB>FB<CR><LF>
```

-> <ACK>

```
<- <STX>24mafP7DO6NzPAA8fSV18O+X10ZSxb5tO4u9v0kZNsSzKNmA/r7BsYMfLdNuG  
+sp8jTz7L2Vf066smfktDsneyWzEsnHJdz3Zj6NTPpis0/vU82S37itNTfpy3fzVHy/dWcb3HKxHdi/  
CLnm5s0DdnExkKDiIgi/HIHHxv+vVrk+KOJa/d2xydhx0/dMPn1xELtR9wzNO61/GQYovF8Xn4/  
Va87tzneAmcR/I5507UJMj/<ETB>F2<CR><LF>
```

-> <ACK>

```
<- <STX>3G7AJcItyc2pVYEQHZC5JrksO/WFJA9Q2qRWBPZBXgnkIB1ih37jstv/  
Up91ZeTf6yp3ET4T0f7RfGDJZQ/  
41z3Gpj4wSaC8wB3GDFzM83Mg5DHE0+U30psQEwk8r5uPKRLzhnpw5cb  
+A5wCUaMJ6li8FbYgrGC0TngGu0jJU05O77+Kw1uf76xk2EubD/  
mKOJ75X9TR9wKHKjwjbF7tEz2aWB+sV/RyX/mKclnV+oV3NMs5<ETB>DE<CR><LF>
```

-> <ACK>

```
<- <STX>4n1MeRv37I/3CWZo1jX1wftbhfGA08KQBj9rDc0JDYS9g7v3x3MrGEMASwlzq9ZlnW/  
u8YBPCuAYZ/wCrE763hmnA98F2xlsN/ZzwNHakclhYr/lgv+qnYDfgajX75bk1M996N3IN3rtFv2upf  
+wTtiSMOWgKhsO  
+hQGCZ2xjXIX6OnPVIWnZbOY9Ilg8mjb9oetbkqWsYm6ihJ5jghyxrAvuBKYG7slzrCn5AW/  
axXJNnZoa<ETB>F2<CR><LF>
```

-> <ACK>

```
<-  
<STX>5sLAp8uXN8jlkHzxtlbgPBraS94Y8kjcK59rUtBeGB34T75s4XxOy0oSMFeR3TZ8FrAjMEVkvP  
jPla6BD4FLUssQLZgTNwKPAYj9hPEAYFPjPih7IkDAZ5G1z6yW4GTJEH8uJawO3u5I/  
RRerFLW7G55pl6tmu/ufi29BjMDZ6gSzwCjC91sNvW56lXTTjA3tcXEP8E1wV/  
RSfhQ72fbwD34gXxJXtHxdc0H9Ktin9umzdnU<ETB>B1<CR><LF>
```

-> <ACK>

```
<- <STX>6clt92PoLVgfmAYaljWk  
+ZdlXLbzefxROGGcGrwYfLB927jyAaVYrptxsnPq3t88pbHSTtHPoJusGT+kPEU/Xtb4TM  
+JfBcQhXCP/yj9F/6VOAhfjM8ITnw2ffYc+xF8qZ6/Ke14k/b/J35WsePFY7piePe6HO8elf9oPwz/  
usSr1fO7XNsOTe/M8L+rL7D/kGx/  
V3274pD7809sB6+57fph17K9zekH1tgf6349U77a8UT<ETB>E1<CR><LF>
```

-> <ACK>

```
<- <STX>7v7UfVizG+YiBn8tz46de9ncUrwzPtWenb77ZPlcxG/u/Mf35BX2OUe  
+zD1aMMi397ku5t8h5FLM+ks/dnXFM5BfEhDyJOOqs5A2fjcgzvZk+PWJW8iPFihEzy/  
ZROWjfQsxQr2PbKDULt/iw7Z+w4z8m38M/V+DRq6VdW862sMJGL2ufmfwOx42RDIA+DcwW  
+y65O8x7wZr1a1jSqxh5qayEft98Xrslo+z/fAn1dKe8V+<ETB>BE<CR><LF>
```

-> <ACK>

```
<- <STX>0gn/C3IMvqt0sZ5vAc/Xv  
+mQvqIXSLq3ldTiX8ivOS91gDZ8Df6u9fTJ1YkXTRDgzur2C1y0DOveBtF/  
45X3Sjmyb9gY78iHbyZp60MqeC11UrYiYafn0NR8wjYn9VwvCTsOrtWyLwcO1I83z7MQcwSfZ82V  
t42Rv8AerJA1WS9u8csYhK9qOl/  
36fzcp14OBTlquKcFzABMi5onvUjdiKfKgzZj4rrwn5hYSXiqC740Oz4<ETB>DC<CR><LF>
```

-> <ACK>

```
<- <STX>1zrR4PmlsBawp85010tVd5xu/AxsBExH/  
TfgnmBqU4wLISbmHpf4y22eDzyxdZfjOTDr1q2Jr95pLKYNXj2xX/gP/  
gGMFmyu9U3vv8yLexHjCSNAP8+2jS3kR4+IHEzsSV+Gr0hfv5dPoes/  
tTPyY7wOnIVYRro6pyMq2Mu1VTAQMjR0Pev25YVbBd69nDGshG/Cssnfgg9x2/  
Izj7g2Fhx1r22idrnxmlzJ3of8jzHBsX<ETB>82<CR><LF>
```

-> <ACK>

```
<- <STX>2BnNGbIT9Ps79o/js28QRce7vxPdeDnr8IOj5ZFxfQGfjmRid9+Kzx+OZuJbn4zXPx2i/  
4ns8U70ez8Uc5Vs3xu+147RxDyduNLT2DwR13imzXeei/s/jtc/ifvxPFg1/  
XxqsR7ar3q46qzgrwGo6bGS+3jKpdgUfsAP6VGDC4Nrg5eTm2burPqutTS6fkBRw6ZUWz/  
MDS0rNTE7Asdx/NZ9+tx5fXhQafjYvz9DqUcFNcj<ETB>A0<CR><LF>
```

-> <ACK>

```
<- <STX>3Y5wYY2iMY/P9Cfl6lxHxDg0xhFB22fiXJz7ezGe6hdWrlrOGYmP/  
TDWi2daj8X12bgXPChB8/qd+N472JZ+YXhgnsRB9P2pfn181I1t89XXLdrxp/YotCbZj/Hf  
+g9dKRGSp1N8fmQjM/BBqHPSY7F8dWKC9AJavm75uvBSc+zM  
+bq2xBv41iGOKXeB7MXeuvbHorVqPHJWtxqueQS  
+zsuAccm9hOsfHqtpGqrx2cMd9e<ETB>22<CR><LF>
```

-> <ACK>

```
<-  
<STX>4juexTc2Kjqeo02DH1EdEbXMjx0nwWnUsYlPkARnZxzFPTS3ICtONM6IHalvHUsQ71JroAVB  
OsXjRMU/GTOqL4MzFSXt+s62d/gz8HnVokBb/aekFX6c  
+gbos5F7UjfJ2YkHtzc9p86unozqWNTUzjSPFOfbvASbJWeD+UqxLDZtwKGqx4z  
+psitqe3RXV8aEltZk9/n9fUXXhW9fND80q8eETmBft8xTmPgXAW4IT5Ioi<ETB>85<CR><LF>
```

-> <ACK>

```
<- <STX>5ju1XvUm9F6dlL+YRIhlyTPITajTEvarpJS/  
Vpzo6e332sKzQh0guqZzsRPNxgPf0N9HPKXuF3zvM5yL  
+Jp99X0aZF19CnrNT9sYntjyqhzN0lhyPvhRkUXXozbNuRp7KOQ+yzZesY1el/  
Q82DVRfwpfjKmttavjWNVHdnRMT85Ab6xyEHRgmP0t+Qt1leSCOVRzJn75WPpm+iXg1QXpaz  
+Ze6de/0/WV8nydqmnW1sn0Rft<ETB>7B<CR><LF>
```

-> <ACK>

```
<- <STX>6aZ9c/2LXfairUGdRDDDoFjKw+QY6uXZwOdU3rG+8xrql8gm8ktNXj1Gn3AeoZoBvm  
+gJ4ealrj+p1OGDKi5xZbu5CtrwzPyCXoksMfQHL1XLTPkXfW1wT6jep/I8cixuG5suSjBM/p/1H/  
Ksxtan7ElxBGq6W5pOURnyE/gN3tEV5VrkKPT5wWf17G9VO2afleeof3NI/  
UJXOR9EKPce3lr0eRk2wTlqptZZ6XvMW+X3it0<ETB>5C<CR><LF>
```

-> <ACK>

```
<- <STX>7ZXbOtnAtW0fyNfUa4FcjnZPHr12wkfAVEJHqj3M/2aI5UU82dL2Vn0/W9p
+MXcTdKx3su9TPyu54YE+u3qEP+u11IdxWdo47p1gmUaPJYcXWKbVd84a9FRB48r2lBwSnZc
+bGdbkMwjfIT6cpA/6Axv0Uvq9Of4LPSQYWclA
+gCtPuc5ZgeCGroNXkiPWPPrpM9e2XOSk9KTqnx1fOrWqKx5Ew/Ta8Bz5LxnWKfxJ6pJ/
6Np<ETB>3D<CR><LF>
```

-> <ACK>

```
<- <STX>0Rv8C9pnaMzVP6Rz9COjOue53qOjJpt/soJRf7O+I5Nd21k/
1xllzDbKuqQdlcO6XWPhoy6VsW3/q0+6Wl7CGaoOUg8rfo7dG/
ovYeZjtozAS9IE68XqpW8QjW1vGslvlyNQz+tA+6uf0TNgK+nUV/yMbn09dQx+2TPqETCo/
oR4M9gYdsYMbp51ifXrjDrF/IB6s5vfKkaDnpraVx3EKeqBJGb
+uP0I9I72+PzUz33NY8kV<ETB>4F<CR><LF>
```

-> <ACK>

```
<- <STX>1n6Hf2KgtXGvHJqjGPVD/x0b/nfeELdDvTza2r9JvR/Zl3wGGAsb0ZcuYfhcCHT+Tz/
TZP6CLshfo3Mk+L3GGMMS1Ux/XtV8TX45LOm9mvuv7IXWUuEz+eCXrgmJLbOma5oX6M
+kNW9X2UjX/w5Mm6/tc+Bv6QNWjB/9GWI/oP1NPGLoWote
+XHSuwfCI08kvyllf7FotCPxPOD7YNmjt42DUBNQfQJMYUeNlEpEzCs8Ym3kH<ETB>E3<CR><LF>
```

-> <ACK>

```
<- <STX>2NcYHnWvoeXJ36lg/6FMNSXj6FOMs6i0ES405qKsKZ/
hDn3Ax5SfPJAYylzGWiYkXzEkxYZKxCOHy1KdeMc5APq96Fmd6o8856jec0wj/
eKfP9Q6wg0WJPboxjKX+WZ9y6TJQe3vO+ZHqdTn8X7kRedYrPh95UZ11WnAgYtVUosCJlk9V/
k7ONd5no56kNRaZfiprQZ7hDedFDdgDGOvkPtVHeC1ciF8tnGbgdxN52D
+ibnm<ETB>4C<CR><LF>
```

-> <ACK>

```
<- <STX>3ONMXnikPvN84jGhPheyFmH+Zftdlbk3cBnzi56aX6ERTD3mg3gG9wY+oGYK/
3Oxzip9gXuBd1BdDXISr2rPPuNE400K42sykyZLcH7VGSkXRSdNu5plgPNR7vuu8lnqJsKs/
GO9RLa7uE94jWVuQnABnW5i0+Lfk842Zy87OfHmhn9F8QV/hHtCR3PV574mzSMbB/JC5b/
pcmuMB58SSN/h+ZfLn/tzDnbnm15N+IfPU8TiP<ETB>E4<CR><LF>
```

-> <ACK>

```
<- <STX>4+PGGzyC8aFTSDfztoeQLsgfuNz3n
+7FIV7jZq3l9KvXg4pR9eEtujv6Ru4eMnkFXogu6Rb3pmTwz9e+RXku9tU/
kunf7zOIN9cmUc9Fren4PuQrTG5+6xDleTf2an3RApn+Y+/i+9VR1RORqoB
+CeucivC7JM1CDnpBydk/K61zLpWSMuai3UiOblvTCxhxnuX9aVLH0A+wpDdy/
9QPsvWUDcvAN24j35fCRnCu/NdiyMd6L<ETB>AC<CR><LF>
```

-> <ACK>

```
<- <STX>5MJfHk6czTC/pPXXQF9MwxJ17ejllHHn7SdqRJ/MMv89zlp
+vpS1B98DFXsvzvZfzULt8O9fYwTEa+Yd884EZqw9Jn/f5jB3o09w9/dsO6WuoN4C3kS/gq/
scCxGvqaf38ozlPpMD/x3PC/8kBjnXMV6bmOTjllnAVYnd1Yv+VcdMxKDKY6xJzK9+njMd
+9DzrvgrHJNwxwryt+RdRzm/VF57umPw8inHJ/p9xeccD9CnSs6k<ETB>9B<CR><LF>
```

-> <ACK>

```
<- <STX>6fl0Y9CzHm6qtZU2DOInfm0Av+hXVw09NZtOlcTN1LsXE59u3sw/5/2Mdn
+s3A3326ftr1nZeQz2Hqzt2ZS/gHMp7pnrvxP74cWpA4CDcU3y6ifM8YWTE9NsYS1Lthnjywz/
VnEOoHrSRzKf17LHnHiau1vd8c01PeEF+zsWJV+fegLvfWbh4NMV+XrO+d+P21aqQYcv7Yyf/
U7WulK+LWO96TfOhKrLu/cDr4qDhni9eu2<ETB>D8<CR><LF>
```

-> <ACK>

```
<- <STX>7Yxb15Z6TOMcQx3bK9dnrkJRJBH6DHF0o9/orJz5x/4Z2+/u/
Eq9peenjhWh48ShjgeVB9CvvG2eYePMk8AZtk5ZONd6ot8KjnB8r3xwdcdl
+o3eaqad8riNTQf0qDnJv5ui149+M8Wcu1o2VAfY2rkjPd2Sv884xm+R063pPSJzZS/Hg
+iGaqmxfne07xH/g4mpBjbsqwa6/EZv2/qWJzfxeh3Hcs7jqW3G5qp9w87cIT1<ETB>77<CR><LF>
```

-> <ACK>

```
<- <STX>0WrVEcLYdnY
+AD5ATq7d9F8tXIHUyRVXhv0VfkF8uG7qw4opH0OcA1LD0ffAcPzLqfflBD3oAN/
a7tk7Y34Uub85+HDKK3jCj1wLF0a/hs+peJ6cC59CrZq6JvJ1bpZ51cTpG
+F3KMUXJnly0rG4Ks6ppfNxG5T/836iWJ4cBV8BXH28tYt9E84Fv5gh9T/nS3j9B1I/
6il75XyFbZNSw5UMRz+m0odZ4NHNdjl+hBF46x<ETB>AB<CR><LF>
```

-> <ACK>

```
<- <STX>1dup4K20WMdoKlKniF+J91b2edTyjPHOQZRofLQxmX+dJ5KT4e/
GSmbaaEU8OTv6tZBvcfMI0YU3VUddM3XnNMRmxujC2XXNt5lZy6YGM2WJO/
fYg7innl4Zc235AWAZxKTzbOPGmfCGv87cP0Fq6TY5CvERMmt8lo/FjxG3bpy8/nT/
+7+JoYZG7CTM9FnmPhKvZKP22Uhr0GuyLuf6vPOC+2Yq2Uzb2dL6o+xB7YJ/
10<ETB>5A<CR><LF>
```

-> <ACK>

```
<- <STX>2v3B9Xfx7L+Md4g9kiX2Sg/wyY6177fPV84M8PpSx43cc4xFLKF95N337/
PyM2OrSjKpMoc7RdaLjnp7FL/clDHJW/
mdxbIH5PPXGdsQs83MeHNaxlnTHH8Rnyr2OC9jQOLPRzL++lb3oL64+zOOYT
+3ZpyyKONFYmxinsm00fQ94unhecbm94ivqEHjXUOTrow9xWmk2i3xPuA3u/
HtvuZRoqr6Jc6O88x1XOrn4uYr+24<ETB>BC<CR><LF>
```

-> <ACK>

```
<- <STX>3byA/U733tox9eP4O77lkn5Sefc5zvd8v+aTnVZ14vvesHktq2NSal/
ZSr9jcfEfh3YtC125Leae68UTHWMIbCpl5GeOdkXs
+LPm1MHINbnlS7vEfJZ4eLxprLo3sSP1cmSJOvpi00g2jD2clWd9lek1OWPDJy0LkpWjTHfFjuQ3x
NqcnVjzl6aZ+szmWEbqgfh8qmVQ+S25APQ/NZ9IX8+k7hO/XmWakv6GF
+Qn5ADZMyc6<ETB>19<CR><LF>
```

-> <ACK>


```
<- <STX>3R|2|^^^RBC^789-8|3.61|1E06/mm3|4.20 - 6.00^REFERENCE_RANGE|L||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>91<CR><LF>
```

-> <ACK>

```
<- <STX>4R|3|^^^HGB^718-7|10.9|g/dL|13.0 - 17.0^REFERENCE_RANGE|L||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>B2<CR><LF>
```

-> <ACK>

```
<- <STX>5R|4|^^^HCT^4544-3|41.1|%|40.0 - 54.0^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>CD<CR><LF>
```

-> <ACK>

```
<- <STX>6R|5|^^^MCV^787-2|99.7|fL|80.0 - 100.0^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>76<CR><LF>
```

-> <ACK>

```
<- <STX>7R|6|^^^MCH^785-6|28.7|pg|27.0 - 34.0^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>60<CR><LF>
```

-> <ACK>

```
<- <STX>0R|7|^^^MCHC^786-4|31.7|g/dL|32.0 - 35.0^REFERENCE_RANGE|L||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>00<CR><LF>
```

-> <ACK>

```
<- <STX>1R|8|^^^RDW-CV^788-0|9.7|%|12.0 - 18.0^REFERENCE_RANGE|LL||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>97<CR><LF>
```

-> <ACK>

```
<- <STX>2R|9|^^^RDW-SD^21000-5|38.1|fL|37.0 - 56.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>60<CR><LF>
```

-> <ACK>

```
<- <STX>3R|10|^^^PLT^777-3|218|1E03/mm3|150 - 400^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>56<CR><LF>
```

-> <ACK>

```
<- <STX>4R|11|^^^PDW^51631-0|16.8|fL|11.0 - 20.0^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>D0<CR><LF>
```

-> <ACK>

```
<- <STX>5R|12|^^^PCT^51637-7|0.327|%|0.150 - 0.400^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>E1<CR><LF>
```

-> <ACK>

```
<- <STX>6R|13|^^^MPV^32623-1|9.2|fL|7.4 - 12.0^REFERENCE_RANGE|N||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>83<CR><LF>
```

-> <ACK>

```
<- <STX>7R|14|^^^P-LCC^96354-6|0|1E03/mm3|44 - 140^REFERENCE_RANGE|L||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>8C<CR><LF>
```

-> <ACK>

```
<- <STX>0R|15|^^^P-LCR^48386-7|0.1|%|18.0 - 50.0^REFERENCE_RANGE|L||W||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>94<CR><LF>
```

-> <ACK>

```
<- <STX>1R|16|^^^LYM#^731-0|3.77|1E03/mm3|1.00 - 4.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>EC<CR><LF>
```

-> <ACK>

```
<- <STX>2R|17|^^^LYM%^736-9|39.4|%|15.0 - 45.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>17<CR><LF>
```

-> <ACK>

```
<- <STX>3R|18|^^^MON#^742-7|0.27|1E03/mm3|0.20 - 0.80^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>EE<CR><LF>
```

-> <ACK>

```
<- <STX>4R|19|^^^MON%^5905-5|2.8|%|4.0 - 13.0^REFERENCE_RANGE|L||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>D3<CR><LF>
```

-> <ACK>

```
<- <STX>5R|20|^^^NEU#^751-8|5.14|1E03/mm3|1.50 - 7.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>EC<CR><LF>
```

-> <ACK>

```
<- <STX>6R|21|^^^NEU%^770-8|55.0|40.0 - 75.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>04<CR><LF>
```

-> <ACK>

```
<- <STX>7R|22|^^^EOS#^711-2|0.25|1E03/mm3|0.00 - 0.50^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>DA<CR><LF>
```

-> <ACK>

```
<- <STX>0R|23|^^^EOS%^713-8|2.6|0.5 - 7.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>66<CR><LF>
```

-> <ACK>

```
<- <STX>1R|24|^^^BAS#^704-7|0.02|1E03/mm3|0.00 - 0.20^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>C4<CR><LF>
```

-> <ACK>

```
<- <STX>2R|25|^^^BAS%^706-2|0.2|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>45<CR><LF>
```

-> <ACK>

```
<- <STX>3R|26|^^^LIC#^55432-9|0.30|1E03/mm3|0.00 - 0.20^REFERENCE_RANGE|H||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>2F<CR><LF>
```

-> <ACK>

```
<- <STX>4R|27|^^^LIC%^55433-7|3.2|0.0 - 3.0^REFERENCE_RANGE|HH||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>FD<CR><LF>
```

-> <ACK>

```
<- <STX>5R|28|^^^ALY#^43743-4|0.28|1E03/mm3|0.00 - 99999.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>36<CR><LF>
```

-> <ACK>

```
<- <STX>6R|29|^^^ALY%^42250-1|3.0|0.0 - 100.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>1C<CR><LF>
```

-> <ACK>

```
<- <STX>7R|30|^^^MIC^X-MIC|0.3|0.0 - 20.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>B7<CR><LF>
```

-> <ACK>

```
<- <STX>0R|31|^^^MAC^X-MAC|0.2|2.0 - 10.0^REFERENCE_RANGE|L||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>9F<CR><LF>
```

-> <ACK>

```
<- <STX>1R|32|^^^IMM#^X-IMM#|0.28|1E03/mm3|0.00 - 0.10^REFERENCE_RANGE|H||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>5D<CR><LF>
```

-> <ACK>

```
<- <STX>2R|33|^^^IML#^X-IML#|0.18|1E03/mm3|0.00 - 0.05^REFERENCE_RANGE|H||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>60<CR><LF>
```

-> <ACK>

```
<- <STX>3R|34|^^^IMG#^53115-2|0.01|1E03/mm3|0.00 - 100.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>8B<CR><LF>
```

-> <ACK>

```
<- <STX>4R|35|^^^IMM%^X-IMM%|3.0|0.0 - 0.5^REFERENCE_RANGE|HH||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>2C<CR><LF>
```

-> <ACK>

```
<- <STX>5R|36|^^^IML%^X-IML%|1.9|0.0 - 0.2^REFERENCE_RANGE|H||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>E8<CR><LF>
```

-> <ACK>

```
<- <STX>6R|37|^^^IMG%^71695-1|0.1|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210707172907|20210707172907|  
112YADH47745<CR><ETX>C0<CR><LF>
```

-> <ACK>

<- <STX>7L|1|N<CR><ETX>0A<CR><LF>

-> <ACK>

<- <EOT>

ESR

<- Instrument

-> Host

<- <ENQ>

-> <ACK>

<- <STX>1H|\^&|||H500/H500E^110YOEH04272^4.0.0.5|||||P|LIS2-A2|
20240328163932<CR><ETX>83<CR><LF>

-> <ACK>

<- <STX>2P|1|||||M<CR><ETX>F0<CR><LF>

-> <ACK>

<- <STX>3O|1|SID-392180515^^00000000^1||^ESR|R|20240302010908||||X||||BLOOD||||
AP^CHILD1||||F<CR><ETX>30<CR><LF>

-> <ACK>

<- <STX>4C|1||CONDITIONS^^REAGENT_EXPIRED\CONDITIONS^^OPEN
\CONDITIONS^^MISS_MATCH_BARCODE|<CR><ETX>13<CR><LF>

-> <ACK>

<- <STX>5C|2||#####G<CR><ETX>75<CR><LF>

-> <ACK>

<- <STX>6M|1|HISTOGRAM|ESR|TRANSALONGTIME|FLOATLE-stream/deflate:base64^Y2AAgQ
+OYCqh2hVIOoCYAA==|FLOATLE-stream/deflate:base64^tdgHeFX1/
cDh41bcinvGfPxYtI6a3HNdULUKjjqKFrWiVatYtQ7UHkbYEPA9RCBsMIKAROZH8MSMGwle2Nr
UWvteEPu/89tGiAo8Dyf53fued831908tw8lQ<ETB>16<CR><LF>

-> <ACK>

<- <STX>7iK/n2V3LnUqnt7EIRhEJzndffk/
593MohG3VZ0UK4g5+ZyBRdmZE94LcNxxsz8fMc7MirVPD7T+cwtNW7InJl/
d2Zu1ScyXZOZd25WZqWa2ZmdO3Xyfk5m3fk5rsnLrJk9wXX5mYa4tjCzQtZm1+/
IRCTyzj0s8XJGuYSZicK3yc6dzojcv/
euQnzExN3VEZULX9VokqVKglWoledjETN7FsS5XOrJriJrM01EhniHkp8U7<ETB>89<CR><LF>

-> <ACK>

<- <STX>0Fmwh4StWvXTITiej5RkFMnYT

+JaoVvJYIgcK99Tpb7GrOaubcFL9v9rZltzejA7WROV3Y3s3rwc8zrYw/
9zBxoH7nmDraXoWYPt58880fa0xhGzJjAmMyYypjByGfMZsxlzGcUMBYxljKWMwoZqxnGBsYmx
nbGF8xvmbSYHzH+J7xz0TR9yW36kFhzeyDw3IFh4SeW1i79uFh
+dwjwok7jgw9w7BC1tHhzPxjwrrljws9z7<ETB>40<CR><LF>

-> <ACK>

<- <STX>1Ag54Qwa/OJYZUqJ4eebZg94ZQwo9xp4ZYap4eec1it8Mzwm4pnh73qnBN65kU/
C4zzGRcwLmRczLiEcSmjluMyxuWMKxhXMa5mVGZcw6jCuJZxHeN6xg2MGxk3MW5mZDAyw6K
fudyqScYtjFsZtzPuYFRIVGpCybiLcTfjHsa9jOqMGoz7GQ8wHmQ8xHiY8QjjUJZNxmOMxxm1GE8
wnmQ8xXiaUZvxDONZxnOM5xkvMF5kvM<ETB>AF<CR><LF>

-> <ACK>

<- <STX>2Sow3iZ8QrjVcZrjNcZbzDeZLzFeJvxDuNdRuSeiFPPfVY9d3bgNfA/
Q2ZWWZkcRuZ05jd2Kwm/CbmNbWHZmY2s4/m5rawlxZmv2c/Lc1vaU/
ZjFaMVozWjNaM9xltGG0YbRntGO0Y7RkdGB0YHRkdGZ0YnRmdGV0YXRIdGR8wujG6MT5kdGd
0Z/Rg9GD0ZQWchi9GL0ZvRi9GH0ZfRn9GP0Y/
RkDGAMYAxmDGIMYHzFyGb<ETB>BD<CR><LF>

-> <ACK>

<- <STX>3mMjxmDGYMZQxhDGJ8whjKGMoYxhjOGMz5ljGCMYOQx8hifMUyRjJGMUYzRjPGMMY
yxjLGMWJGzBjPGM+YwJjlmMiYxJjMmMyYwpjKrmMqYxpjGmM6YwZjB
+JyRz8hnzGTMYsxizGbMYcxhzGXMZxzBmMeYx5jPWMBYwPiSUcAoYCxkLGQsYixmLGYsYSxIL
GUsYyxnLGesYKxkrGQUMgoZqxirGasZaxhrGWSz6xjrGesZGx<ETB>3C<CR><LF>

-> <ACK>

<- <STX>4gbGBsZmxibGJsZWxhbGFsZ2xjbGNsZXzG+YvyF8RfGXlFm75m/
l2xg7GD8Q3jW8a3jO8Y3zH+zvie8T3jH4wfGD8w/sn4F
+NfjH8zguSWGkGylCdITwRjH12JTt3OiiZtfgm5MsZByd9jiWFrF6crFLikGSFrEOSPtOS31Q8NFn4
1qHJmfmHJn2+JXvVOSyZPeGwZN3yhyd91ixvyzs8mVHuiGSlmkckfe75fXUk40jGkY<ETB>B1<CR>
<LF>

-> <ACK>

<- <STX>5wjGUcxjmcxSjHKMcozxiacTTjaMYxjGMYxzCOZRzLOJZxHOM4xnGM4xnHM45nnMA4gX
EC4wTGiywTGScyTmKcxDiJcTLjZMbJpKM8ozjyFMYpzBOYzZKOJVxKuM0xmmM0xinM05nnM4
4nXEG4wzGGYwzGWcyzmScxTiLcRbjbMbZjLMZ5zDOYzZDOJdxLuNcRgVGBUaFZNVh
+S01zmOcxziPcT7jfMb5jAsYFzAuYFzluJ<ETB>BD<CR><LF>

-> <ACK>

```
<-  
<STX>6BxleMixkWMixgXMy5mXMy4hHEJ4xLGpYxLGZcyKjIqMiyoKjIqMSoxKjEuY1zGulxxOeNyx  
uWMKxhXMK5gXMM4knEl4yrGVYyrGFczrmZczajMqMyozKjMulZxDeMaxs8Y2P8JFGFUYVRhXET  
41rGtYzrGNcxrmp8nPFzxs8Z1zOuZ1zPuIFxA+MGxg2MGxk3Mm5k3MS4iXET4xeMXzB  
+wbiZcTPjZkYGI4ORwchZDlyGQ<ETB>36<CR><LF>
```

-> <ACK>

```
<- <STX>7IGgpFghlyQETJCRpKRZCQZtzBuYdzCuJVxK  
+NWxm2M2xi3MW5n3M64nXEh4w7GHYyqjKqMqoxqjGqMaioxqjF8yfsn4JeNoxp2MOxl3Me5i3M  
W4m3E3427Grxi/YvyKcQ/jHsY9jHsZ9zLuZVRnVGdUZ1Rn1GDUYNRg3Me4j3E437G/  
Yz7GQ8wHmA8wHiQ8SDjQcavGb9m/  
JrxEOMhXkOMhXkPMx5mPMx4hPEl4xHG04xHGy<ETB>C4<CR><LF>
```

-> <ACK>

```
<-  
<STX>08yfsP4DeM3jJqMmoyajMcYzEeYzzOeJzxOOO3jN8yfsuoxajFqMWoxXiC8QTjCcaTjCcZTz  
KeYjzFelrxO8bvGL9jPM14mxE0ozajNqM24xnGM4xnGM8ynmU8y3iW8XvG7xm/  
ZzzHel7xHON5xvOM5xkvMF5gvMD4A+MPjD8wXmS8yHiR8RLjCzLjDjQMOow6jDqMlxkvM15m/  
JHxR8YfGa8wXmG8wniV8SrijVcZrjNcYrz<ETB>3B<CR><LF>
```

-> <ACK>

```
<- <STX>1H+xPgT40+M1xmvM15nvMF4g/  
EG4w3Gm4w3GW8y3mK8xXiLUZdRI1GX8TbjbcbbjHcY7zDeYbzLeJfxLuPPjD8z/  
syl3BNxlvdFrMi9ES9yFz1mPTPqceuZU49dz6z6/Prm1beH  
+mbWt4/65jawlwZmN7CfBuY3sKcGjlaMhoyGjlaMhoyGjlaMLEYWI4uRchiZDEaMRoxGjEaMRox  
GjEaMxozGjMaMxozGjOaMjowmjCaMJ<ETB>7A<CR><LF>
```

-> <ACK>

```
<-  
<STX>2owmjCaMJoymjKaMpoymjKaMpoymjGaMZoxmjGaMzozmjOaM5ozmjOaM1owWjBaMFo  
wWjBaMFow3mO8x3iP8R7jPcZ7jJaMloyWjJaMloyWjGxNiObkc3lZmQzWjFaMVoxWjFaMVoxWj  
FaM1ozWjNaM1ozWjPeZ7zPeJ/  
xPuN9xvuMNow2jDaMNow2jDaMtoy2jLaMtoy2jLaMtox2jHaMdox2jHaMdoz2jPaM9oz2jPaM9o<E  
TB>1D<CR><LF>
```

-> <ACK>

```
<-  
<STX>3wOjA6MDowOjA6MDoyOjI6MjoyOjI6MjoyOjE6MToxOjE6MToxOjM6MzozOjM6MzozOjC6  
MLowujC6MLowujK6MroyujK6MroyujK6MDxgfMD5gfMD4gPEBoxujG6MboxujG6Mb40Pgh4wPG  
R8yPmR8uPNv9m8qdm0Z3RndGd0Z3Rn9GD0YPRg9GD0YPRg9GT0ZPRk9GT0ZPRk5DBYGD  
mMHEYOI4fRI9GL0YvRI9GL0YvRI9<ETB>6D<CR><LF>
```

-> <ACK>

```
<- <STX>4Gb0ZvRm9Gb0ZvRm9GH0YfRh9GH0YfRh9GX0ZfRI9GX0ZfRI9GP0Y/Rj9GP0Y/  
Rj9GP0Z/Rn9Gf0Z/  
Rn9GfMYAxdGAMYAxdGAMZAxdGQMZAxdGQMYgxiDGIMYgxiDGIMYjxEeMjxkeMjxgfMT5  
i5DjYgbmMXEYU5fxMeNjxseMjxkfMz5mDGYMZgxmDGYMZgxmDGYMYQxhDGEMYQxhDGF8w  
viE8QnjE8YnjE8YQxIDGU<ETB>F1<CR><LF>
```

-> <ACK>

```
<-  
<STX>5MZQxIDGUMZwxjDGMMYwxjDGMMYwxjDGcMZwxnDGcMZwxmfMj5fMr4IPEp41PGCM  
YlxgjGCMYlxghGHlOPkcfY+Qx8hh5jM8YnzE+Y3zG  
+lzxGWMkYyRjJGMkYyRjJGMUYxRjFGMUyRjFGMUyRjNGM0YzRjNGM0YzRjNGM0YwxjDGMMYwxjDGM  
MYyxjLGMsYyxjLGMsYxxjHGMcYxxjHGMcl2bEjJgRM2JGzlgZ4xnjGeMZ4xnjGe<ETB>96<CR><L  
F>
```

-> <ACK>

```
<-  
<STX>6MZEExGTGBMYExGTGBMYExkTGRMZExkTGRMZkxiTGJMYkxiTGJMYkxiTGZMZkxmTGZ  
MZkxiTGFMYUxhTGFMYUxhTGMVMZUxhTGMVMZUxhTGNMY0xjTGNMY0xjTGNMZ0xnTGdMZ0xnT  
GTYMYxgzGDMYxgzGJ8zPmd8zvic8Tnjc0Y  
+l5+Rz8hn5DPYgfmMmYyZjJmMmYyZjJmMWYxZjFmMWYxZjFmM2YzZjNmM2YzZjNmMOYw5j  
D<ETB>E6<CR><LF>
```

-> <ACK>

```
<-  
<STX>7mMOYw5jDmMOYy5jLmMuYy5jLmMuYwvGF8wvB8wfiC8QVjHmMeYx5jHmMeYx5jPm  
M+Yz5jPmM  
+Yz5jPmMBYwFjAWMBYwFjAeNLxpeMLxlfMr5kfMkoYBQwChgFjAJGAWMhYyFjLWMhYyFjLWMh  
YxYFjEWMRYxYFjEWMRYzFjMWMxYzFjMWMxYwlijCWMJYwlijCWMJYylijKWMpYylijKWMpYylijGWM  
ZYxlijGWMZYxlijOWM5YzljOW<ETB>5C<CR><LF>
```

-> <ACK>

```
<-  
<STX>0M5YzljBWMFYwVjBWMFYwVjJWMIYyVjJWMIYyVjJaOQUcgoZBQyChmFjFWMVYxVjFWM  
VYxVjNWM1YzVjNWM1YzVjDWMNYw1jDWMNYw1jDWMtYy1jLWMtYy1jLWMdYx1jHWMdYx1jH  
WM9Yz1jPWMDYwNjA2MDYwNjA2MDYyNjI2MjYyNjI2MjYxNjE2MTYxNjE2MTYzNjM2  
MzYzNjM2MzYwtjC2MLYwtjC2MLYwtjK<ETB>7A<CR><LF>
```

-> <ACK>

```
<- <STX>12MrYytjK2MrYytjG2MbYxtjG2MbYxtjO2M7YztjO2M7YztyeCEV2/f+X/  
yoSqremoN085VTnsv/f1aqddhiet3d2/tPd3N6t62nHitPmVS8wubd7OOY1vC4KD9a9bg+iHW4PgH/  
pef9d3zn2rb4oLvtl6FXq9TEscL9YixwutJYpSFb2/85pFxddHRfcsSd2/1KrAvGC5YUrrApWwWlemv  
KJWOV5tVbDGqmCtdW3xvqKiva<ETB>71<CR><LF>
```

-> <ACK>

```
<- <STX>223FrXB8Uargk1WBZutCrZYFWy1KthmVbC9uGh78dcaFX29fEq+KtVwddWBX
+zKthhTRX833P6tvi57Xx+qYqeZ/T34mcbpSp61IHR8/6h+NnvpF7/tGrn9yNV8G
+rguC2IEwVKU4VHOScolTxQanvqUJFqeKic4cUFypSnCo4tLhQUaq46NhxYWplsWpgsOLCxCwliI
MFRxQXpooUpwqQLC5MFSIOFRxVXJgqShWnCsoVF6<ETB>1A<CR><LF>
```

-> <ACK>

```
<-
<STX>3aKUsWpgqOLC1NFqeK0gmOKC1NFacWpgmOLC1NFacWpguN2FaaK0opTBcfvKkwVpR
WnFZywqzBVIackjhxV2FaUVpxWsFJuwrTikoUpXwcvKswrSituERB
+V2FaUJlitMKtIVWKKoRHGJglN3FZYokIFcouC0/y4sUVSiueTB6f9dWKKolOK0gjp
+t7BEUSnFpRSc+d+FpRSVUlyi4KzSC0sUIVJcSsHZipReWUIRkCskF5+<ETB>4D<CR><LF>
```

-> <ACK>

```
<- <STX>4y+sJSi3RTvpuDc/
y3cTdEeindTUGH3haUU7aW4lILz9ly4h6l9FJdScP6eC3dTILaWVryHggv2XriXoj0U76Xgwr0X7qVoL
8VIKLho74VIKCPdCRkLLt57YRmKylhcxoJLyI5YxqlyFpex4NKyF
+5D0T4Up61ILai4b4X7WLSpxWUsqFT2wh9R9BOK97Hgsh9X+COLfkTxjyi4/
KcX7mNR2vpji39CwRU/rfAnFv3E4v1QcO<ETB>5F<CR><LF>
```

-> <ACK>

```
<- <STX>5xlfPOjbCXkC/5kzbpHKu14Wv2J0ucUG/z1Wvbl1oOt4zfON8vNfrr
+XzB6ecj7IMVdBnpHUFv9S62H4RXmLvK/zMZPMN+16dnjYEE3+N5Qzdzq861bpTYb
+H94fbrkrUDPS9xWXOIdao+0DpQD3XchU6UU/7Ez5xsG4fNwo+zLraeeAOZYM76yPjOUN
+TzTnHstUcmjbtwftvaaso+c/6Cc/1D7dc1/smO3Oj/nOXwJ8Q5n<ETB>6B<CR><LF>
```

-> <ACK>

```
<- <STX>5WuSr4ua+F+KNqPxT+h4Kri0o9/bOEBKEqVfrwvxWnr/iq4ev8WHoCitHV/Fe/
ngsoHrvAAFKVKP95fxQeo4JoDV5i2Hsii/dt/AA==<CR><ETX>30<CR><LF>
```

-> <ACK>

```
<- <STX>6M|2|REAGENT|CLEANER\DILUENT\LYSE|
CLEANER^20240223000000^20240223\DILUENT^20240223000000^20240223\WHITEDIFF^202
40223000000^20240223<CR><ETX>0E<CR><LF>
```

-> <ACK>

```
<- <STX>7M|3|SETTING|RuO\WBCDIFF|TRUE\5<CR><ETX>ED<CR><LF>
```

-> <ACK>

```
<- <STX>0R|1|^^^ESR^82477-1|10|mm/h|0 - 2^REFERENCE_RANGE|H||F|
LabManager^^LABMANAGER|20240302010908|20240302010908|
110YOEH04272<CR><ETX>57<CR><LF>
```

-> <ACK>

```
<- <STX>1L|1|N<CR><ETX>04<CR><LF>
```

-> <ACK>

<- <EOT>

3.6.4. Example of QC Result Sent by the Instrument

DIF

```
<- Instrument
```

-> Host

```
<- <ENQ>
```

-> <ACK>

```
<- <STX>1H|\&|||H500/H500E^112YADH47745^3.0.0.3a|||||Q|LIS2-A2|
20210709175358<CR><ETX>A6<CR><LF>
```

-> <ACK>

```
<- <STX>2P|1<CR><ETX>3F<CR><LF>
```

-> <ACK>

```
<- <STX>3O|1|QCL4||^DIF|R|20210706094947|||||CONTROL^^CTRL LOW|||||
F<CR><ETX>6F<CR><LF>
```

-> <ACK>

```
<- <STX>4C|1|||CONDITIONS^^REAGENT_EXPIRED
\CONTROL_FAILED^^RBC_ABOVE_TOLERANCE
\CONTROL_FAILED^^HGB_ABOVE_TOLERANCE
\CONTROL_FAILED^^HCT_ABOVE_TOLERANCE
\CONTROL_FAILED^^PLT_ABOVE_TOLERANCE
\CONTROL_FAILED^^WBC_ABOVE_TOLERANCE
\CONTROL_FAILED^^MCV_ABOVE_<ETB>62<CR><LF>
```

-> <ACK>

```
<- <STX>5TOLERANCE\CONTROL_FAILED^^MCH_ABOVE_TOLERANCE
\CONTROL_FAILED^^MCHC_ABOVE_TOLERANCE\CONTROL_FAILED^^RDW-
CV_ABOVE_TOLERANCE\CONTROL_FAILED^^RDW-SD_ABOVE_TOLERANCE
\CONTROL_FAILED^^MPV_ABOVE_TOLERANCE\CONTROL_FAILED^^NEU
%_ABOVE_TOLERANCE\CONTROL_FA<ETB>B1<CR><LF>
```

-> <ACK>

```
<- <STX>6ILED^^LYM%_ABOVE_TOLERANCE\CONTROL_FAILED^^EOS
%_ABOVE_TOLERANCE\CONTROL_FAILED^^BAS%_ABOVE_TOLERANCE
\CONTROL_FAILED^^NEU#_ABOVE_TOLERANCE
\CONTROL_FAILED^^LYM#_ABOVE_TOLERANCE|<-CR><ETX>FF<-CR><LF>
```

-> <ACK>

```
<- <STX>7C|2||Name_QCL4|G<-CR><ETX>30<-CR><LF>
```

-> <ACK>

```
<- <STX>0M|1|HISTOGRAM|RBC|RBCALONGRES|FLOATLE-stream/
deflate:base64^Y2AAgW5nMMUQ5QIkHEAsAA==|FLOATLE-stream/
deflate:base64^bdUNaJtFHMfxU6tVs5eqJXNu08Rt3ToTnLW2cS/2ee6ysbmn2pnZ1y3RaZ
+zcHKZadZLNLattGq2yIIFUG6Qw1ISkUMIYZRhWmUIQWIUms9tKUNsEUTaooiyfp/
kC<ETB>37<-CR><LF>
```

-> <ACK>

```
<- <STX>1TwEAz/ucrn87/nnpclYXy6VbYR
+7xCaJoQO6QQAwl3xwVj1TA2V0tCNo0e9Kn0ddS00P0x7RgaJbvNr2nc6WemnbrM3U1OnN0ZT
+gB0Nten2wXWe
+HsqcYU5cT1SfY96Qnum7wNxlOrWYP6a7A1c4Zkr3p2c4blaPuBY49nrpT98k8WUwtFSGMnfliOt
OSS0ZH3flRPVamYyVS+rKtKyQmb4qOTG3SbIGOT+gpHEuNn+tZ<ETB>C5<-CR><LF>
```

-> <ACK>

```
<- <STX>2D3SaWuS7oBfelL7JWuT9cEW7MPYQew27KPYx3HC/
NaO1cHvEbwoC7ox32Peadwe5p7Bfp/5vfgfsp44NT5itf3UOcu6zIerwdo+pt4nrG
+ImsPYSezz2BewR7AvYqewL2F/hn0Z+4vs/kdcX2J/hf0N9hj2t9jY/+AfQX7J+xfscwep7CvYv+K/
Rv2DPbv2H9g/4k9iz2P/Rf2NewF7H84Riib/zrFPquezhTUpq9I2ZM3K<ETB>A6<-CR><LF>
```

-> <ACK>

```
<-
<STX>3vZcxcl1cTczcppu5Vrb1OJ6kVqpm6xcgeWKK6FSsZK1PzAbcQTul1xXVRqulQZ94yyL1N
cl5WwY7Hvwl6BvRJ7Ffb2PdgO7Cd2Kux12CvxS7DXoe9Hrscwep2fdgubDf2/dgbsR/ArsB+ELsS
+yHsKuxqbA/2w9ibsLdgb8V+BLsGW8PWsSW2wvZib8Pejr0Deyf2o9i7sGux67DrsR/D9mE3YD
+O3YjdhP0E9h7svdh+7<ETB>99<-CR><LF>
```

-> <ACK>

```
<- <STX>4H3YT2I/hb0f+2nsZ7CfxT6A/Rx2APt57Bbsg9gvYB/
CPoz9lvYR7Jewg9it2C9jv4Ldhv0q9mvYr2MfxX4DO4R9Dps49pvYJ7BP0g+rma/DfD
+I3fdPMdaugftaqqmWSpZ0ULdDzD1UrtTebZGqB9RocYu1tCIUoeirCOqRPh1vIONSZ5/
pt5TodJEffPGrKF1Jox3hde4iGVZrvenOcgJUSQv7PPes7Jp5/0khhpJT6zt<ETB>B3<-CR><LF>
```

-> <ACK>

```
<- <STX>5cYYc5ASlv4no1ou/WbCBX3jnSYs0SytdW6hYx0XZv2NRNNz
+2GsedA8p0k9d46LLPuzmxwh75IBMKp+NPaCPV1MlpNyspk0kBZyjHSx9x/
QnqVnkskvOzLJ2Bztv7TFXqEt9YrRUt7ZK8hq+utoN5AKrwhX025mTKO/
i76PfiP9Pd7se350L6Ef3s33Bvr1ZCF9bbQcF66iddGWMMeagJWIVNzCxtt3wLWSBdUyTn8kYGVWv5
<ETB>8A<-CR><LF>
```

-> <ACK>

```
<- <STX>62kTufVz/whxkhwkTUSRSnlvMd4Vxcb5sB9T5v/
Np2SQxM09ayfNxGfuZ6V5P5WaKTLvKWPvx8ileT8Z1yVqSa85br3XwpbELGPWe67ZMIY4z9rP18j
Xs64hXzc/J7+WwjZm6Q+az8ZlwbMybPmtv6B+q6WftwYtKTzvaEG9z9nLi2ScLMn
+7/8H<-CR><ETX>E5<-CR><LF>
```

-> <ACK>

```
<- <STX>7M|2|HISTOGRAM|PLT|PLTALONGRES|FLOATLE-stream/
deflate:base64^Y2AAAQ4nMMXQA6ldgMjhx+Tdo+qahx02tc4QOQa7EFyAA==|FLOATLE-
stream/deflate:base64^rZV/TJVVGMevcGdQUTBpREYDh0jmiJgSCFE
+z3szxqChozF02DBZMhZOpkjGQERTAhKDVaWKeKl0qGui/
AgIDEUwSliQoC4E8cOgl<ETB>22<-CR><LF>
```

-> <ACK>

```
<- <STX>0DSEwur7cs9d1xvjnzrju+d9z3me83z3Oe89qFTKsJDngiodMYnwADmySpUPTbB
+TZnbq4nWrfCdtT3uW7+221ejfUBy0bhlFp0bpNHndJwQqoU6pcjNVmXSN7d1VJQYvkeK2TMjz
HJaW+MsKCYpqsaWbPQ1kOIHO7cfpxTAPsqpfS5eWaygxNYCeHg
+m8eAwKq6l0C000WSfHEvtQwLY30/LQg8hJ426qzOQl0VZtnlz<ETB>44<-CR><LF>
```

-> <ACK>

```
<- <STX>1aXAg/nlLyT1aDFqSqkm6CzqztPuskru1pCb/UVKDhbMwwnNpNG2UI5/
O83axqdQvx4q29NLNiUDFK0bpibrMXLRTFBy7C3SnZom7+5Z7K3i1/
PMuLhCzZ1ti1k9asEe6vt4i4MVZ3g
+yDVBnjwauYTtkx9ivxw73l1mz4UtS7I9ylEVhjeXLOPBFc7c5e3CV4NcuXbrStbGreKCNDc
+lufOKec8OL5xNW/v8eTwcS8ONvfm5<ETB>E6<-CR><LF>
```

-> <ACK>

```
<- <STX>2+2e5WeekBh//Fiwhm22rWPzeD+eOuzPN04GcM
+FF7i1OYjrdRu4bDKYixaH8lIHQjndbRMnymEcE/ISR0SfC0jy+yfGcE+Ra/wk1WR7NQaxbb9r/
I9U9t5xjKGxxx2cu9Tsdyl2Lo4bNu7h8uh4PrMvgXOP7uXGjtIsv4+rRpLRyz+Xzh5An4Ocb30lv140/
IN9EvIn7zS0DOdXwt8C30Pc1R4Bnof4c273kb/TF6fkgUP7<ETB>D4<-CR><LF>
```

-> <ACK>

```
<- <STX>37Ccxq+JvEa7XF4yWbXhhPw8y4v7cqBp1y2GnsPvt6f+
+ZmLD8at5PwVwB2hfD4lfgVwecpMCyG19PgeAZ+PwLLEnguBc
+P4fsTMNVyxumz4PopJ9ecA9sy3tV2Hnww8LbBcjCu4E0zleD8GQdaVYN1DUtOteD9OXusQPzel
7ufxHcv2C7zQ1gf4nvjbm/01858AVnEETJ2c34xyucn/
JlziLFv6mrhXn8RWYXQOzNjBrB<ETB>EC<-CR><LF>
```

-> <ACK>

<-
<STX>47OvwawDzDrB7DqYdYHZt2DWDWY9YPYdmH0PZjow6wWzPjD7Acz6wWwAzH4Es0EwG
wkZyTAbAbMbYPYtm12C2RiY/
Qxmv8z9RmcsfwWzSTC7CWA3wOw3MJsCs9tgNg1mM2D2O5j9AWazYHYHzP4Es7+wrplbO1Ry
w8ZFCr1ukVy71UyuGjGty6PN5bJc1kbp5ZLZ9Xjivi/RhLuBMKdsgP
+i6FsERXZKr2EIHInxD7WS1nrQ<ETB>38<CR><LF>

-> <ACK>

<- <STX>5lyN+DBkDbIDavHuCk2LvEeh+yEfUaO8O8r6tedErpesv+PUit9HrE+IfGV
+lejTJTyMQNdYf29eEe8VJtKK+zMFqoOOiBgu5taLHBJ52Uik5C5YKHGHiEpNHZj1kf7ZUeTW0T/
PyppKzBlyFc75RjLMGSKJ3CRRmy/+B8zNSfrnuTMT0VBnOMM+o2TurlodN5Ed38DKro7zzjHsB
+Z5BiG6V7GvUy/NeN145x5l/27xuB/v<ETB>97<CR><LF>

-> <ACK>

<- <STX>6j0WHLsw/m8/tcx3x6m52Hqb+H9/gY=<CR><ETX>05<CR><LF>

-> <ACK>

<- <STX>7M|3|MATRIX|DIFF|LMNERESABS|FLOATLE-stream/deflate:base64^Y2Aaggf/
XRjgtIMDiAka|FLOATLE-stream/deflate:base64^7Zx5tF1Vle6XUioiTaFASQlyAJVOBEMrRbOTe
+kpWpFO4NBllYgloSIE2TEQEpIgoQtpgJOEK EASAgkhAYxumghlZalCMhREEUYSywtVIT6fvObN
+GPctR79Wpo8ca5Y8yx<ETB>AF<CR><LF>

-> <ACK>

<- <STX>0z9l77bXmmt2a3bml6K/7Rn958zX+6qp0N9i5tM/vL51r+0tzVn+pdS2f7i/VUHO/
V9dz9OyC/tK9WM+O1L3DBP39pVvr3FG6DtezUYKrdP8UjddcjbVI+VzSF0/o+v+uneoxozQ5+MEF
+n+aF3P01VjGq3RHa/PrKE5m8mCf9L8H9GYawTXaZ1Lde+LAs1RH+zv9ZcFY/
QcnPFTHFq7HGNofUX3T9D4vv7SvlKfTxbonUpr<ETB>3B<CR><LF>

-> <ACK>

<- <STX>1dG/UPeHPvpvTNZY5tH5L+6hZZxPBEdq39IQNMx71hRp/
me5p3q6uldBUxqF7wr8rfMsswVDTocOC6896bL0jApdorFXaw2tU3bT+5/XGPCFbpcnPBv+s4/
eE37VOO+nM0H39Lk9TNeO3jnXODK0m0Twd7aercbHQUWPr4zWxcC1jdQ8egKs+t9n7P/
tePVNjda8Wro3Gd7+q59eZ/9W/+N32RNO0Fu2a841bW7i2NLyWzbq6<ETB>8D<CR><LF>

-> <ACK>

<- <STX>239J6lWhQoKdo0BGeRbSqNG+X9bTnmDpiNfi3OTdmcn/
GXp2kWWgpcfq0bsRbdpT9Jl9aJ4CT2Z5P505ei76dSbmXqGjeNpmP
+AEfXYwreBdvYdgN49nvkZ0aiFfa3r/1WI6V7JbjbB8twT19hrX1nWqnt3k9yvJexImfMAX+oMP/
Czib3t80qU2T8oWGiP6FeFUHZy8m2m96lzocY3GdMaaPs2elq
+ygcac7H0gX2WGZa5o<ETB>C6<CR><LF>

-> <ACK>

<- <STX>3f81czSGcKu2v6J1qI9072PM1yKvkt3O1+dsSHyrtqzV70t2i3SxoJeSKYKca71a
+1P0vedrX/gWuCdEFGO1fpjrcMFfVLLdo0ujbwa2/dg+ZzUr40V5HsIO3Mu5BHjW
+jJ4lywet30K3zrC9lF703ynysZQ
+aYZZR5klu2ujP2f5cDtd6V3h8JZ1qatsY9LdzyTLc4GeHuaWXzQGmTXeG9TdkYaR5B13KPqZ/
0EjzN7IT<ETB>7F<CR><LF>

-> <ACK>

<-
<STX>49V6aE9swzDRqj02ZmWAdjPv76rNo20lesEX7WUbrCX7WEk2b86xPFfbnen2Xnng52B91j5
qyWbZxnJdnWEdR1/CHmhMWzQuyM10wVF+1kgumk/p
+Um2adX2OV57boZYrhvJa0vrle1Nd2w3uNef0/rwFz0fBR4jVzW6KZnsiu91bXpX51qWyjTTI/
1UI9uWxnvwRnwou1r/a+yreNlakfYAHUSmJyav0Sv073jTMs6EU6wn<ETB>BA<CR><LF>

-> <ACK>

<- <STX>5dZ/xx8Z0NG8zMuealPb6K7btyD462ZVMtIR/5yLbitYNPleqY7x+S
+Oqo23DsMEFeZhkmtbSt7berb+gZ7t4Hexz2MATdRWNypc05gbrO/
a1nGobjHyAHzagkW2sxbNmW+tFOcJy2YaWk7zHUnu
+luZuXWX5rfpNF3QAWxP8vDbt4Z6mbxdbNNH740ytjrJdrD9p210utpyyr7rSOGzyQbp3oedpZnue
Gvv3Ze+rSF6anb12<ETB>EA<CR><LF>

-> <ACK>

<- <STX>6kbzW8BEbto/tCHauuso2Al41Q73Pbm2Zwr4221nvsUPoQftC
+wD1ZO8VvYXX2Hn237nO5wpnQpww6MIhlsfQyZGWs/YY48tZH2cse/
usz0dsGutj88G5OdY8qT5uO4zxsphZfqeZkr7J/ml367SbX/B534gWFTo7KvV1VMqpdKhcavw5i
+tp5k3ZSnNDn2PsgzAWHwfc6qHeA/xC39Ap5AOBX432WRm6MNz38QWwV/
g25Tjj<ETB>21<CR><LF>

-> <ACK>

<- <STX>7Um/
IMwufqly0DUCm4FFzmmUfOS2chV807erVbV8L9uJlyxi2qljvnTHGp77I99GzTsd2sJxpO4J
+gQN0gK9xvoquzSHJ56N8XtWHpl3StTrdtMKPCbofbpuJzkGn4DV8PyNtr/
iNbxnb6mH29ZrD7XtxXmJjwrfU+xU6x/5Pt/
7Aq3KWZRH5wp6H3RmRNIt8LofZ7oFndaptYX20fR78zNI2jswBP2qNbY6xDQw/
Z6TxDHn8<ETB>53<CR><LF>

-> <ACK>

<- <STX>0TPqEn8m9HmabUB9qP4534DX8hCflaNsx7D72h7Wx05xf0AvbAuBPBD6nWl/qttfDJ2X/
2KHwrYd6P2F/jrKvyftBkyMte+y1OTp5l+kfqOvNOjAP2jm1nr
+lV13so1riq56Vl7tK5X812oF3Vu7P8YX2ZCi86leTtdVdW
+QYA2NGWxZ5/1qPd17l66au5bvXX9YsLznK3/UunvZjpbVBjXPgHp3gXCo/
k5X1sfObaxnkuUG<ETB>9E<CR><LF>

-> <ACK>

```
<- <STX>126Q5mnfrO37lconDCj7/OG+LfLgYkW0gNq18QvC+/vCPm63sE1XaX/WP  
+q53Gl2LcGvW1b0tvN9mJ++IES7N+rq3nu+Vv8/3tYdK45uWvq+jz8QVH+0Pv7zm/ND5U+I+Yb  
+bCdjf+h6P7eR9dLMBvz+JFuCquSvh18CHvf0sfC09r1c1b/AzC3hDQ/CVPIfYUtGt+aTnwGdq3q/  
rDt4v69Tr59zQaA0/Z18Rk8i/q0Wjjezv<ETB>3C<CR><LF>
```

-> <ACK>

```
<- <STX>2EtybFZOeW+Xzjwm2FByU8wwwHrXwLJvr+yq53w1ShqDplPO25tmmlg/uVWta1uodTa  
+g0SY+EyrW1H6rd+j+isYT/zTm+1jOL7kpW1o2ysbeYy3a42fXyOnbTZvyHt/  
je6XxDfL8T8av0T4b5tsigfP8D5p3s5T9nS0vdStpOcTnW8M879V88P2d3ht0qSrLYemzn8fnBlz1Ti08  
mhXy2a6WL+hRI7fgtnJetzadC2tuZn5W<ETB>03<CR><LF>
```

-> <ACK>

```
<- <STX>36+f59IHKFTT9oGUDoxy+u+hfXtO+i7PuRbxCjLGZ34Fu6Hi1kq5r+  
+xBvuAfuDbvSZ0UfsS1tXBjLmjWvC7hnfSgRp/  
EXnYyTJQreZ3iBEq6WSznukTz9AbZEH6X9Ywj6AvODQ6dyrkXfsqmjNsywamC3tqNk26l9rWV/  
xVauPek7wR+eYA3kua+V6u6bMSK4q+AcPPpQyInmqJS/V6taXsr/  
ls5KOE7Ngs0Kft7ROh23B<ETB>27<CR><LF>
```

-> <ACK>

```
<- <STX>4hn3QOIVMh2aDfV5R9sVbBO2C9ybvY0b9KkONL2gbdgNbODGHgffm41MS  
+wreGKvyoBtYp7zmm8w3T4hZxufmz1s//HbuBK/4Y/iV/As4mHxFx  
+Us6H5O5XO7OpYx8uc0y29Q5xL3EmcGevJp6vP8r4AbEmcdsZeX7gp3Ju7mVcwo9jzXPSx9zG  
diLWI068Pu24zskW/Jb29fY/6ms8Hr+OeC5ig/PTTzjCOloJ9Ycn921<ETB>91<CR><LF>
```

-> <ACK>

```
<- <STX>5zj3yBsSZdcexBfkW8gXVTOskNogYK3lzZ3peYtHwf2qf6eUE+/It3id2xCcmx/  
DljF848/Us/E/tozPeg/f60Zlp2uBjk6PapyfnRJ4n/  
HL5SI3GEMuCN76j5KJDLHODz5DwefCRJHv18DwziJvJBZ1kwvS8w/8mnhuln8Y4bmb/xKnx/  
ITKL2c6752a/vP6Ho/sNfhne5oP4UPL72iPy9gLH2GO/W7iV2JDDkTab/  
mqFXKk<ETB>03<CR><LF>
```

-> <ACK>

```
<- <STX>6tcjZ4N91tYc2fMcnJ5bW/skxFPxSfcbfR/4qXcMPHu64Fn8aPoFf5NiAQ1MPjrvBM25H  
+9DW3wYZJR4DBqQL7jaeRT2iO2Cr+Q7kKuKHBixHOctz0/Jmlzv+O1H+Hsz2rIH/  
fARKTvsBbwrw/08/NkLLd/  
wnvvgEDQebB3gbEfwv8c5PewXcTnxGHkoNC1eiBnhQ3C14WX8Av5lJx0iYske/jiNfKJrCIHB3t9/  
EL0GZ6h<ETB>C2<CR><LF>
```

-> <ACK>

```
<- <STX>7L81w61NnluNudCR85tMzthFfO1/PGJe4cmbGd/P03lznsylmmJv  
+vxfnuTyqV7g9espGSeSD8w8K/mKDp+JNxb1OyfyNfu85GeqO3RPa3Xna+x02yPWls/  
QnpC25yLnMrt6r77CekEci/y3brZ8t7+hd4Rr53Z9vtl7qvS9lp7R9/astBm63xHPGslp67rUB  
+213KbnkhPiuXqhdSjyhMKval2iOZq7jH99i+cj70k+LPIr<ETB>8C<CR><LF>
```

-> <ACK>

```
<-  
<STX>05NHu0bOJzhmHfeEZOVNBd7pxJT6stdfOPOfTyCMEvdH7+aZVmWvcoEE1yziETQv0XpC5  
kdtTb2bZDlVznAtnLuiDXLTmeQx4EU8Gr77mnAUxIPsjB0SekP2QUynYr2mpnzc494DMNPF2Oy  
+A3b/JfGg0b0O+i7ma1N3J5hVxAt3ybY/iTeRI6DNhc45t6dIPE0L9f6ObFid7ZtHTlwGfTmxGx3hk  
+U4hJl2cpHSDnjU3l<ETB>A4<CR><LF>
```

-> <ACK>

```
<- <STX>1fpxtX3JeuH4pf+wq+b7DBA/q84WC2YLR  
+n6TruN1Xajri7pe5muZps9f1bUWTNfn63W9RcC4ewSjBlit1/990fUXwIOAuWswCK3X/  
UI2v0XWwrr8WfEOfn9b1u4L78p3bBXd7rfives6YMfo8VXCd3y/  
Ms8Df64sEzwguzvujEqev6N51y96pb9b1Vl3Z1wLjxDXga/o+XPCoPoPHBM9fv  
+D12VPQ5qtep14kgHZzde9UvxN7<ETB>A5<CR><LF>
```

-> <ACK>

```
<- <STX>2+qGuPxJ8S6A56mnGozDPrwTavw1+4wRj9bkjWCK4Q99/np9/IJiU+D0reCnxul/  
w9eQLe5vtmW1eVhY/yKvW7TJerJA+y2PJG2e0/  
UxXc9PEA71k8m7K5MGzLEk8Z7qdaBLLZ7UV6aMnKfP39F1hq5P5X6e0HVG4vNY0i30KwCJGsHj  
uif61b8V3Jn3vpnr3Ohn5elcc4Zxqn+TvAw/pGflzCLTCxxq6Dgqx48lRzncZ10f<ETB>3D<CR><LF>
```

-> <ACK>

```
<- <STX>3etP1leT9T02v8m1BJ3n8gK4/8fOQwfvM69CPW70Gvl45vpzy  
+UTiwyXCyZ57vKQ6V6+b/zLHMsDuhGyvyTIR3Suf5z8mGgcg2aiby0+IRtyLPL2qHEJ  
+qNjv0o5OfTwrXlc61ouS11D1q4ZbBQg01N0ne6xocxtjPAAZlAhy/OtReY/  
iFbjLsx9fBfBezVae8VmQ9c5pincW9x7n1a6hy68b3Uq6mJ7w+8txqatf3zHu3<ETB>9A<CR><LF>
```

-> <ACK>

```
<- <STX>46fr1pNEAX36XMntB2pmHTIPQY/g/Nt/RPsvklOM5SWvGzUmdvTJ178mkuz5j40L/  
vmL5gX7BP+lafXXK20uJzyrZogWe/ISn+1AbXkMe3hB8vvGpC20wwY9b50PXZuR  
+52dunxZ6vqslIFLkk/  
I1XjzJMY8kXp2b8mEyl3k0zPWjyvv22aBD2eN79Cn5nvjJTIMbnf01OuOyITF6XOPZv6i1zKF63XYR  
+m5nfGdFMmf537<ETB>61<CR><LF>
```

-> <ACK>

```
<- <STX>5eCLX+ULqw1XmOXITYy5P2RpnMQG30Mezkm/QVe/XjWnDOVT/  
vs92aHTShjPkyaRhygs6GHgssh4hw7XsZ9jMa3NPNGuP59zjzJuYZ17K4IPmGbyA5nHm3WV5KDM  
tf6F32JnxuQbPfmz5DZnqmHesh02N9djPCK8bZ9Ho1AHZjvnpnmpfYqldSjiakvH4jaQz9rkmcH0k6/  
VJXbNRRN1vcYc23S+d/N4zghiuDmQtd/2Hu+zHr<ETB>A2<CR><LF>
```

-> <ACK>

```
<- <STX>6esj/9Ynz2cnrm+QaV1m/A59LU0bZwyy+STvCZeW/P/  
TMfeoluTk7+yGYV6NU1rmGfxptHrTvJxX5aC35Z+VO+6PIFn9v3S24S2Pw3TS2o+/  
dxbonf7Mj368l/7v6ht/Db6p0bfrRuPc8+bXue/eTOYv65HCIUcJn1OSA1nQOqHlbf  
+RFyWmUVfqdGyTncWDMlPbNXBE5D40lI0bcTP6OWgX5JXJr1bYeT86K/  
Ch53ch7kCMj<ETB>13<CR><LF>
```

-> <ACK>

<- <STX>7D9OXz3bx+JqcKnmX4s/kX8nPKOOpd3Buon6/czKRfYk+XD7xZM7tvB7Pohfh45njIR/
x9n7ncMltUg/XXskhkzeibh154c37XdMip0YeZpDzRMR89baZUyG3937neSK/mDkVcmCR/9nH
+ZblI5HXUJzdfMJzcvWib4T9/Fn8J4d2gHEipxewofNLhfoue31nv3Ob8IY80LtzDo2rX
+uLHE7z0cwzLzC5nxU1hrwhseHmjK/J<ETB>1B<CR><LF>

-> <ACK>

<- <STX>0L0YeSzRpVhKsnHuHVqvkPtZ0ron5yJORbyl3F/0FW/U7F7Zd0mY7x
+3xHJnZPvNLIWUg8uvQERnZxryLXNRO5lvIGHmlHcx3clucOfG/
9h35sX7zKXKIWrsh38ec25gGQRd4Q359+by3nj6v4HflwcvV0laVMkT7u3ge9U+KRvkkCQf1XssM
+Tkgi7UGVayDBLXh3xuaRpGrYG6wnqWT3J70W/
BGPEizmjwJneJn7qmaYmM<ETB>FD<CR><LF>

-> <ACK>

<- <STX>11YP1n21fyPWFbKxg/CtymO+y7MHXoCs+5fLGHvwnvjc55NjLyqYB76C/kUt+j
+nMXDxHp8K/e7f1EZtFThYdRqaYJ+io94psQtA85ahZ1fwLf5/
vg1JHJfPz4P2y6XurJbPoONKSePIPAfyA90iF7uTxwStkCvyqazzqu0R98NX4xm04PzdPOkP7TgnV
84cyTTX0aNY6ZjSuJ2eimlTXIOTEvsTlxL7pE4LiaPF5rvnOE<ETB>F4<CR><LF>

-> <ACK>

<- <STX>2Td6v6XmRXaVPiF6MmGO042pi29bizGsQQ8vGdr4p0Pu17HP27swT6P1Ka9b30O/
HfflO5AGI+cti50cquSE7hVQBZm+lc5X0jOIZwYOQVsfan1n1STjTF6qw/
chtvtd4UDPGPnCtvZZcXY0/T6Xth8iu63riYKDBMcJThKcLDhKsGt+/
rzghL6oOdLrErnUQwWfzlj68H7XBE/LXBE1vKP6o2+n0rgOOR9qikIZ+UHq/
QD5<ETB>75<CR><LF>

-> <ACK>

<-
<STX>3UHJWAYdkP0jOyZIG7wS5pmaBz67umJRRdEUySX0mzv3WvaLbFNFP1+Hd8j97+G7Xvl
D/UqfHLs/zvSFupcoD4V9ULqf6vm+aHn5NWQS2o
+ce6glyv3+3xGXielj7YwfcqX0nfBZ1mcPgdl5qbvyRIPjIDfTh5wjH2nekrexw/
A18RnJ87Dt97DehVzym8Lm0FszXP8mQ1tC4jh8XXD98M/VPxDrEnMyHIQhvaFzWu98I
+o<ETB>13<CR><LF>

-> <ACK>

<- <STX>45TBfxCL4ivLfyR2yZvsP2usTgm+LDz/S+q/r+jr6r8/fEujaejjvPS4eveFn7Z/
pfd3rvoGeCu7XZ33v8EzzVFxf97wdPW91Nddzur7QbXkckLXv6vmTev97urL+g3rv
+xqjatHdO8x3fuOvv8YP0XvP4RNMD5t8Pmp1v2trq94TfLtnJnof/QLkVf8RNpx6tXr
+byjnkauipS2C7qG7Lz1Ocafvtbe/C11nd+bnoOTs9<ETB>55<CR><LF>

-> <ACK>

<- <STX>5z2adFVErg5GHwa8oyZ5ic8JemroX6yodw2z/MbZRa6bWsf9FM
+kGeZ9C3qwPgl1O8+ahsVdpdzDF+Fs4l6Eb4Gfgd1ZfKEh9mPifNLPgr1eGpB1GajrqT3yQITz4veU
+pum+R+yDHTo0TdjRrEke7v6Yzoj3px9BJQR1nX/UjUnahxU00O3rGjjCv+TOSH6Yui35L60nH9rk/
SD7BB+mbYP/ow3pc9Yut7Tnrjoi5LDZn6<ETB>B1<CR><LF>

-> <ACK>

<- <STX>68qmG0PHtzVN6GuALZ174Xyu67kK/B74RvV30PwQfhto+cV5EL8Ae6X8N9bz0FUaf3EY
+w5GRwAcf5NjMkVJXPMK+FP0KzXEpH3u4FhPndNs9P/Q7VPTAYCvPTr+WupXeoWYVNdH9bP/
wr8g54ndE3Zbc+vG6ljOsi4/0j+krb5o+wUrpA9CDJL6i0/AXH6li53q1548+4f08n6j7S76id4T
+EvAi/yx/k/py9Gh80jhE3wB+<ETB>3B<CR><LF>

-> <ACK>

<- <STX>7GXWJW00z+n6iJ+AY7x37GT4VtZ/drUdx1sOjQyzTUbPH7mM7VzdvoneEcwQ/
k37C6eZhtXOut6l5Hnjs7VoPNTI8iOg9W812r5bsRt0e33Wt1JXsaYj4YW3zO/RYXveQSeA/
dNP3Np6SO9P+Irr5ro6x6MvFd
+HmtgB3kfU93Z2HQLfKOqcfF838aFv7r2WiZDT04wHZzB95PTqRL82cJfCMgUeZ96aNSzd3YNkL
4S6tTh<ETB>A2<CR><LF>

-> <ACK>

<- <STX>0H2+V861j2lAbh/fUc0LX4Ad+3x4+H5F1Plctk3hHXLoof/oALJ5sNcKn/
W8lFV6gzY1X6AN+0Z/g5ZZW4peH3oUqMUOMx
+pzUeP1TbmGXXJ6IMpr1tbN6OofbZ5gT7Sa4aOY1+pmQctsl+fsgyBA32F0dd5ZsqyaBt
+AH0T2WtLFTT8y3VtF+kpixow9aujrRdRe2N/+B/js+eK7+fk512Mc9S8kZ/90tbgq
+6ddu9g6wdn<ETB>0F<CR><LF>

-> <ACK>

<- <STX>1SMS16OyEPAM+Y/
0aqHIH3R9ebJv8Zn180x1Tz9eybaauGT220lxYcZk8MvdGb9Mm2Td+WtrCD/
cvrfVHD5nilXwvvhM3RUy0su1r2K/1cv9b25Z0wRe/YZ3ECbmcv/Bm1ZxjK9sx+Sjp2Bn62esg
+6dY9tDPZzaCudO9Gh/2npBP2b0mX3K/j+xG7170Q+ELSOunGT7j3wTvXOTRjy7f/
p3O1r3wo7ulj34u6b87ZX6v1ae<ETB>68<CR><LF>

-> <ACK>

<- <STX>2Ux
+xvYvaPfaTmO5c9+ISt43zWocJpQ5xtq6UtnSPPAeHmEdR00cO0aO2dTJ6jomDiG0/
nnK4umkQmjrS95FHznLQy/BtztAN+U6/N3Fk9JAgK/TP0VNzumkM/vymoM6+vpA3ztDzrL/
hv3wwbUGfdZ1+U3olyaFErR0bCw7jkk/sib2w5+NTfk82rhHfMi92B3+D9UYZz4gRD3BfJ/
2o0dtOvY59DvJ5F3Mfb12KvArnzGnp<ETB>45<CR><LF>

-> <ACK>

<- <STX>3g7zXY6LXdXfjH32QnE15Vkd8uF36CkNSZ1Y1HnE+/YP3T10c+xn3j/W
+2BO92+EzbWL7Qj8TehN2FFweyzaG5kLfcS5QHlH9Tzn7MI/pj53n/1g6i1RcyMX+IDzgGXx
+gcaOQNyXO/nj67nkeuS98bxQeRv9f9Qpz9mn3qcmfmQqfmXM84bpx5PvLas51DJO8ecfjLFRH/
Rxw7UE/7vWOGepasY4OIY+58Uw6R/C4xB7Wk<ETB>33<CR><LF>

-> <ACK>

```
<- <STX>4W5zDjFwmcQ+5/1dyf7fkflz9Zd+yOtbPct/Pe43li5LTvC3zp0tMK/  
rgoo5C3nNg7tccm5AjlloIdZhfZQx9Cz9xrvh+1r9+aF9E/+JRzrOAW9aBrTP/IT9+XPCOeuSbZpYsSH  
+pcl3ptcr5R34KW8OAI86oiTODu+X7ncsmBRK79DzmfC71ph8kjakZkNufYbqwbvPOfvMHGs1M/  
Bdk3DU3ced6oK911ijK/Y7F4r3ncr2n<ETB>D4<CR><LF>
```

-> <ACK>

```
<- <STX>5LWPiXyFOI0dM7fle8yLqUMSLYzx/0Hxm4nllgyhy+xO/E+uQrwcHvt+esSTzfStp82qu86+  
+F3NckvPeZjmJmuYt+X1Rrv9qyk+T+oDMEOfOtxyHzD1vGsAPdCL4BE  
+hGbkYZOzlxGuK6Rw6MFCnfjHjUeqkj3j9qDPAg2stb7HWvRnDQjfkX38NmUWmfya9ZEaTvChE2  
NTVhamDn0/ZR8Zn5WyzX9/re+ZXU98FiS+jMl<ETB>EB<CR><LF>
```

-> <ACK>

```
<- <STX>66ca4e1N3f2PaRd1/  
RvKLWszpfc7dj821FpiuQSF0hHrF8KQ780DbF3Leq3JN6INP5drfTNuznXISzD  
+4aTlnOT745ZZ7ofez0/cmtRJaDMuecl3+6LumgZ1rc0DxH7XJDy9pBtRsj0bSmfD6dtmJ7Pn/  
Ueop5xT8rE00mLGSk7sz02dOaPxiPqbQN0uyxIB7jCuerQwYm2HdS3g8/QGttwXdKKOvo1nj/  
k589pJ9CfZ1MH<ETB>9B<CR><LF>
```

-> <ACK>

```
<- <STX>7f5fy2DE/Y645qTPQ9ITc9x9zje8uk7GoqVWV90fbDWbHAcl  
+IDSjZo0tmZZ7vCn5PNfzhMxNTzvBvAO1Xej/jK  
+hd6NzHc6BO21rwlk1uSv0NM4W1gDPaDvHNIC76ndUZ/K/pGo4bFX7Dm0uSv1HJmcl/  
SIBjkhx3AeXZ+y9KD5gL2M3vbXk2/Tk4+Ss4hH+a3lvo7Llpe+t+NM/Fd8BxRj4zclB/jcrl4P7IEUQu/  
yPp<ETB>4D<CR><LF>
```

-> <ACK>

```
<- <STX>0gx1v34seuPChbnQ8RiwRvUTUcuhd/  
Zh9sMijTXI8ULlwmO9n4oxfyb5o9CniH1EnIHe3p31valPRt0kMt7x9E+Jp+vaoE4U/  
SXxzhP3Jitge3yzz1dE/vFvGOod67/  
iM0SN9aPZa7uWcB78RiX9NbYqcZeRDTuxfWnsiTxNx74b2/+J3gFXG30McN8XvLzPPQzwVPaAb  
O7aL38sOsm8deYvz7A8RGxBPkGch7sEHon+SPBG+<ETB>72<CR><LF>
```

-> <ACK>

```
<- <STX>1b/iOa9vHwj/jNwoRhw5ybBPxB/78Fhl/4G/vb78vftcgn1y+q7K7/  
c7oKzwx1zzSMUDkpg4yvaPGs6d9t4i7s5c7fHxiojPtJ8dvtg6zb0peJWKMAxyzRF/  
2oPRx97Ps1NQgiFUusP8ePaWr2BeMeHdwrnN0+p3llb4mOYQDnVOg753cHj3EkR8nXyD5JE8Rv1  
Ui1pyYPvc2/t1kxGBD/YzfcfvclY3jyJPKL8niDqXYq7W<ETB>57<CR><LF>
```

-> <ACK>

```
<- <STX>2SK8RdVH8+8/bx4180UmpC9RJT3F8QJ0zfp9C3MfvYshFb2w5IRcSuUTRoc7albUQelJ  
+oH8Ri/yz6RRjtvD78RuWE/2Z3w1FfWifjBnXchwa  
+MGHXZHRa5pJfvbBN1vYMyFts9Y5IDM9Za3TkucgnlShnojWesbHPUZ4k74Qm/  
X1jB9iPyeOSr5RdFjKvzN3Tk7ZbHiDGx+eRXidHoUd/I9MOHgeeRB0GG6BHa3c  
+o60Z8<ETB>77<CR><LF>
```

-> <ACK>

```
<- <STX>3xLm4j/kX/oV86vi9DPEcfVTkTrHrsocL3Ww9xvv+F2EbdLxC3Ykfg  
+DHWBefH1i8X2tz9CPMwMdJh6PHMw7UobJXSADP/b60Ct4vJv3EjrD+PUz/  
sRnWshvYefDf9S5Fnm/FPs+ObmHTIQPizP17BdDFvFXKI7toR9x28Y5KNFbnFn+8URf61n  
+Y2cC7W7Z/MM6DMu1BWiRoBvsYF9rsgDcmY+n/frGe0t6LKF7V4UZYt<ETB>AC<CR><LF>
```

-> <ACK>

```
<- <STX>4K2ZMJ88GXdZOOcOu7OPYPHzg5+3vRbxJb8hLrjvGebpJ  
+nofStoP8r6jjogcZT2SONz0fYnuUU/Pem/8ZucDlsOwZW+zTxo1Tc59aqa/t09ZwzN8lj/5XA0/k3ucx/  
ja9ATxHv7vHfZF4hxe4rM+zmrkjLrZLemrDfSSPJRN8QV97t  
+6/02+1Fz7edFjyJld27cp2YMS9Z0l6U/ir/  
4mfQV6pmb5nfBn8HOmpx8qH5gzPPwC<ETB>8A<CR><LF>
```

-> <ACK>

```
<- <STX>54gn6j4hZb07fBf/k/PQt53qemOPr6e/d6rli3VF5pWdloGdzpvGJOS  
+2n1UOyXH4lyPSP8RHeiD9nlNybnpSb0t/6LS+pbFy+HKXpM/Jvj6vvgz44felHhN8fsRB7ledB/  
wQe9IPsxK2t/vtSOWgz6jve/ofRqJ5jrGq8V/  
nOTPJucuL2WPhrT0794fPqg0Pip0zR0E348nT7eSd5D9KXy/Lg++774tcTGM/  
Nzx35n5CAy<ETB>66<CR><LF>
```

-> <ACK>

```
<- <STX>6Xo/PDYdtnkj/LH0zejfLMX2u1S1M+s7I7/CcOvjvkm0so1M  
+binb2nulfaBTHw234d30lcY8gemccSloyxnNfgRR03z/  
eA5NOHzlemDXpWYMSnxvc80i366Fy234La0h/hu27Wl3+9L+s/x3APx30hRTEBvnDly1C/  
F3jdkXS8l2V6ZsmWOMR/Z+TkzcTvO+4N87v0YMbslXn/XuTP/P9DFpEP  
+D0ImfJlseQoRFJi8OT<ETB>D0<CR><LF>
```

-> <ACK>

```
<- <STX>7H3ckTW7PuUf2Le3piz1NSTyY65P+/R/4x08AWeP6pOHU1O9Hcn349Kj3HTjMz  
+edXos53wuf/LjFXmXJbnP8cYhejlA9PVXfh45E+rQV1vOoq/  
xc0lfYrLfpF24leXunL7oR4p4fKp1OhoI5/QtjZFjj7ekbCNfz/  
a5ZxY8nkzZXmiZlO4l2euk3BC3oQt9ucd5uUfoMzH5/K2k1Y2pl9AH/mG/  
H025uCFpzh7o6Ua3iRVH<ETB>02<CR><LF>
```

-> <ACK>

```
<- <STX>05BrU4Pk+0AvO2rwH/sjPrcm7lxOHcd5z9Kyy5jdTruZbpyLvNdFyF/
mq4davsMOn5R6fTTryzl1eK3SS7wtMo/BfxqecoX+zch3Ovm7fsnj7C6m/
4HG29xQ2BJ4ushwt1as8CylGvit5uDDfR9+avH9z0uxB4xnn1KjUK3I02adMj07YnAdSbq7ONdGbB
9JOCGY0loPIG97gfFsZbHmE1xHfTs45Jif9hiVdkB/6nV43n+Md<ETB>8C<CR><LF>
```

-> <ACK>

```
<- <STX>11jg1+XBxyja84/yGJ/smD2/
yfolei1IeJ6ccsz9vCvjeM7wGXm9LvUYnT49P09Mmg5P3SB3eZtpxJyYa5MySO4Sm5t5q1hnScrR4
amHs5fRhX7TOGUnJ1mpuwj19g7fN6B34dwzvB7vM+nH36h/9S5PDPzt/
+XZ4xyyH20anL0XcUdQeN6wz8Qu1MPra52D7051nDHwf2T4fwT83jDyKvMTt8W2E/
F9Ye739tS3N0zX<ETB>DF<CR><LF>
```

-> <ACK>

```
<- <STX>2yO/ebkNOXRu++MsHDgnlt9G3m9yytdsy13I5jX5GZm/
z7pZ9kj5mGcaRL6CPnHyJtimn1tO4pyYlu9PTfo/
mrybnbKDz3xRfsdfnuo9BR63ph6Sw1mY8j7gXy1KvqF3j6RuvGjZCHympP7Ptq0IXfuZcQhZQX6xu
9j2B83bOPewE79MGRmXPgc/PzctAm5KvUp6x3mKTSOGIKc6LeX85qQT/
PmO9xl6OceyHmfHbYnwYdX<ETB>5C<CR><LF>
```

-> <ACK>

```
<- <STX>3kr7M0cn9P9u3rG/54pRFcrrYylfTVtxtWob8P5z4Z34//MTHLSvKxqK/nvdeTI29vG/
p727Cbs20biz9nQr+/2LrVMjaAylPmQcMe89ZBF3JS/
0w7cvU1KHbcu0XvdfYN74veVJ8+UvSHiwwHsGH6SI3yCe0xe
+ZZJqHDC0wfcNWsN7Abzyey3HIJtLubDM+Gjnosb4fPssLlp3wPRrHYvw/LJK/
K4/6NPXhY5wXiz9G8ey<ETB>FF<CR><LF>
```

-> <ACK>

```
<- <STX>4kSNY2fmaqlGOcp4t/s8GMeG2js/JT0UtKhHbOf8Tv/3e0nrM/
5CJXqATXN8jTxH16xWdq2Lt6EkmTlzLcTK5i4jVyCeQYzgu8xfYIZbrhfG/R9bK
+O1A5yYjud3t1f4M/EI//Mq/ifers5vBB47Oc6OWjN9GMRw2zve5l78vtC5zXo46B2y/+Ri/9bRK/
3Hs5txP+Wyp8fQ8V9f3oYd3BeavoFVgcyE0/SSkjtjDurG<ETB>79<CR><LF>
```

-> <ACK>

```
<- <STX>56zgODzIFB9bJnEFxviT2hByRGyCnRC4RWpM/w/YTf0oHyDcQc8e++lw9Qnblj5Gn/
HPaJuwAsvO9PudS6lnWs8gBsU/OTX82fTvUNvKfRvy2IN9Cn+yaP7127Z/rMz12L2scPXeC5t/
d70ZvXv1of/Td0YNHX3/0vNFn91O9+0udBX/y2A5j9h28zEfAZ/50n89d8tGX
+zwLm3eWbVnYTc7B8Wkv7nStM/Ln6M8v0g4+kzZ7<ETB>79<CR><LF>
```

-> <ACK>

```
<- <STX>6IN/9tswZdNKWYQ+zZhJ2bHHaC3lf+LDQXfaKXkL+byP77fxCe/
ij4JnUafMr8pJmS8hXwnt6DIZLXMC2zpPGjIA8in0uW9sXYj/BYUebu1cVOSft3R
+lf6PyI6ZO7jeebjo9ow8478f5eP+Lex5Aifw+QA+T/jdBnr17pcOcf4n8Mvc95EH4HG/834++ts/AI5F
+yxP8Oon8qepLQzbVSPsI9/8I8JKdBb3F8/kDmJNdM<ETB>DB<CR><LF>
```

-> <ACK>

```
<- <STX>7uXjR88RvKOglyr3Stx3/22p+f/Rjxf8KOc72ptzj5+Qqq+c0Zon2pGv8LuP17OWkB
+4p56OjL+91526b5Ev3/n73V9P/3Of34n+kbeZ14n8lbW15jJ5RrldnLhSfhnuHpJzPSx/
j1qzR4gfR88dZ9nLKya99D38LvKOn7wb/n6X4f2WnmD70mcY5N1BjwR7XO/
WgBz3oQQ960IMe9KAHPehBD3rQgx70oAc96EEPetCDHvSg<ETB>4F<CR><LF>
```

-> <ACK>

```
<- <STX>0Bz3oQQ960IMe9KAHPehBD3rQgx704K0ApepBD3rQgx70oAc96MH/z3D/
4B681aD31/vr/fX+en//u/5uHtyDHvSgB/81zOxBD/6XwfdJ/t/
h0cE96EEPetCDHrw1oKI68FaFHw7+60KnBz3owf8o/N2QHvy14W/dZ/bfhW71n8Oiwf+z8Op/
AzrVXw+qvwD7Dv7bQxny1oFq8P89NH8D2PxN0P0/hLr6y/
DC4GXQHvwwf<CR><ETX>99<CR><LF>
```

-> <ACK>

```
<- <STX>1M|4|REAGENT|CLEANER\DILUENT\LYSE|
1502061**^20200525000000^20260206\171108H1**^20180227000000^20220714\150520M11^20
200915000000^20160520<CR><ETX>F8<CR><LF>
```

-> <ACK>

```
<- <STX>2M|5|SETTING|RUC\WBCDIFF|TRUE|5<CR><ETX>EA<CR><LF>
```

-> <ACK>

```
<- <STX>3R|1|^^^WBC^6690-2|9.68|E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||
LabMan_111^^LABMANAGER|20210706094947|20210706094947|
112YADH47745<CR><ETX>CA<CR><LF>
```

-> <ACK>

```
<- <STX>4R|2|^^^RBC^789-8|4.27|1E06/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||
LabMan_111^^LABMANAGER|20210706094947|20210706094947|
112YADH47745<CR><ETX>99<CR><LF>
```

-> <ACK>

```
<- <STX>5R|3|^^^HGB^718-7|10.9|g/dL|0.0 - 2.0^REFERENCE_RANGE|N||F||
LabMan_111^^LABMANAGER|20210706094947|20210706094947|
112YADH47745<CR><ETX>57<CR><LF>
```

-> <ACK>

```
<- <STX>6R|4|^^^HCT^4544-3|41.7|%|0.0 - 2.0^REFERENCE_RANGE|N||F||
LabMan_111^^LABMANAGER|20210706094947|20210706094947|
112YADH47745<CR><ETX>75<CR><LF>
```

-> <ACK>

```
<- <STX>7R|5|^^^MCV^787-2|98.8|fL|0.0 - 2.0^REFERENCE_RANGE|N||F||
LabMan_111^^LABMANAGER|20210706094947|20210706094947|
112YADH47745<CR><ETX>EC<CR><LF>
```

-> <ACK>

```
<- <STX>0R|6|^^^MCH^785-6|31.6|pg|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>F0<CR><LF>
```

-> <ACK>

```
<- <STX>1R|7|^^^MCHC^786-4|31.7|g/dL|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>A4<CR><LF>
```

-> <ACK>

```
<- <STX>2R|8|^^^RDW-CV^788-0|14.0|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>15<CR><LF>
```

-> <ACK>

```
<- <STX>3R|9|^^^RDW-SD^21000-5|38.9|fL|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>02<CR><LF>
```

-> <ACK>

```
<- <STX>4R|10|^^^PLT^777-3|260|1E03/mm3|0 - 2^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>87<CR><LF>
```

-> <ACK>

```
<- <STX>5R|11|^^^MPV^32623-1|6.0|fL|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>3A<CR><LF>
```

-> <ACK>

```
<- <STX>6R|12|^^^LYM#^731-0|2.94|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>F4<CR><LF>
```

-> <ACK>

```
<- <STX>7R|13|^^^LYM%^736-9|33.8|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>B5<CR><LF>
```

-> <ACK>

```
<- <STX>0R|14|^^^MON#^742-7|0.05|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>E7<CR><LF>
```

-> <ACK>

```
<- <STX>1R|15|^^^MON%^5905-5|0.6|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>A0<CR><LF>
```

-> <ACK>

```
<- <STX>2R|16|^^^NEU#^751-8|6.13|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>EF<CR><LF>
```

-> <ACK>

```
<- <STX>3R|17|^^^NEU%^770-8|59.1|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>A9<CR><LF>
```

-> <ACK>

```
<- <STX>4R|18|^^^EOS#^711-2|0.32|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>E3<CR><LF>
```

-> <ACK>

```
<- <STX>5R|19|^^^EOS%^713-8|3.7|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>74<CR><LF>
```

-> <ACK>

```
<- <STX>6R|20|^^^BAS#^704-7|0.24|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>D5<CR><LF>
```

-> <ACK>

```
<- <STX>7R|21|^^^BAS%^706-2|2.8|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>5A<CR><LF>
```

-> <ACK>

```
<- <STX>0R|22|^^^IMG#^53115-2|0.06|1E03/mm3|0.00 - 2.00^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>37<CR><LF>
```

-> <ACK>

```
<- <STX>1R|23|^^^IMG%^71695-1|0.7|%|0.0 - 2.0^REFERENCE_RANGE|N||F||  
LabMan_111^^^LABMANAGER|20210706094947|20210706094947|  
112YADH47745<CR><ETX>C8<CR><LF>
```

```
-> <ACK>
<- <STX>2L|1|N<CR><ETX>05<CR><LF>
-> <ACK>
<- <EOT>
```

ESR

```
<- Instrument
-> Host
<- <ENQ>
-> <ACK>
<- <STX>1H|^&|||H500/H500E^111YCEH00001^4.0.0.6a|||||D|LIS2-A2|
20240523172041<CR><ETX>B4<CR><LF>
-> <ACK>
<- <STX>2P|1<CR><ETX>3F<CR><LF>
-> <ACK>
<- <STX>3O|1|SX001N||^E^ESR|R|20240523172034||||X|||CONTROL^CTRL MEDIUM|||||||
F<CR><ETX>6F<CR><LF>
-> <ACK>
<- <STX>4C|1||CONDITIONS^^NOT_EFFECTIVE||<CR><ETX>D1<CR><LF>
-> <ACK>
<- <STX>5C|2||SX001 Normal|G<CR><ETX>FF<CR><LF>
-> <ACK>
<- <STX>6M|1|HISTOGRAM|ESR|TRANSALONGTIME|FLOATLE-stream/deflate:base64^Y2AAgQ
+OYKqh2hVIOoCYAA==|FLOATLE-stream/
deflate:base64^7dcHcJVlugfwY1fsGhQsoCIKVjQWLMn5DoJgB3uJig0LImAXLKGEdqFDQiehQ
+gQekjoJHQIHUKHBHDxvf6d/feH4p3GSZEZxbHnTvJzH/Om/e87/
N7vc785<ETB>A1<CR><LF>
-> <ACK>
<- <STX>70kFDr0823kp5eERjVCoSAIha7we7//I82bDCVMrX5oUCov9d5SeRVikrl
+iTG0yc3JMT4YUznu3FjzsYV1qsbm5jwcm17zIVhrYjPKJcZWjkuKTUIO9n5qbKOodGsyYUOSsqzLi
VXE2vzY8okF1h
+MRYQzyp0SbhBTKqxmOL9hVDgluWz48YxyYfXD2QcrhRtF3RSOjo4Os8Jp8THhuKRq4aj0mmFu
OLGgTjim1DPH7yvFhf<ETB>A3<CR><LF>
```

```
-> <ACK>
<- <STX>0UQRlevXrh8Yv1wXmp8WD/
hWvkNwy7UniacRPTasFrb25aXZH9HZhc1unOT1enF7qNwF36qeoP0METN4fplV3e0XsapPUE/
GepP0dN0RiYjizGHMY+XkJHDWMJYxIjJyGosZWxgbGLkM7YxdjJ2MwoY
+XnfMr5jHGT8wPiR8ffwofuSXvOEIC7pxKBU3kmBcwwq1Ts1iEo/Lcg
+eHrgDIPyiWcGuTinBY2izgmcZ5CXel6QWH<ETB>0D<CR><LF>
-> <ACK>
<- <STX>1B+EB19YeBsg6Ss0kFMqYuDwjplAucc1Mq/JPi+0mVBWvzlgTM/
9FfgXMm4iilGBUZFxDeNaRiXGdYzrGTcwbmLczKjCulURzbiNcTvTjTkvxi2Muxn3MmYscGhz1x6z
QijGuM+Rg3G/YyajFqMBxkPMR5mPmp4jFGbUYfxBONJxIOMZxjPmp5jPM+IY7zlellRI/
EK41XGa4w3GPUYbzLeYrzDqM94I/E+4wNGPKMB4yPGx4<ETB>88<CR><LF>
-> <ACK>
<- <STX>2xPGJ8xPmd8wWjl+JLxFeNrRoI9CZzG9jVmNbG3Ka+p/c2YiWokcpur04LdQq2W/
JbqtdJDazVb66ONum310lbtvppr357PSUxOjA6MDoyOjl6MTozOjO6MLoyujK6MbozujN6MHowk
hkpjBRGT0YvRi9Gb0YfRh9GX0Y/Rj9Gf0Z/
xgBGKiOVkcYyYbjGMQYzBjMGMIYwhjKGMYYxhjOGMEYwRjJSGekM0YxRjNGM8Ywxj<ETB>C
8<CR><LF>
-> <ACK>
<-
<STX>3DGMsYxxjHGMyYwJjAmMiYxJjEyGBmMyYwpjCmMqYxpjGmM6YwZjBmMmYxMRiZjFm
MWI4uRzchmzGbMYcxhzGXMY8xjzGfMZYxgLGQsZCxi5DBYGLmMxYzFjCWMpYyIjGWMZYzljBW
MFYyVjFWMVYzVjDxGHmMNYw1jLWMdYx1jPwMDYwNjI2MTYxNjM2MLYwsjn5HP2MrYxtjG2M7
YwdjB2MnYxdjF2M3Yzjd2MvYyyhgFD<ETB>A1<CR><LF>
-> <ACK>
<- <STX>4IKGfsY+Xn7GQcY3zK+ZfyJ8SfGnxnfMb5j/IVxkHGQ8T3jr4y/Mn5g/MD4L8aPjB8Z/834G
+NvjL8z/sH4B+N/GKFIYZ1QJC81FMk+GlP4dkVSkk+JJBacEGkQc2LEcyxSK//
ESHT0SZHyiSdFPNmi31c6OZL8ORlbs7JEc+3SFr8KZGkrFMijaJQjXjWRR7PODUSU
+q0SOW40yKee76vTmeczjdcTrjDMYzjDMYpRilGK<ETB>C1<CR><LF>
-> <ACK>
<-
<STX>5UYZzLOZJzJOItXFuMsxtmMxlnM85hnMM4h3Eu41zGuYzzGOcxzmOcxzifT7jfMYFjAsYf
zAuZFzluJARxYhiRDFKM0ozSjMuYlzEulhxMeNixsWMMowYjDKMMoyyjLKMsoxLgJcwLmFcyriUc
SnjMsZljMsYlzMuZ1zOKMcoxyjHKM8ozygOfQ9X1jnCsYVjCsYzKuzFzJulpxFeMqRgVGBUYFxt
WMqIXMyoyKjIqMq<ETB>83<CR><LF>
-> <ACK>
```

```
<- <STX>62kTufVz/whxkhwkTUSRSnlvMd4Vxcb5sB9T5v/  
Np2SQxM09ayfNxGfuZ6V5P5WakTLvKWPvx8ileT8Z1yVqSa85br3XwpbELGPWe67ZMIY4z9rP18j  
Xs64hXzc/J7+WwjZm6Q+az8ZlwbMybPmtv6B+q6WftwYtKTzvaEG9z9nLi2SclMn  
+7/8H<CR><ETX>E5<CR><LF>
```

-> <ACK>

```
<-  
<STX>65hXMO4hnEt41rGtYxKjEqMSoxKjMqMyozKjOsY1zGuY1zPuJ5xPeMGxg2MGxg3Mm5k3  
Mi4iXET4ybGzYybGTczqjCqMKowqjBuYdzCulVxK+NWxq2MaEY0I5pxG  
+M2xm2M2xm3M25n3MG4g3EH407GnYw7GVUZVRIVGVUZdzHuYtzFuJtxN  
+Nuxj2Mexj3MO5I3Mu4lxHDIgHEMGIzSxYrPpgRZoQZASNgBlyAEWFEGBFGNU<ETB>83<CR>  
<LF>
```

-> <ACK>

```
<-  
<STX>7Y1RjXGfYz7GpCxcqjOqM6ozajBqMGow7mfcz7ifUZNRk1GTUyTri1GLUYvxAOmBxgOMBx  
kPMh5kPMR4iPEQ42HGw4yHGY8wHmE8wniU8SjjUcZjjMcYjzFqM2ozajNqM  
+ow6jDqMB5nPM54nPEE4wnGE4wnGU8ynmQ8xXiK8RTjacbTjKcZzzCeYtZDeJbxLONZxrOM5xj  
PMZ5jPM94nvE84wXGC4wXGHGMOEYc40XGi4wXGS<ETB>D1<CR><LF>
```

-> <ACK>

```
<-  
<STX>08xXmK8xHiZ8TLjZUZdRl1GXUZdxiuMVxivMF5lvMp4lfEa4zXGa4zXGa8zXme8wXiD8QajH  
qMeox7jTcabjDcZbzHeYrzFelvxNuNtxtuMdxjvMN5h1GfUZ9RnvmMt4l/Eu4z3Ge4z3GO8z3me8z/  
iA8QHjA0Y8I54Rz4hnNGA0YDRgfMj4kPEh4yPGR4yPGB8zPmZ8zPiE8QnjE8anjE8znzI+Y3zG  
+lzxOeNzxueMzxlML<ETB>D4<CR><LF>
```

-> <ACK>

```
<-  
<STX>15gfMFoyGjlaMhoxGjEaMT4kvEl40vGV4yvGF8xvmZ8zfia8Q3jG8Y3jAR7EjgJ9iWwEuxN4C  
XY35jZWI3G3MbqNGY3VqsJv4l6TfTQRm0m  
+miibIO9NFW7qX6aqt9UT00zRjNGM0YzRjNGM0YzRiJjERGIOrkchlZDRnNGc0ZzRnNGc0Z7Rg  
tGC0YLRgtGC0YLRktGS0ZLRktGS0ZLRktGK0YrRitGK0YrRitGa0ZrRmtG<ETB>04<CR><LF>
```

-> <ACK>

```
<-  
<STX>2a0ZrRmtGG0YbRhtGG0YbRhtGW0ZbRltGW0ZbRltGW0Y7RjtGO0Y7RjtGO0Z7RntGe0Z7  
RntGckMZIYSYwkRhlijdGB0YHRgdGB0YHRgdGB0ZHRkdGR0ZHRkdGR0YnRidGJ0YnRidGJ0Zn  
RmdGZ0ZnRmdGZ0YXRhdGF0YXRhdGF0YXRidGV0ZXRidGV0ZXRjdGN0Y3RjdGN0Y3RndGd0Z  
3RndGd0Z3Rg9GD0YPRg9GD0YPRg5<ETB>29<CR><LF>
```

-> <ACK>

```
<-  
<STX>3HMSGYkM5IZyYxkRgojhZHCSGGkMFIYPRk9GT0ZPRk9GT0ZvRi9GL0YvRi9GL0YvRi9G  
b0ZvRm9Gb0ZvRi9GH0YfRh9GH0YfRh9GX0ZFRi9GX0ZFX/6n/37Sv0Y/Rj9GP0Y/Rj9GP0Z/  
Rn9Gf0Z/  
Rn9GQMYAxAxDGAMYAxAxDGKmmVEYqI5WRykhlpDHSGGmMNEYaI42RxljGMgYyBjJGMgYyBjE  
GMQYxBjEGMQYxBjMGmWyzB<ETB>53<CR><LF>
```

-> <ACK>

```
<-  
<STX>4jMGMwYzBjCGMIYwhjCGMIYwhjCGMoYyhjKGMoYyhjKGMYYxhjGGMYYxhjGGM4YzhjO  
GM4YzhjOGMEYwRjBGMEYwRjBGMEYwRjJGMkYyRjJGMII26Qz0hnpiHRGOMUyXRjFGMUyXR  
jFGM0YzRjNGM0YzRjNGM0YwxjDGMMywxjDGMMyxjLGMsYyxjLGMsYyxjHGMcYyxjHGMcYz  
jPGM8YzxpGM8YzxpAmMCYwJAmMCYw<ETB>52<CR><LF>
```

-> <ACK>

```
<-  
<STX>5JlMmIyYJlMmIyYJjEmMSYxJjEmMSYxIlg5HByGBkMDIYGyWmXmTGZMZkxmTGZMZkx  
hTGFMYUxhTGFMYUxITGVMZUxITGVMZUxjTGNMY0xjTGNMY0xjTgdmZ0xnTgdmZ0xnTgdmY  
MxgzGDMYMXgzGTmZMxkzGTmZMxkxGjIoTkcniZGQyMhmZjFmMwYxZjFmMwYxZjCxGFIOLk  
cXIYmQxshnZjGxGniObkc2YzZjNmM2YzZ<ETB>2F<CR><LF>
```

-> <ACK>

```
<- <STX>6jNmM2YzZjDmMOYw5jDmMOYw5jLmMuYy5jLmMuYy5jHmMeYx5jHmMeYx5jPmM  
+Yz5jPmM  
+Yz5jPWMBYwFjAWMBYwFjAWMhYyFjIWMhYyFjIWMRYxjFjEWMRYxjFjEYGHkMHIOYwRg4jh5  
HLyGXkMnIzuYxcxMLGYsZixmLGYsZixhLGEsYSxhLGEsYSxILGUsZSxILGUsZSxILGMsYyxjLGM  
sYyxjLGcsZyxnLGcsZyxnLGcs<ETB>E9<CR><LF>
```

-> <ACK>

```
<-  
<STX>7YKxgrGCsYKxgrGSsZKxkrGSsZKxkrGSsYqxirGKsYqxirGKsZqxmrGasZqxmrGakYel4+Rx  
8hj5DHyGGsYaxhrGGsYaxhrGGsYaxlrGWSZaxlrGWSZ6xjrGOSY6xjrGOSY6xnrGesZ6xnrGesZGxg  
bGBsYGxgbGBsYGxgbGRsZGxkbGRsZGxmbGJsYmxibGJsYmxibGZsZmxmbGZsZmxlbGFsYWx  
hbGFsYWxhbGpMmFey+I5<ETB>7F<CR><LF>
```

-> <ACK>

```
<-  
<STX>0+Rz8hnbGVsZWxlbGVsZWxlbGNsY2xjbnGNsY2xjbnGdsZ2xnbGdsZ2xnbGfsYOxg7GDsYOx  
g7GDsZOxk7GTsZOxk7GTsYuxi7GLsYuxi7GLsZuxm7GbsZuxm7GbsZuxh7GHsYexh7GHsYexI7G  
XsZexI7GXsZRQwChgFjAJGAaOAUcgoZBQyChmFjEJGIWmfYx9jH2MfYx9jH2M/Yz9jP2M/Yz9jP  
+MA4wDjAOMA4wDjQCT07U<ETB>95<CR><LF>
```

-> <ACK>

```
<- <STX>1c1QnUb/ZzaEkiVw/IImajf64JDufI9UeuO5T4ItYIHLU/KKJe/  
BHWkbWDDtX9j189tKVijVDmjVK7eii4xJwklIP05wREJSWaZn5NwOIGEDs1dbHw4lcm8yFhCklnaW  
gkkdDiZUb+eUOnfnuB3JOF3JPM4Erro9yU44vV4k/BvSObhHDn+VyR0xGfkyNd/Z4L/  
wCQc8fqmMwifl8qxb33/zm/PPd+Gf/eHO++kpTk6ARI/v<ETB>58<CR><LF>
```

-> <ACK>

```
<- <STX>2ld/Hv2FLX/6PGvGcXNH+9cccbR64u79qCIHOv9Y51DUft/  
y76iahR13cXNF3fdx7qPRZ3J0TV+7V4f62yLu3/Hug/HOsfizrWo6/otvRSXY51rcfepuDMv7iyOt8d/  
Vf4otyQIKUIJSIKSkpTkj07wB9QOjhofve7X5olyRf8tWtR7Jfkp/ws=<CR><ETX>90<CR><LF>
```

-> <ACK>

```
<- <STX>3M|2|REAGENT|CLEANER\DILUENT\LYSE|  
24052311^20240523171458^20240823\240523H1^20240523171446^20241123\240523M1^2024  
0523171439^20240723<CR><ETX>C1<CR><LF>
```

-> <ACK>

```
<- <STX>4M|3|SETTING|RUO\WBCDIFF|TRUE\5<CR><ETX>EA<CR><LF>
```

-> <ACK>

```
<- <STX>5R|1|^E^ESR^82477-1|13|mm/h|0 - 40^REFERENCE_RANGE|N||F||  
technician^^TECHNICIAN|20240523172034|20240523172034|  
111YCEH00001<CR><ETX>DE<CR><LF>
```

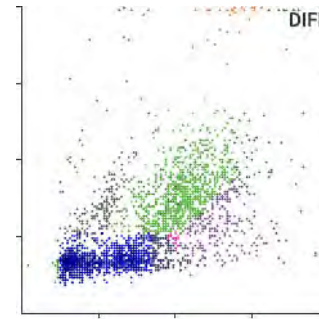
-> <ACK>

```
<- <STX>6L|1|N<CR><ETX>09<CR><LF>
```

-> <ACK>

```
<- <EOT>
```

3.6.5. Example of Data Frame for DIFF Matrix



```
M|3|MATRIX|LMNE|LMNERESABS|FLOATLE-stream/deflate:base64^Y2AAggf/  
XRjgtIMDiAkA|FLOATLE-stream/deflate:base64^7ZwJtF1llee/  
FkqZShDQAinklpPFGBTRQIQH3kPmQclgYPACxTxPxQyHOYEEEEkiATHATMg8QghDCe  
AIREZFBEBQbvNgyCallzRrh79//vx9x1erutbp62VW67lvrW+fec8/9hj3v/973IRJ/3T/2lz  
+96q+uSnejHUv30v5S3xzjP7SGd5fmpviel28P6y/tKbG+/i8c3V/  
qXaL7361v3TreH1w3N8pxkXxeljcj2s5Kb7DXPFMa2yMuN9Miffj47OD  
+kv78nj2iJjryngdo5wfn58V1xviGvM3O8fn58X7EbHGpHi/Ybw/J74/  
Lb4zOea7lu7F91uxt3Jh3GeeelYda3djne6eD72Xu0dn8c+Suy/2Suux8T1aK/  
RnRPXf4754gyty+J6Tbz/qvdQro3vvhLzfi0+uzFebx/  
Xy71edXGMU2KteKaJ73bifb17jllxf3Z89/i4Bg3LJXHdLr4zOp4ZFe/  
jHHXMXZ2VnwUN6+NNJ2gGjaqYp4I9dWl/  
zedij7F2Nz7rdOL9BTFizVas0Qk6lFi3mR6fQ6/4bntc3AuatEeaZ524Nsd7z  
+1Yt94zng1edGfGvaBVdWK8jjN3ppoOzdnxzJfj/QzTrDPM67fjLJ34jfjmr8bEM7F  
+E7Row984W31u3L/QNGyYE7q0Y46+uBfnroJX9Zlx76qYZ168Pt  
+0ZI4SctaK9TrxWR1nbAXfOsG3wuugQ0H24PXcuA/9rjGNCvQ  
+0edpwbegRQk61HGOerD51oz3/uF1tWY8Nyvunxz3Yp/VIXE/5kXem  
+BRh7MgN7elbB9onIRBkxL3mjhne0KM2F+DPAYyLag/ch  
+vIKu7P0Ky3wb2uyW5w35rM  
+xbjUbxDX0o3WRadXhfGms5+WLCyVe15pH9V6WZfhTgn/1rnENOevMTBmK8zRV3D/  
EczaxRjf43uaMO/t+a4LlozrVNGoHTzqXW57ql6yj0Jnvol/  
sRQOenXiWuJ9BT2nWeY5M8+2kljLe+t4amv6M6stAPIZNwv/  
2Q9aXaz3nSqVizPcM6ivy0a+teO/  
jYRcaOS54EjzrjEPYnhp5iLXrkLfmy6aV9hJzNbt4TXQN2jZBh3Ka+VSg/R659smevxlq/  
kNj6lKesUfkpUaXbvS+tKe4FmQBU8K5Y+56n7iGnHSCvIXwuM33gsbVJb4in
```

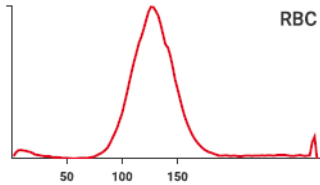
+hevYPPVIK5YB4Hv0Jua/O8PrQr4I52tNsp0p8r+yXMhX7r14x/
6vB1tkqztSCL8g9urqt7Sef6R4yP9z2sQq9qi6wjDEn32XeGrrfYjrV51n26zhfF/
t8gXnTHubR9Md1pvfBPNgwwteJZzvzCf4yXvJwDXmI9a
+0LpQnxBzTLEdqsluLLDLzSxMl3YPmURfRetb45IDrUvYBfS2GhLPHh7fi8/
qkKHmMPuo5qC005+OsWO8D1mrj7bf0n5H+grvqhM8VwI9LcGfLjZ5IPdehx2twy63g1/
N17wnzsAaXfT
+GstwXScPRIhGoCV2DbvX3Gxb17nEA71D7zITE3vv4FOuTtk7zfazi88ImSiXWyxedTX
+ZX3rZ7ksdePolIMdTcMGep2b8nNbyxVInFoWR1vG1eG2C+z7wbb
+Y9x70r7CvngR8QeJ6Z8jzRfsAfoFXtH1/EF+H7mrNNnNPhrbHms2451y6EZlwy3vWM/
0L4+zfaK/dfB9+po76V1g20c/qAVzzb7pB0YZR1vz7bs4xOIM5q9ra
+yyYO8JnYKWajDBIU3WOb5PvqDnWlfnSmWyWor+yrsQ71+8v6ouB/
f6V6S9iV42hCL7GkKb/uE/UKWLjPvxlfPojbCXkC/5kzbpHKu14Wv2J0ucUG/
z1Wvbl1oOt4zfON8vNfrr+XzB6ecj7IMvdBnpHUFv9S62H4RXmLvK/zMZPMN
+16dnjYEe3+N5Qzdz861bpTYb+H94fbRkrUDPS9xWXOldao+0DpQD3XchU6UU/
7Ez5xsG4fNwo+zLraeeAOZYM76yPjOUN+TzTnHstUcmjbtlwfTvaaso+c/6Cc/1D7dc1/
smO3Oj/nOXwJ8Q5nQUYUpx6bvj/PyNnro3L
+4X6NHcA2Mhf7VE4sG0KelqwtcQFp9oO4SPLlfZP
+KImz1YN9b5E98vt52SDL0r7FM9VB+U+8B1XWVaw
+8xRjrWP4Y2ZqPwqnnz3VvJFs4e9/31fqkPkm/EizkmNKYqs6YhpixKbE+3+NZ9aOa+h/
WSVGPF//XYyQ1aoV12XjHu/39bPVf4vXEdM223sNYplSstrw+YoxNorPI8m1N/
O9aq0Y7CHmLFulvY3XTfifet347DNxXT4+2zxeY49jXxW
+iTn80vuuPxLXD8b7DWPEfhvs0RaOe/Bj1XrxzJfi+vf+Xh3r1p
+P97H3aq88d8Q15b3YV5yz3tJ0qD8Qn3887ocvaMJPntvE+9hfvX
+ML3htaFW2jvdrxAlaVJ+K95/POVb2mSqe5xwRa5W/
jRF0aWlvTdiMahmfq3A29sxxMUcNXT7meaAFcZr2AA1jzWpz75czNXHOaou07+wrYpjqi
6ZV/Yc
+2akSZ6mXSz6vZ5qwV87YbG66NFv6fFXQtYn1qjhHCR7UQzyPnv2s5yrBsxK0qWl/
1fLeP7FT2clnKMTyruqVvC/4DH20xiB/
pwm6lcFJqy28XhX0aQ7wXusNfQadH95WSas4d7NOvP6c1xJd4HPYw7Jpysaulht8fFnVs
sJ6dchJxTPx/fpjyR/
8QMhNHXJTs9Zm3hexdXyuV4vXQecqzkbMX3b2uZm3JhdhK5+wwDbM9w8xPmE6Eud
IH7bK/cW5yJapG4McB5FblJW9FvpU7WddafYwvZHRZv/UCWi6iWPKERxE55q
+IOPwBe2p9mnEdsRg5azMZQ6zT8I24KpgFfE0trLaMG0DZyVPx/
5eZ58hm3Klc5TqsLTtlX1ZdZLto2z4CPtpYh1sO/Eh9ruJpZXwJ
+QK5Gvl8lxXjrWPUqw31jkdQ3Fz0Je8vU18Oca62Rzp
+Ih4sHt9xj9X26aT4+Br8CfKXYgdRqSPZs6z7IM6N6bfie
+TT5QJ9mnkF8SMBb8RclPtKnn7xc4/
OTf5PD52IP4sR9uHKCYcZ7oQv5JHVxIP1PjYOGd7elxvddyOGqT9BOTzCdwDnhHDqn
chJiBs1+XfN0mc/WLI/

pv7GRBV2ekzIR8dkc4XmnVpmvB353mM5IvKOCixjrGfoJ8QzEwOjLd
+IdswOjLqzCHXSxfEbEs/C8vtw+sBW8IP4iv1Vsit+5ynEPPCQ/0p5Yj/iM9Yk Jrjf9FJ/
CH2K7oxw/1RGHdCOHINZRrESucoNp0r3KOBExf178JXYU7+XOfS+BKew7/
Kj5KHQEdi7DPTN5zqOaC78AjirN1y/QMyxx6avuyyJcdHW9fJVZi/iTOSq/
Pd5nTvg5wEeSfGRS6lbraIA/HFhT5vs579OrlaZ7TIBh+MvIFdda+zTSN25qzkf80/
WP7Ya0k8BJmULA4zjqJYCTm70jLenZHYycXWHfAc9kGsjxhG5gHfcSW6EynO85Av
+oJmdM/GPFRjymevwbvukNfcbLy85Dr1jzTHp1t3RnjUuNpxCZVx3LH/
N25PkNN7rb1cW25r1/xMLwu2J3b4/
v3GCEOFSR34h45ZXdq6mfQs465u5x2YU5rrHUAaGVFudrudfS8vsf9WzNOJ9Zr5ccV2xP7b
80zzVjxb5pg35EAl9tiO9SrsaDynPGWebQpnBa8oC+P1LGNHnYwMNVgh8l3usa1so+/
znZd3GufsnK3NWpOtS2Bg5IHEhTU6cbVzIbrcYbbPgX1IH8K5k11bjUuQqzdxrvYY761W
9rPabZB9f2W2e5k27n2nda1Tny/
fXfMfYvXgict8vSrrf7OAmOdrdh766EY1zqna8V85PdgA8ILb7Rsd4xdtGemHo7yjhSM9N
naJb0C7uS/Qs+dWLO9mLTrLPYNkyYa1byLWjSAs
+akPgiNmmS8ZA6aF2g2V3xbNieJs7WPGw9AN8jtwevYLe3Xm2T
+g99oF8CTyDmHkgXia36lzk+9hF5avktNiMq/oix4wxJcbdMR6N
+OfSGPP69Fk9N8YNcX9+XH8a1+ti3Bvjing/
LK6XxJgWY3iMhTEeivt3+7vit3GNub4f1yVxvcFz1WPj9YQYM
+P1WZHui9cvtXhgmxi9xPv64Rgz4vWFuc7UuE6PcWO8vj6usX55Je9dE2NMDOal12V8jN
HeU07gxuXx
+mrvWeOyuDfJn5XnY9wZY4z3pX3e5TPWi2OMi9fM8XqM0Umj22L895ybc58X15Ex
+M5s76P+ps9XXorXj8f4I3gd56Iz+80YT+TZ47I6hGITuE6O94/EuCcG5/hJf7Xe61v8j7YT/
IVjMfyKx9UYzYe93E++diQGfu3eY59N2Red4b88refhyDfULXK0xbzcXZR5/
JfYTDII8kXxcl8+yp07S
+iWfr0CL7+V5kYfvWr4031ILz1e4H7ypZya9fpnnDrqXJfmdoGe5MsYPvU690OeG7vWjKQ
8xZ4Ee98d7xnMp088mn19O/vH9t/298rPkwVMPo/
+S9ODZ2ryov5XyNT7INj6vg971K96fdGRh8iPOVv8q15+aMjDJ/
IGukvegdZikesAT6cU34nrtUjmoJ+Qzj+b5r8j935Z8RdbRk9CJ
+tqkFWvMSpm4MOXq5hgTPXdBjn+afB6d8gufbo33X/d
+4VX5XvLoTectQvSjlG37PifFL81b6gz1A709LWs1K3Xo1BnOcmfudZb2QfUGuxuRen7IsIV
NiPJ3PxTqly1mrJ6eMPGCbU/P922O8nbZiVu7jOdTdBbYf9YN9tlI3p32ZaBmCj+URry
+9nGD6cVbx4vWYbyUPRqZMjOvRU908dtxfdlPif7PpaxDH/hyecrqaZB/eu4sJbP/o/
UhbFJg2kpJ7OWyoyk4mafP7DO6NzPAA8fSV18O+X10ZSxb5tO4u9v0kZNSzKNmA/
r7BsYMfLdNuG+sp8jTzf7L2Vf066smfktDsneyWZeSnnHJdz3Zj6NTPpis0/
vU82S37itNTfpy3fZVHy/dWcb3HKXhdi/CLnm5s0DdnExkKDilgj/HIHHxv+vVrk+KOJa/
d2xzydhx0/dMPn1xELtr9wzNO61/GQYovF8Xn4/Va87tzneAmcR/I5507UJMj/
G7AJclityc2pVYEQHZC5JrksO/WFJA9Q2qRWBPZBXgnkIB1ih37jsw/
Up91ZeTf6yp3ET4T0f7RfGDJZQ/
41z3Gpj4wSaC8wB3GDFzM83Mg5DHE0+U30psQEwk8r5uPKRLzhnpw5cb

+A5wCUaMJ6li8FbygrGCoTngGu0jJU05O77+Kw1uf76xk2EubD/
mKOJ75X9TR9wKHKjwnBFd7tEz2aWB+sV/RYx/mKclnV+oV3NMs5n1MeRv37I/
3CWZo1jX1wftbhfGA08KQBj9rDc0JDYS9g7v3x3MrGEMASwlzq9ZlnW/u8YBPCuAYZ/
wCrE763hmnA98F2xIsN/ZzwNHAKclhYr/lgv+qnYDfgajX75bk1M996N3IN3rtFv2upf
+wTtiSMOWgKhsO
+hQGCZ2xjXIX6OnPVIWnZbOY9lg8mjb9oetbkqWsYm6ihJ5jghyxrAvuBKYG7slzrCn5A
W/
axXJNnZoasLAp8uXN8jlkHzxtlbgPBraS94Y8kjcK59rUtBeGB34T75s4XxOy0oSMFeR3TZ
8FrAjMEVkvPjPla6BD4FLUssQLzqTNwKPAYj9hPEAYFPjPih7IkDAZ5G1z6yW4GTJEHg8
uJawO3u5l/RReFrLW7G55pl6tmu/
ufi29BjMDZ6gSzwCjC91sNvW56IXTTjA3tcXEP8E1wV/
RSfhQ72fbwD34gXxJXtHxdc0H9Ktin9umzdnUclt92PoLVgfmAYaljWk
+ZdlXLbzfxROGGcGrwYfLB927jyAaVYrptxsnPq3t88pbHSTtHPoJusGT+kPEU/Xtb4TM
+JfBcQHxCP/yj9F/6VOAhfjM8ITnw2ffYc+xF8qZ6/Ke14k/b/
J35WsePFfY7piePe6HO8elf9oPwz/usSr1fO7XNsOTe/M8L+rL7D/kGx/
V3274pD7809sB6+57fph17K9zekH1tgf6349U77a8UTv7UfVizG
+YiBn8tz46de9ncUrwwPtWenb7ZP1cxG/u/Mf35BX2OUe+zD1aMMi397ku5t8h5FLM+ks/
dnXFM5BfEhDyjoOqs5A2fjcgzvZk+PWJW8iPFihEzy/ZROwjfQsxQr2PbKDuL/iw7Z
+w4z8m38M/V+DRq6VdW862sMJGL2uflmwfOx42RDIA+DcwW
+y65O8x7wIzr1a1jSqxh5qayEft98Xrslo+z/fAn1dKe8V+gn/C31Mvqt0sZ5vAc/Xv
+mQvqlXSLq3ldTIX8ivOS91gDZ8Df6u9fTJ1YkXTRDgzur2C1y0DOveBtF/
45X3Sjmyb9gY78iHbyZp60MqeC11UrYiYafn0NR8wjYn9VwVCTsOrtWyLwcO1I83z7MQ
cwSfZ82Vt42Rv8AerJA1WS9u8csYhK9qOlp/
36fzcp14OBtLquKcFzABMi5onvUjdiKfKqgzZj4rrwn5hYSXiqC740Oz4zrR4PmlsBawp850
10tVd5xu/AxsBExH/
TfgnmBqU4wLISbmHpf4y22eDzyxdZfjOTDr1q2Jr95pLKYNXj2xx/gP/
gGMFmyu9U3vv8yLexHjCSNAP8+2jSj3kR4+IHEzsSV+Gr0hfv5dPoes/
tTPyY7wOnIVYRro6pyMq2Mu1VTAQMjR0Pev25YvBd69nDGshG/Cssnfgg9x2/
lZj7g2Fhx1r22idrnxmlzJ3of8jzHBsXBnNGbt9Ps79o/
js28QRce7vxPdeDnr8lOj5ZFxfQGfjmRid9+Kzx+OZuJbn4zXPxi2i/4ns8U70ez8Uc5Vs3xu
+147RxDyduNLT2DwR13imzXeei/s/jtc/ifvxPFg1/XqqsR7ar3q46qzgrwGo6bGS
+3jKpdgUfsAP6VGDC4Nrg5eTm2burPqutTS6fkBRw6ZUWz/MDS0rNTE7Asdx/
NZ9+tx5fXhQafjYvz9DqUCFnCjY5wYY2iMY/
P9Cf16lxjHxDg0xhFB22fiXJz7ezGe6hdWrlrOGYmP/TDWi2daj8X12bgXPChB8/qd
+N472JZ+YXhgnsRB9P2pfn181lI2t89XXLdrxp/YotCbZj/Hf+g9dKRGSplN8fmQjM/
BBqHPSY7F8dWKC9AJavm75uvBSc+zM
+bqc2xBv41iGOKXeB7MXeuvbHorVqPHJWtxqueQS
+zsuAccm9hOsfHqtpGqrx2cMd9ejuexTc2Kjqeo02DH1EdEbXMjx0nwWnUsYlpkARnZxz
FPTS3iCtONM6iHalvHUsQ71JroAVBOsZxjRMU/GTOqL4MzfSxt+s62d/gz8HnVKokBb/

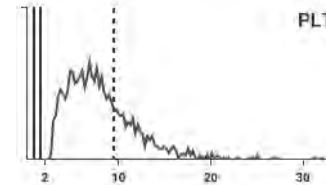
aekFX6c+gbo5F7UjfJ2YkHtz9p86unoqzWNTUzjSPFOfbvASbJWeD
+UqxLDZtwKGqz4z+psitqe3RXV8aEltZk9/
n9fUXXhW9fND80q8eETmBft8xTmPgXAW4IT5IXoiju1XvUm9F6dIL
+YRIhlyTPItAjTEvarpJS/Vpzo6e332sKzQh0guuqZsRPNxgPf0N9HPKXuF3zvM5yL
+Jp99X0aZF19CnrNT9sYNtjyqhzN0lhyPvhRkUXXozbNuR7KOQ+yzZesY1el/
Q82DVRfwpfjKMTltavjWNVHdnRMT85Ab6xyEHRgmP0t+Qt1leSCOVrZJn75WPpm
+iXg1QXpaz+Ze6de/0/WV8nydqmnW1sn0RftaZ9c/2LXfairUGdRDDDFxjkW
+QY6uXZwOdU3rG+8xrlq8gm8ktNXj1Gn3AeoZoBvm+gJ4ealrj
+p1OGDKi5xZbu5CtrwzPyCXoksMfQHL1XLTPkXfW1wT6jep/l8cixuG5suSjBM/p/1H/
Ksxtan7EixBGq6W5pOURnyE/gN3tEV5VrkKPT5wWf17G9VO2afleeof3NI/
UJXOR9EKPc3lr0eRk2wTlgptZZ6XvMW
+X3i0ZXXbOtnAtW0fyNfUa4FcjnzPHr12wkwAVEJHqj3M/2a15UU82dL2Vn0/W9p
+MXcTdKx3su9TPyu54YE+u3qEP
+u11dxWdo47p1gmUaPJYcXWKbVd84a9FRB48r2IBwSnZC+bGdbKMwjfIT6cpA/
6Axv0Uvq9O4LPSQYwCia
+gCtPuc5ZgeCGroNXkiPWPPrpM9e2XOSk9KTqnx1fOrWqKx5Ew/Ta8Bz5LxnWKfxJ6pJ/
6NpRv8C9pnaMzVP6Rz9COjOue53qOjJpt/soJRf7O+I5Nd21k/
1xllzDbKuuQdlcO6XWPhoy6VsW3/q0+6WI7CGaoUg8rfo7dG/
ovYeZjtoAS9IE68XqpW8QjW1vGslvlyNQz+ta+6uf0TNgK+nUV/yMbn09dQx
+2TPqETCo/oR4M9gYdsYMBp51ifXrjDrF/IB6s5vfkKaDnpraVx3EKeqBJGb
+uP0I9l72+PzUz33NY8kVn6Hf2KgtXGvHJqiGPVD/x0b/nfeLdDvTza2r9JvR/
Zl3wGGAsb0ZcuYfhcCHT+Tz/TZP6CLshfo3Mk+L3GGMMS1Ux/
XtV8TX45LOm9mvuv7IXWUuEZ+eCXrgmJLbOma5oX6M+kNW9X2UbX/w5Mm6/tc
+Bv6QNWJb/9GWI/oP1NPGLoWote
+xHSuwfCI08kvylf7FOtCPxPOD7YNrmit42DUBNqfQJMYUnElpEzCs8Ym3kHNcYHnWv
oeXJ36lg/6FMNSXj6FOMs6i0ES405qKsKZ/
hDn3Ax5SfPJAYylzGWYiYkXzEkYzKxCOHy1KdeMc5APq96Fmd6o8856jec0wj/
eKfP9Q6wg0WJPboxjKX+WZ9y6TJQe3vO
+ZHqdTN8X7kRedYrPh95UZ11WnAgYTvUOsCJlk9V/
k7ONd5no56kNRaZflprQZ7hDedFDdgDGOvkPtVHeC1ciFx8tnGbgdxN52D
+ibnmONMXnikPvN84jGhPHEyFmH+Zftdlbk3cBnzi56aX6ERtD3mg3gG9wY+oGYK/
3Oxzip9gXuBd1BdDXISr2rPPuNE400K42sykyZLcH7VGSkXrSdNu5plgPNR7vuu8lnqJsK
s/GO9RLa7uE94jWVUQNABnW5i0+Lfk842Zy87OfHmhn9F8QV/hHtCR3PV574mzSMbB/
JC5b/pcmuMB58SSN/h+ZfLn/tzDnbnml5N+lfPU8TiP
+PGGzyC8aFTSDfztoeQLsgfuNz3n
+7FIV7jzQ3i9KvXg4pR9eEtujv6Ru4eMNXFXogu6Rb3pmTzw9e+RXku9tU/
kunf7zOIN9cmUc9Fren4PuQTrG5+6xDleTf2an3RApn+Y+/i+9VR1RORqoB
+CeuCivC7JM1CDnpBydk/K61zLpWSMuai3UiOblvTCxhnxuZX9aVLH0A+wpDdy/
9QPswUDcvAN24j35fCRnCuNdiyMd6LMJfHk6czTC/

3.6.6. Example of Data Frame for Histograms



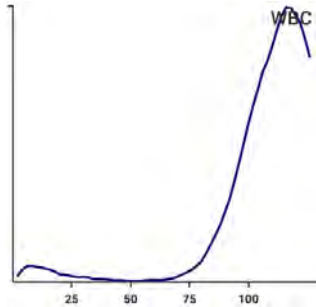
```
M|1|HISTOGRAM|RBC|RBCALONGRES|FLOATLE-stream/  
deflate:base64^Y2AAgW5nMMUQ5QIkHEAsAA==|FLOATLE-stream/  
deflate:base64^bdUNaJtFHMfxU6tVs5eqJXNu08Rt3ToTnLW2cS/  
2ee6ysbm2pnZ1y3RaZ  
+zcHKZadZLNLattGq2yIIFUG6Qw1ISkUMIYZRhWmUIQIWIUmS9tKUNsEUTaooyifp/  
kCTwEAz/ucrn87/nnpcIYXy6VbYR  
+7xCaJoQO6QQaWl3xwVjJ1TA2V0TcNo0e9Kno0ddS00P0x7RgaJbvNr2nc6WemnbrM3  
U1OnN0ZT+gB0Nten2wXWe  
+HsqcYU5cT1SfY96Qnum7wnXLOrWYP6a7A1c4Zkr3p2c4blaPuBY49nrt98k8WUwtF  
SGMnflIOToss0ZH3flRPVamYyVS+rKtKyQmb4qOTG3SblGOT+gpHEuNn  
+tZD3SaWuS7oBfeIL7JWuT9cEW7MPYQew27KPYx3HC/  
NaO1cHvEbwoC7ox32Peadwe5p7Bfp/5vfgfsp44NT5iTf3UOcu6zErwdo+pt4nrG  
+lmsPYSezz2BewR7AvYqewL2F/hn0Z+4vs/kdcX2J/hf0N9hj2t9jfY/+AfQX7J  
+xfsCewp7CvYv+K/Rv2DPbv2H9g/4k9iz2P/Rf2NewF7H84Riib/  
zrFPquezhTUpq9l2ZM3KvZcxcel1cTczcppu5Vrb1OJ6kVqpm6xcgeWKK6FSsZK1PzAbc  
qTul1xXVRqulQZ94yyl1Ncl5WwY7HvwI6BvRj7Fbd2PdgO7Cd2Kux12CvxS7DXoe9Hrs  
cewP2fdgubDf2/dgbsR/ArsB+ELsS+yHsKuxqbA/2w9ibsLdgb8V  
+BLsGW8PWsSW2wvZib8Pejr0Deyf2o9i7sGux67DrsR/D9mE3YD+O3YjdhP0E9h7svdh  
+7H3YT2l/hb0f+2nsZ7CfxT6A/Rx2APt57Bbsg9gvYB/  
CPoz9IvYR7Jewg9it2C9jv4Ldhv0q9mVr2MfxX4DO4R9DPs49pvYJ7BP0g+rma/DfD  
+l3FdPMdaugtfaqfmWSpZ0ULdDzZd1UrtEbZGqB9RocYu1tCIUoeirCOqRPht1vIONSZ  
5/  
pt5TodJEffPGrKF1Jox3hde4iGVZrvenOcgJUSQv7PPes7Jp5/0khhpJT6ztcYYc5ASlv4no  
1ou/WbCBX3jnSYs0SytdW6hYx0XZv2NRNNz+2GsedA8p0k9d46LLPuzmxwh75lBMkp  
+NPaCPV1MlpNyspk0kZBzyjHSx9x/QnqVNksvkOzLJ2Bztv7TFXqEt9YrRUt7ZK8hq  
+utoN5AKrwhX025mTKO/  
i76PfiP9Pd7se350L6Ef3s33Bvr1ZCf9bbQcF66iddGWMeagJWIVNZcxTt3wLWSBdUyTn8  
kYGWvt52kTufVz/hxkhwkTUSRSnlvMd4Vxcb5sB9T5v/  
Np2SQxM09ayfNxGfuZ6V5P5WakTLvKWPvx8ileT8Z1yVqSa85br3XwpbELGPWe67ZMI
```

Y4z9rP18jXs64hXzc/J7+WwjZm6Q+az8ZlwbMybPmtv6B
+q6WftwYtKTzvaEG9z9nLi2ScLMn+7/8H

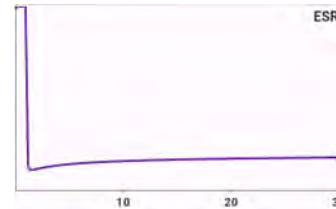


```
M|2|HISTOGRAM|PLT|PLTALONGRES|FLOATLE-stream/  
deflate:base64^Y2AAAQ4nMMXQA6ldgMjhxW9P+1dqO+3f1Yg7QuQa7EFyAA==|  
FLOATLE-stream/deflate:base64^rZV/TJVGMevcGdQUTBpREYDh0jmiJgSCfE  
+z3szxqChozF02DBZMhZOpkjGQERTAhKDVAAwKEkl0qGui/  
AgIDEUwSliQoC4E8cOglDSEwur7cs9d1xvjnrju  
+d9z3me83z3Oe89qFTKsJDngiodMYnwADmySpUPTbB  
+TZnbq4nWrfCdtT3uW7+221ejfUBy0bhLFp0bpNHIndJwQqoU6pcjNVmXSN7d1VJJQYv  
kEK2TMjzHJaW+MsKCYpqsaawBpQ1kOIHO7cfpxTAPsqpfS5eWaygxNYCeHg  
+m8eAwKq6loC000WsfHEvtQwY30/LQg8hJ426qzOQl0VZTnlzaXAg/  
nllYt1aDFqSqkm6CzqztPuskRU1pCb/UVKDhbMwwnNpNG2UI5/  
O83axqdQvx4q29NLNiUDFK0bpiBrMXLRTFBy7C3SnZom7+5Z7K3i1/  
PMuLhCzZ1t1ki9asEe6vt4i4MVZ3g  
+yDVBnjwauYTtkx9ivxw73l1mz4UtS7I9yIEVhjeXLOPBFc7c5e3CV4NcuXbrStbGreKCND  
c+lufOKec8OL5xNW/v8eTwcS8ONvfm5+2e5WeekBh//FiwHm22rWPzeD  
+eOuzPN04GcM+FF7i1OYjrdRu4bDKYixaH8IIHQjndbRMnymEcE/ISR0SFc0jij+yfGcE  
+Ra/wk1WR7Nqaxbb9r/  
I9U9t5xjKGxxx2cu9TsdY2Lo4bNu7h8uh4PrMvgXOP7uXGjiTsv4+rRpLRYz  
+Xzh5An4Ocb30lvI40/IN9EvIn7zS0DOdXwt8C30Pc1R4Bnof4c273kb/  
TF6fkgUP77CcexQ+jvEa7XF4yWbXhhPw8y4v7cqBp1y2GnsPvt6f+  
+ZmLD8At5PwVwB2hfd4lfgVwecpMCyG19PgeAZ+PwLLEnguBc  
+P4fsTMNVyxumz4PopJ9ecA9sy3tV2Hnww8LbBcjCu4E0zleD8GQdaVYN1DUtOteD9OX  
usqQPzel7ufxHcv2C7zQ1gf4nvjBkM/o1858AVnEETj2c34xyucn/  
JlziLFv6mrhXn8RWYXQOzNjBrB7OvwawDzDrB7DqYdYHZt2DWDWY9YPYdmH0PZjow  
6wWzPjD7Azc6wWwAzH4Es0EwGwKzYTABAbMbYPYtm12C2RiY/  
Qxmv8z9RmcsfwWzSTC7CWA3wOw3MJsCs9tgNg1mM2D2O5j9AWazYHYHzP4Es7+w  
rplbO1Ryw8ZFCr1ukVy71UyuGjGTy6PN5bJc1kbp5ZLZ9Xijvi/RhLuBMkdsgP  
+i6FsERXZKr2EIHlnXD7WS1nrQlyN+DBkDbIDavHuCk2LvEeh+yEfUaO8O8r6tedErpesv  
+PUit9HrE+IfGV+IejTJTyMQNdYf29eEe8VJtKK  
+zMFqoOOiBgu5taLHBJ52UIk5C5YKHGHiEpNHZj1kf7ZUeTW0T/
```

PyppKzBlyFc75RjLMGSKJ3CRRmy/+B8zNSfrnuTMT0VBnOMM
+o2fTurloN5Ed38DKro7zzjHsB+Z5BiG6V7GvUy/NeN145x5l/27xuB/vj0WHLSwv/m8/
tcx3x6m52Hqb+H9/gY=



M|3|HISTOGRAM|WBC|WBCALONGRES|FLOATLE-stream/
deflate:base64^Y2AAgX9OYlOhygVIOIBYAA==|FLOATLE-stream/
deflate:base64^ddUBiN1zHADwH45tHDsc22zj2GxnDmfONu7Yu7s3NjvzJzc7MzzMDMN
hGMZeEkeXLkkj6Y4JF1raUl6sXRJurS0tPSSNJKWL1a+Ly937/+vebq0/
d7v//vd/v/3+/7/
cXQuXvn64jIazPhIDihDDaGcJyY68zGq8F4892u760mmcy1XuLICgTfK6BJrJKCNPPwUG
GGInRYYZYQ+lzurcY
+ynzEEOMUGwljomU08DjUxnFk3MpZkWWmljCR1kyHZVn62HHL30sYE8G9nMFvrZyja2
U+A5nucFBniZQV5hiFd5Lb67nbzJW7xNkXd4j/cZ5kM+4mNG2MVuPmEPn/Izn1PiC/
byVfxtvuYbvmWM79jH9+znBw7wl2V+4md+4SC/8Tt/clg/GecvJvibw11xj/j9j
+FYjqOO4zmBSUxmCidyEvWczCIMpYFTOY3TaeQMzmQa05nBWcxkFrM5m3No4lzOY
w5zOZ95zKeZC1jAhbRwERdzCa1cykluo43LWcRiinAFV9JOB1dxNUvJ0EkX3WRZxjVcy
3JWcB0r6eF6VnEDOVZzl2voZS03sY4+bmY9t7CBW7mN28lzB3dyFxu5m03cw2bu5T7u
ZwsP8CAP0c/DPMKjbOUxHucJtvEkt/
E023mmu1r3lfrOx1qti3XWEeuj9ZUNtZaUnPN8b6mWKuV
+p2INT6SUoz9YCj2iVyMabnYVyr9JRxFKfahYISoySv9KqRkUjF9b+33pMeT/
pb0tnxc83B8pnLsUfWp99Mbe8lgrPISrMkQa2NG3LPtcW9siu/+xe5QeEN8V9zFI
+yjbGxc/FecIa2ZqdlQatS3ZzJHPi9cwMJsKCwW241I5CvIOfka+brskV5f6kNe6PX/
avkqVsiXIT5XWCS2iPOMNYmE2eacZty8hSkcto5fOcAYJWvbLX5QXX/hJfmOuD/
XxrppizVcqf9K3xiPwK09rrh2DMHY7+t9OVcfJ9tcT81RnVxT5XjubEn7qehenykvmMmvdC
KKUOpsfSey6fGau9L58kcyXzpNSTzJvcka6mN/3cujtRlRhrV5j/
aGTucUvvcAzXz7Y3nTeWsqPTsEP4D



M|1|HISTOGRAM|ESR|TRANSALONGTIME|FLOATLE-stream/deflate:base64^Y2AAgQ
+OYCqh2hVIOoCYAA==|FLOATLE-stream/deflate:base64^tdgHeFX1/
cDh41bcinvGfpxYtI6a3HNdULUKjjqKFrWiVatYtQ7UHKbYEpA9RCBsMIKAROZH8MSM
Gwle2NrUWvteEPu/89tGiAo8Dyf53fuued8319O8tw8lQik/n2V3LnUqnt7EIRHeJzndffk/
593MohG3VZ0UK4g5+ZyBRdmZE94LcNxxsz8fMc7MirVPD7T+cwtNW7InJl/
d2Zu1ScyXZOZd25WZqWa2ZmdO3Xyfk5m3fK5rsnLrJk9wXX5mYa4tjCzQtZm1+/
IRCTyzj0s8XJGuYSZicK3yic6dzojcv/
euQnzExN3VEzULX9VokqVKgIWoledjETN7FsS5XOrJriJrM01EhnlHkp8U7Fmwh4StWvX
TITlej5RkFMnYT+JaoVvYlGck99Tpb7GrOaubcFL9v9rZltzejA7WROV3Y3s3rwc8zrYw/
9zBxoH7nmDraXoWYPt58880fa0xhGzJjAmMyYypjByGfMZsxlzGcUMBYxIjKWMwoZqxnr
GbsYmxnbGF8xvmbstYHzH+J7xz0TR9yW36kFhzeYDw3lFh4SeW1i79uFH
+dwjWuq7jgw9w7BC1tHhzPjwrrljws9z7Ag54Qwa/
OJYZUqJ4eebZg94ZQwo9xp4ZYap4eec1it8Mzwm4pnh73qnBN65kU/
C4zzGRcwLmRczLiEcSmjluMyxuWMKxhXMa5mVGZcw6jCuJZxHeN6xg2MGxk3MW5m
ZDAyw6KfudyqScYtjFsZtzPuYFRIVGPcybiLcTfjHsa9jOqMGoZ7GQ8wHmQ8xHiY8QjjUU
ZNxmOMxxm1GE8wnmQ8xXiaUZvxDONZxnOM5xkvMF5kvMSow3iZ8QrjVcZrjNcZbzDe
ZLzFeJvxDuNdRuSeifPpffVY9d3bgNfA/Q2ZWWZkcRuZ05jd2Kwm/
CbmNbWHZmY2s4/m5rawlxZmv2c/Lc1vaU/
ZjFaMvozWjNaM9xitGG0YbRntGO0Y7RkdGB0YHRkdGZ0YnRmdGV0YXRldGR8wujG6
MT5kdGd0Z/Rg9GD0ZOQwchi9GL0ZvRl9GH0ZfRn9GP0Y/
RkDGAMYAxmDGIMYHzFyGbmMjxmDGYMZQxhDGJ8whjKGMoYxhjOGMz5ljGCMYO
Qx8hifMUyYrjJGMUyZrjPGMMYyxjLGMWJGzBjPGM
+YwJlMmiYxJjMmMyYwpjKmMqYxpjGmM6YwZJB
+JyRz8hznGTMysxizGbMYcxhZGXmZxZBmMeYx5jPWMBYwPiSUCaOYcXkLQGsYixmL
GysYSxILGUsYyxnlGesYKxkrGQUmGoZqxirGasZaxhrGWSz6xjrGesZGxgbGBsZmxibG
JsZWxhbGFsZ2xjbGNsZxZG+YvyF8RfGXlFm75m/l2xg7GD8Q3jW8a3jO8Y3zH
+zvie8T3jH4wfGD8w/sn4F
+NfjH8zguSWGkGylCdITtwRjH12JTt3OiiZtfmg5MsZByd9jiWrFR6crFLikGSFrEOSPtOS3
1Q8NFn41qHJmfHJn2+JXvVOSyZPeGwZN3yhyd91iXvyzs8mVHuiGSlmkckfe75fXUk4
0jGkYwJGUcxjmlcxSjHKMcozxiacTTjaMYxjGMYxzCOZRzLOJZxHOM4xnGM4xnHM45n
nMA4gXEC4wTGiYwTGSyTmKcxDiJcTlJZMbJjPKM8ozyjFMYpzBOYzZKOJvXkUm0x

4. HL7 Format

HL7 content is enclosed by special characters to form a block.

The block format is <SB> HL7 Message <EB> <CR>.

The characters below shall surround the HL7 TCP message:

Element	Description	Value	Comment
<SB>	Start Block character (1 byte)	<0x0B> / <VT>	Vertical Tab
HL7 Message	This is the HL7 data content of the block	The data can contain any single-byte values greater than 0x1F and the ASCII carriage return character <CR>	
<EB>	End Block character (1 byte)	<0x1C> / <FS>	File Separator
<CR>	Carriage Return (1 byte)	<0x0D> / <CR>	Carriage Return

4.1. Protocol Description

4.1.1. Overview

Messages

A message is the atomic unit of data transferred between systems. It consists of a group of segments in a defined sequence. Each message has a message type that defines its purpose.

Segments and segment groups

A segment is a logical grouping of data fields. Segments of a message may be required or optional. They may appear only once in a message or they may be allowed to repeat.

Each segment is identified by a unique three-character code known as the Segment ID. Two or more segments may be organized as a logical unit called a segment group. A segment group may be required or optional and might or might not repeat.

Each message is defined in special notation that lists the segment IDs in the order they would appear in the message.

- Braces { . . . }, indicate one or more repetitions of the enclosed group of segments. The group may contain only a single segment.
- Brackets [. . .], show that the enclosed group of segments is optional.

If a group of segments is optional and may repeat it should be enclosed in brackets and braces [{ . . . }].

Fields

A field is a string of characters.

HL7 does not take into account how systems store data within an application.

When fields are transmitted, they are sent as character strings.

Separators

The HL7 messages must be created by using the separators below:

Separator	Name
\	Escape character
	Field separator
~	Repetition separator
^	Component separator
&	Sub-component separator

Escape sequences

If producing HL7 messages that contain the separators in the fields content, the application should properly escape the data using the escape sequences below:

Special character	Escape sequence
\	\\E\
	\\F\
~	\\R\
^	\\S\
&	\\T\

Date and time format

Date and time fields and components must contain a date and time formatted as follows: YYYYMMDDhhmmss

Date fields and components must contain a date formatted as follows: YYYYMMDD

Numerical values

The numerical values must use the character "." as decimal separator.

Low level protocol

Two sockets are used. The first socket is dedicated to orders messages and their acknowledgments. The second socket is dedicated to results messages and their acknowledgments.

Records to send

Fields that are not used are sent empty.

When sending records, the HL7 sends only non-empty components, ie. without component delimiters for the last empty components of the field.

Received records

If a field value, length, delimiter of a received record does not correspond to the required input type, the instrument generates an error log, and can ignore the record and its following ones (depending on the error and the message).

For more information about errors and messages, refer to the *Appendices > Error Management* chapter.



Histograms, matrix and QC results are not sent.

4.1.2. Message Structure

The following table lists the message types supported by Yumizen H500 OT/CT / Yumizen H500E OT/CT for the laboratory testing workflow transactions:

Message	Description
OML^O33	Order information (related to a single patient and a single specimen) used to send a request from an external system to Yumizen H500 OT/CT / Yumizen H500E OT/CT (request downloading).
ORL^O34	Acknowledgment / Rejection of a request message sent from Yumizen H500 OT/CT / Yumizen H500E OT/CT to an external system.
OUL^R22	Result information (related to a single order) used to send a test result from Yumizen H500 OT/CT / Yumizen H500E OT/CT to an external system (result uploading).
ACK^R22	Acknowledgment / Rejection of a test result message sent from an external system to Yumizen H500 OT/CT / Yumizen H500E OT/CT.

The application must respect the following attribute descriptions to create and process the HL7 messages:

- Segment: the segment ID
- Meaning: the contain of this segment
- Usage: whether the segment is required (R) or optional (O)
- Card: whether the segment may repeat

Card.	Description
[0..1]	Element may be omitted and it can have at most one occurrence
[1..1]	Element must have exactly one occurrence
[0..*]	Element may be omitted or repeat for an unlimited number of times
[1..*]	Element must appear at least once and may repeat for an unlimited number of times

4.1.2.1. OML^O33^OML_O33

The following table lists the detailed structure for message OML^O33 used to send a request from an external system to Yumizen H500 OT/CT / Yumizen H500E OT/CT:

Segment	Meaning	Usage	Card.
MSH	Message Header	R	[1..1]
	--- PATIENT begin		
PID	Patient Identification	O	[0..1]
[[NTE]]	Notes and comments	O	[0..1]
	--- PATIENT end		
	--- SPECIMEN begin		
SPM	Specimen	R	[1..1]
[OBX]	Observation Result (for specimen)	O	[0..1]
	--- ORDER begin		
ORC	Order Common	R	[1..1]
TQ1	Timing Quantity	O	[0..1]
	--- Observation Request begin		

Segment	Meaning	Usage	Card.
OBR	Observation Request	R	[1..1]
[[NTE]]	Notes and comments	O	[0..1]
	--- Observation Request end		
	--- ORDER end		
	--- SPECIMEN end		

4.1.2.2. ORL^O34^ORL_O34 / ACK^R22^ACK_R22

The following table lists the detailed structure for messages ORL^O34 and ACK^R22 used to acknowledge a message reception by both Yumizen H500 OT/CT / Yumizen H500E OT/CT and an external system:

Segment	Meaning	Usage	Card.
MSH	Message Header	R	[1..1]
MSA	Message Acknowledgment	R	[1..1]
[ERR]	Error	O	[0..1]

4.1.2.3. OUL^R22^OUL_R22

The following table lists the detailed structure for message OUL^R22 used to send a test result from Yumizen H500 OT/CT / Yumizen H500E OT/CT to an external system:

Segment	Meaning	Usage	Card.
MSH	Message Header	R	[1..1]
	--- PATIENT begin		
[PID]	Patient Identification	O	[0..1]
[[NTE]]	Notes and comments	O	[0..1]
	--- PATIENT end		
	--- SPECIMEN begin		
SPM	Specimen	R	[1..1]

Segment	Meaning	Usage	Card.
[OBX]	Observation Result (for specimen)	O	[0..2]
	--- ORDER begin		
OBR	Observation Request	R	[1..1]
[ORC]	Order Common	O	[0..1]
[NTE]	Notes and comments	O	[0..n]
{	--- RESULT begin		
OBX	Observation Result	R	[1..1]
}	--- RESULT end		
	--- ORDER end		
	--- SPECIMEN end		

4.2. Message Segments

Messages consist of segments of various types that are listed in the table below:

Segment Type	Name
MSH	Message Header
PID	Patient Identification
NTE	Notes and comments
SPM	Specimen
ORC	Order Common
OBR	Observation Request
OBX	Observation Result
MSA	Message Acknowledgment
ERR	Error

Fields and components must contain a value that complies with the specified input type. The input types are listed in the table below:

Input type	Name	Description
F	Fixed	The corresponding fields and components must contain only this fixed value.
CL	Closed list	The corresponding fields and components must contain only the predefined values.
OL	Open list	The corresponding fields and components must contain only the values specified in the Yumizen H500 OT/CT / Yumizen H500E OT/CT.
AN	Alphanumeric	The corresponding fields and components must contain a free text.
N	Numeric	The corresponding fields and components must contain a numerical positive data including 0 (zero).
DT	Date and time	The corresponding fields and components must contain a date and time formatted as follows: YYYYMMDDhhmmss
D	Date	The corresponding fields and components must contain a date formatted as follows: YYYYMMDD

4.2.1. MSH - Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

The Message Header segment contains general information and identifies the sender. The Message Header segment is always the first record in a transmission.

4.2.1.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	MSH
1	1	R	F	Field Separator	(Pipe)

SEQ	LEN	OPT	Input type	Element name	Example
2	4	R	F	Encoding Characters	^~\&
					^: component separator
					~: repetition separator
					\: escape character
					&: sub-component separator
3		O	AN	Sending Application	Application setting
4		O	F	Sending Facility	Application setting
5	42		AN	Receiving Application	
6	14		AN	Receiving Facility	
7	14	R	DT	Date/Time of message	20161012144125 YYYYMMDDhhmmss: date and time of the message
9	15	R	CL	Message Type	OML^033^OML_033
					OML: message code ID
					033: trigger event ID
					OML_033: message structure ID
10	20	R	DT	Message Control ID	2016101214500200002 YYYYMMDDhhmmss: current date and time CCCC: counter from 00001 to 99999
11	1	R	CL	Processing ID	P P (Production) D (Debugging) Default setting depending on user profile: ■ Tech: D ■ Others: P
12	3	R	F	Version ID	2.5
18	16	O	CL	Character Set	UNICODE UTF-8

Example of a message sent by Host:

```
MSH|^~\&|Application|Facility|||20220414163210||OML^O33^OML_033|
20220414163210|P|2.5|||||UNICODE UTF-8<CR>
```

4.2.1.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	MSH
1	1	R	F	Field Separator	(Pipe)
2	4	R	F	Encoding Characters	^~\&
					^: component separator
					~: repetition separator
					\: escape character
					&: sub-component separator
3	42	R	AN	Sending Application	H500/H500E^123456A^1.0.0
	15				H500/H500E: instrument code
	15				123456A: serial number
	10				1.0.0: version
4	14	R	F	Sending Facility	HORIBA_MEDICAL
5		O	AN	Receiving Application	Application setting
6		O	AN	Receiving Facility	Application setting
7	14	R	DT	Date/Time of message	20161012145002 YYYYMMDDhhmmss: date and time of the message
9	15	R	CL	Message Type	OUL^R22^OUL_R22 : results
	3				OUL: message code ID
	3				R22: trigger event ID
	7				OUL_R22: message structure ID

SEQ	LEN	OPT	Input type	Element name	Example
10	17	R	DT	Message Control ID	16101214500200002 YYMMDDhhmmss: current date and time CCCCC: counter from 00001 to 99999
11	1	R	CL	Processing ID	P P (Production) Q (QC) D (Debugging) Default setting depending on user profile: <ul style="list-style-type: none"> ■ Tech: D ■ Others: P
12	3	R	F	Version ID	2.5
18	16	R	F	Character Set	UNICODE UTF-8

Example of a message sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:
 MSH|^~\&|H500/H500E^111YODH00001^3.0.0.3f|HORIBA_MEDICAL|Application|
 Facility|20220414153220||OUL^R22^OUL_R22|22041415322100001|P|2.5|||||UNICODE
 UTF-8

4.2.2. PID - Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information.

4.2.2.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	PID
1	1	O	N	Set ID - PID	1
3	31	R		Patient Identifier List	PID0002^^^^PI
	25		AN		PID0002: ID number
	2		CL		PI: identifier type code
5	41	O	AN	Patient Name	Doe^John
	20				Doe: family name
	20				John: given name
7	14	O	D	Date/Time of Birth	19800926000000 YYYYMMDDhhmmss: date and time of birth
8	1	O	CL	Administrative Sex	M M (Male) F (Female) U (Unknown)

Example of a patient identification segment sent by Host:
 PID|1||PID0002^^^^PI||Doe^John||19800926000000|M

4.2.2.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	PID
1	1	R	F	Set ID - PID	1
3	31	R		Patient Identifier List	PID0002^^^^PI
	25		AN		PID0002: ID number
	2		F		PI: identifier type code

SEQ	LEN	OPT	Input type	Element name	Example
5	41	O	AN	Patient Name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	Doe^John
	20			Doe: family name	
	20			John: given name	
7	14	O	D	Date/Time of Birth This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	19800926000000 YYYYMMDDhhmmss: date and time of birth
8	1	O	CL	Administrative Sex	M M (Male) F (Female) U (Unknown)

Example of a patient identification segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

PID|1||PID0002^^^^PI||Doe^John||19800926000000|M

4.2.3. NTE - Notes and Comments Segment

The NTE segment is defined here for inclusion in messages defined in other chapters. It is commonly used for sending notes and comments. The NTE segment can be linked to a PID or an OBR segment.

4.2.3.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	NTE
1	1	O	N	Set ID - NTE	1
3	200	O	AN	Comment	Patient Comment Depends on the associated segment: ■ PID: patient comment ■ OBR: order comment
4	1	R	CL	Comment Type	G G (General): patient comment, order comment

Example of a message sent by Host:

NTE|1||the patient is afraid of needles|G

4.2.3.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	NTE
1	1	R	N	Set ID - NTE	1
2	1	R	F	Source of comment	L L (Filler)

SEQ	LEN	OPT	Input type	Element name	Example
3		R		Comment This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.	Depends on the comment content (refer to the table below).
4	1	R	CL	Comment Type	G G (General): patient comment, order comment I (Device Flag): analyzer and analytical alarms

Comment content

What?	Associated Segment	LEN	OPT	Input type	Example
Patient comment	PID	200	R	AN	Patient Comment
Order comment	OBR	200	R	AN	Order Comment
Analyzer alarm	OBR	103			AlarmType^MeasurementType^AlarmMain^AlarmDetail~
		20	R	OL	Alarm type: P (processing alarm, analyzer alarm, suspected pathologies)
		20	O	OL	Measurement type: empty
		30	R	OL	Alarm (main): name of the alarm or suspected pathology
		30	O	OL	Alarm (detail): empty

What?	Associated Segment	LEN	OPT	Input type	Example
Analytical alarm	OBR	103			AlarmType^MeasurementType^AlarmMain^AlarmDetail~
		20	R	OL	Alarm type: D (device) if the analytical alarm is linked to an instrument technical problem or S (sample) if the analytical alarm is linked to the blood sample
		20	O	OL	Measurement type: name of the alarm family <ul style="list-style-type: none"> ■ WBC ■ DIFF ■ PLT ■ RBC ■ RBC_OTH ■ ESR
		30	R	OL	Alarm (main): name of the analytical alarm (main)
		30	O	OL	Alarm (detail): name of the analytical alarm (detail)

Example of a message sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:
NTE|1|L|D^PLT^ANA_ERR^CLOG_PLT|I

4.2.4. SPM - Specimen Segment

The intent of this segment is to describe the characteristics of a specimen. It contains information about the sample.

4.2.4.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	SPM
1	1	O	N	Set ID - SPM	1
2	16	O	AN	Specimen ID	0123456789
4	20	R	CL	Specimen Type	WB WB (Whole Blood)
11	1	O	CL	Specimen Role	P P (Patient)
17	14	O	DT	Specimen Collection Date/Time	20161012145110 YYYYMMDDhhmmss: date and time of the specimen collection
18	14	O	DT	Specimen Received Date/Time	20161012181002 YYYYMMDDhhmmss: date and time of the specimen reception

Example of a specimen segment sent by Host:

SPM|1|0123456789||WB|||||P|||||20161012145110|20161012181002

4.2.4.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	SPM
1	1	R	F	Set ID - SPM	1
2	16	O	AN	Specimen ID	0123456789
4	20	R	CL	Specimen Type	WB WB (Whole Blood)
11	1	R	F	Specimen Role	P P (Patient)

SEQ	LEN	OPT	Input type	Element name	Example
17	14	O	DT	Specimen Collection Date/Time	20161012145110 YYYYMMDDhhmmss: date and time of the specimen collection
18	14	O	DT	Specimen Received Date/Time	20161012181002 YYYYMMDDhhmmss: date and time of the specimen reception

Example of a specimen segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

SPM|1|0123456789||WB|||||P|||||20161012145110|20161012181002

4.2.5. ORC - Common Order Segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders.

However, the Yumizen H500 OT/CT / Yumizen H500E OT/CT manages only one order at a time.

4.2.5.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	ORC
1	2	R	CL	Order Control	NW NW (New order)
17	21	O	AN	Entering Organization	^Hematology_Department
	20				Hematology_Department: department name

Example of a common order segment sent by Host:

ORC|NW|||||||||||||^Hematology_Department

4.2.5.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	ORC
1	2	R	F	Order Control	SC SC (Status Change)
17	21	O	AN	Entering Organization	^Hematology_Department
	20				Hematology_Department: department name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.

Example of a common order segment sent by Yumizen H500 OT/CT /
Yumizen H500E OT/CT:

ORC|SC|||||||||||||^Hematology_Department

4.2.6. OBR - Observation Request Segment

In the reporting of clinical data, the OBR serves as the report header. It identifies the observation set represented by the following atomic observations. It includes the relevant ordering information when that applies. It contains many of the attributes that usually apply to all of the included observations.

The Universal Service Identifier field corresponds to any parameters or compatible panels:

CBC
DIF
ESR

4.2.6.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBR
1	1	O	N	Set ID - OBR	1
4	10	R	OL	Universal Service Identifier	CBC Test panel: ■ CBC ■ DIF ■ ESR
16	51	O	AN	Ordering Provider	789456^MISTER PHYSICIAN
	20				789456: physician ID
	30				MISTER PHYSICIAN: physician name

Example of an observation request segment sent by Host:

OBR|1|||CBC|||||||||789456^MISTER PHYSICIAN

4.2.6.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBR
1	1	R	F	Set ID - OBR	1
4	10	R	OL	Universal Service Identifier	DIF Test panel: ■ CBC ■ DIF ■ ESR

SEQ	LEN	OPT	Input type	Element name	Example
16	51	O	AN	Ordering Provider	789456^JOHN DOE
	20				789456: physician ID
	30				JOHN DOE: physician name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.
22	14	R	DT	Results Rpt / Status Chng Date	20161012161021 YYYYMMDDhhmmss: date and time of the result delivery
25	1	R	F	Result Status	F F (Final)
34	41	R	AN	Technician	LoginName LoginName: user login name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.

Example of an observation request segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

OBR|1|||CBC|||||||||789456^MISTER PHYSICIAN|||||20161012161552|||F|||||||LoginName

4.2.7. OBX - Observation Result Segment

The OBX segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report. The OBX segment can be linked to a SPM or an OBR segment.

4.2.7.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT with the SPM Segment

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	1	O	N	Set ID - OBX	1
2	2	O	CL	Value Type	NM NM (Numeric)
3	24	O	F	Observation Identifier	35659-2^Age at specimen collection^LN
	10				35659-2: LOINC code
	10				Age at specimen collection: name of the transmitted observation
	2				LN: Logical Observation Identifiers Names and Codes (LOINC)
5	3	O	N	Observation Value	35 35: patient age
6	2	O	CL	Units	d Unit: <ul style="list-style-type: none"> ■ a (Year) ■ m (Month) ■ d (Day) ■ h (Hour)
11	1	O	F	Observation Result Status	F F (Final)

Example of an observation result segment sent by Host:

OBX|1|NM|35659-2^Age at specimen collection^LN||36|a||||F

4.2.7.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host with the SPM Segment

For the Patient Age

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	1	R	F	Set ID - OBX	1
2	2	R	F	Value Type	NM NM (Numeric)
3	40	R	F	Observation Identifier	35659-2^Age at specimen collection^LN
	10				35659-2: LOINC code
	26				Age at specimen collection: name of the transmitted observation
	2				LN: Logical Observation Identifiers Names and Codes (LOINC)
5	3	O	N	Observation Value	35 35: patient age
6	2	O	CL	Units	d Unit: <ul style="list-style-type: none"> ■ a (Year) ■ m (Month) ■ d (Day) ■ h (Hour)
11	1	R	F	Observation Result Status	F F (Final)

Example of an observation result segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

OBX|1|NM|35659-2^Age at specimen collection^LN||36|a||||F

For the Dosage Category

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	4	R	F	Set ID - OBX	1
2	2	R	F	Value Type	ST ST (String)
3	40	R	F	Observation Identifier	^Dosage category
5	20	O	AN	Observation Value	CHILD1 Patient profile: CHILD1, CHILD2, CHILD3, CHILD4, CHILD5, CHILD6, CHILD7, CHILD8_MAN, CHILD8_WOMAN
11	1	R	F	Observation Result Status	F F (Final)

Example of an observation result segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

OBX|1|ST|^Dosage category||CHILD1|||||F

4.2.7.3. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host with the OBR Segment

For Parameter Values

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	4	R	N	Set ID - OBX	3 Incremented by one at each OBX segment in the OBR segment, starting with 1.

SEQ	LEN	OPT	Input type	Element name	Example
2	2	R	CL	Value Type	ST NM (Numeric) ST (String)
3	24			Observation Identifier	742-7^MON#^LN
	10	O	OL		742-7: LOINC code
	10	R	OL		MON#: parameter English name
	2	R	F		LN: Logical Observation Identifiers Names and Codes (LOINC)
5	16	O	AN	Observation Value	2.4 2.4: parameter value
6	10	R	OL	Units	1E03/mm3 1E03/mm3: parameter unit
7	110	O		References Range	xx - yy^REFERENCE_RANGE One or more ranges (used to evaluate the abnormal flags of the parameter) are sent as follows: range values1^range type1&range values2^range type2&...
			AN		xx - yy: range values
			CL		REFERENCE_RANGE: range type ■ REFERENCE_RANGE
8	2	R	CL	Abnormal Flags	L~ L: abnormal flag ■ L (Low) ■ H (High) ■ LL (Critically low) ■ HH (Critically high) ■ < (Off scale low) ■ > (Off scale high) ■ A (Abnormal) ■ N (Normal) ■ X (Invalid value) ■ >> (Above absolute visibility)

SEQ	LEN	OPT	Input type	Element name	Example
11	1	R	CL	Observation Result Status	F F: result status ■ Z (Warning: suspicion on validity, reject or out of linearity range) ■ X (Order cannot be done: invalid value or out of visibility range) ■ F (Final)
16	41	R	AN	Responsible Observer	LoginName LoginName: user login name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.
17	30	O	AN	Observation Method	Laboratory name This field is not transmitted if the Anonymous patient check box is selected in the General Communication screen.
19	14	R	DT	Date/Time of the Analysis	20210707172928 YYYYMMDDhhmmss: date and time of the analysis

Example of an observation result segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:
OBX|5|NM|789-8^RBC^LN||3.92|1E06/mm3|4.20 - 6.00^REFERENCE_RANGE|>||Z||||
LabMan_111|||20210707172928

For Reagent Traceability

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	4	R	N	Set ID - OBX	3 Incremented by one at each OBX segment in the OBR segment, starting with 1.
2	2	R	CL	Value Type	ED ED (Encapsulated Data)
3	20	R	OL	Traceability Name	LYSE LYSE: reagent name (LYSE, CLEANER, DILUENT)
5	39			Traceability Information	150520M11^20200915000000^20201115
	15	R	AN		150520M11: reagent ID
	14	O	DT		20200915000000: loaded date/time
	8	R	D		20201115: expiration date
6	7	R	F	Traceability type	REAGENT REAGENT: traceability type
11	1	R	F	Observation Result Status	F F (Final)

Example of an observation result segment sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

OBX|3|ED|LYSE||150520M11^20200915000000^20201115|REAGENT|||||F

4.2.8. MSA - Message Acknowledgment Segment

The MSA segment contains information sent while acknowledging another message.

4.2.8.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	MSA
1	2	R	CL	Acknowledgment Code	AA AA (Accept) AE (Error) AR (Reject)
2	20	R	AN	Message Control ID	2016101214500200002 Message Control ID of the corresponding message sent by the Yumizen H500 OT/CT / Yumizen H500E OT/CT.

Example of a message sent by Host:

MSA|AA|2016101214500200002

4.2.8.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	MSA
1	2	R	CL	Acknowledgment Code	AA AA (Accept) AE (Error) AR (Reject)
2	20	R	AN	Message Control ID	2016101214500200002 Message Control ID of the corresponding message sent by the Host.

Example of a message sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:

MSA|AA|2016101214500200002

4.2.9. ERR - Error Segment

The ERR segment is used to add error comments to acknowledgment messages.

4.2.9.1. From Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	ERR
3	20	R	CL	HL7 Error Code	203 Error code
4	1	R	CL	Severity	E E (Error)
8	250	O	AN	User Message	The Version ID is not supported Error message

Example of a message sent by Host:

ERR|||203|E|||The Version ID is not supported

4.2.9.2. From Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	ERR
3	20	R	CL	HL7 Error Code	101 Error code
4	1	R	CL	Severity	E E (Error)
8	250	O	AN	User Message	A required field is missing from a segment Error message

Error code

When?	Error code	Name	Context	Concerned Segment / Field
Message rejected	200	Unsupported message type	The Message Type is not supported.	MSH-9
Message rejected	201	Unsupported event code	The Event Code is not supported.	MSH-9
Message rejected	202	Unsupported processing id	The Processing ID is not supported.	MSH-11
Message rejected	203	Unsupported version id	The Version ID is not supported.	MSH-12
Message rejected	204	Unknown key identifier	The order to delete does not exist.	SPM
Message rejected	205	Duplicate key identifier	The ID of the patient, order, etc., already exists.	SPM
Message rejected	206	Application record locked	The analyzer is not be able to manage the message because of an error at the application storage.	Not applicable
Message rejected	207	Application internal error	A catch-all for internal errors not explicitly covered by other codes.	Not applicable
Message error	100	Segment sequence error	The message segments were not in the proper order, or required segments are missing.	Not applicable
Message error	101	Required field missing	A required field is missing from a segment or a required component is missing in the field.	Not applicable
Message error	102	Data type error	The field contains data of the wrong input type.	Not applicable
Message error	103	Table value not found	A field (that must contain only predefined value) was compared against the corresponding table, and no match was found.	Not applicable
Message error	104	Value too long	A value exceeded the normative length.	Not applicable

Example of a message sent by Yumizen H500 OT/CT / Yumizen H500E OT/CT:
ERR|||101|E|||A required field is missing from a segment

4.3. Special Characteristics for HORIBA Medical Data

4.3.1. Data Presentation

The CBC, DIF and ESR codes correspond to the parameter English name in field OBX.3 and the units correspond to the Units field OBX.6.

4.3.1.1. Parameters

LOINC Code: Logical Observation Identifiers Names & Codes

CBC Codes	LOINC Code	Definition
RBC	789-8	Red Blood Cells
HGB	718-7	Hemoglobin Concentration
HCT	4544-3	Hematocrit
MCV	787-2	Mean Corpuscular Volume
MCH	785-6	Mean Corpuscular Hemoglobin
MCHC	786-4	Mean Corpuscular Hemoglobin Concentration
RDW-SD	21000-5	Red Distribution Width Standard Deviation
RDW-CV	788-0	Red Distribution Width
MIC	X-MIC	Microcytic Red Blood Cells percentage (versus RBC)
MAC	X-MAC	Macrocytic Red Blood Cells percentage (versus RBC)

CBC Codes	LOINC Code	Definition
PLT	777-3	Platelets
PCT	51637-7	Plateletcrit
PDW	51631-0	Platelets Distribution Width
MPV	32623-1	Mean Platelet Volume
P-LCC	96354-6	Platelets - Large Cell Count
P-LCR	48386-7	Platelets - Large Cell Ratio
WBC	6690-2	White Blood Cells

DIF Codes	LOINC Code	Definition
LYM#	731-0	Lymphocytes absolute value
LYM%	736-9	Lymphocytes percentage
MON#	742-7	Monocytes absolute value
MON%	5905-5	Monocytes percentage
NEU#	751-8	Neutrophils absolute value
NEU%	770-8	Neutrophils percentage
EOS#	711-2	Eosinophils absolute value
EOS%	713-8	Eosinophils percentage
BAS#	704-7	Basophils absolute value
BAS%	706-2	Basophils percentage
IMG#	53115-2	Immature Granulocytic cells absolute value
IMG%	71695-1	Immature Granulocytic cells percentage
IMM#	X-IMM#	Immature Monocytic cells absolute value
IMM%	X-IMM%	Immature Monocytic cells percentage
IML#	X-IML#	Immature Lymphocytic cells absolute value
IML%	X-IML%	Immature Lymphocytic cells percentage
ALY#	43743-4	Atypical Lymphocytes absolute value
ALY%	42250-1	Atypical Lymphocytes percentage
LIC#	55432-9	Large Immature Cells absolute value
LIC%	55433-7	Large Immature Cells percentage

HL7 Format

Special Characteristics for HORIBA Medical Data



ESR Codes	LOINC Code	Definition
ESR	82477-1	Erythrocyte Sedimentation Rate

4.3.1.2. Units

Default unit system:

Conventional

Codes: CBC	SI (international)	Conventional	mmol/L	Japan	China
RBC	10 ¹² /L	10 ⁶ /mm ³	10 ¹² /L	10 ⁴ /μL	10 ¹² /L
HGB	g/L	g/dL	mmol/L	g/dL	g/L
HCT	L/L	%	L/L	%	%
MCV	fL	fL	fL	fL	fL
MCH	pg	pg	fmol	pg	pg
MCHC	g/L	g/dL	mmol/L	g/dL	g/L
RDW-SD	fL	fL	fL	fL	fL
RDW-CV	%	%	%	%	%
MIC	%	%	%	%	%
MAC	%	%	%	%	%
PLT	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ⁴ /μL	10 ⁹ /L
PCT	%	%	%	%	%
PDW	fL	fL	fL	fL	fL
MPV	fL	fL	fL	fL	fL
P-LCC	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ⁴ /μL	10 ⁹ /L
P-LCR	%	%	%	%	%
WBC	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L

Codes: DIF	SI (international)	Conventional	mmol/L	Japan	China
LYM#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
LYM%	%	%	%	%	%

Codes: DIF	SI (international)	Conventional	mmol/L	Japan	China
MON#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
MON%	%	%	%	%	%
NEU#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
NEU%	%	%	%	%	%
EOS#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
EOS%	%	%	%	%	%
BAS#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
BAS%	%	%	%	%	%
IMG#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IMG%	%	%	%	%	%
IMM#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IMM%	%	%	%	%	%
IML#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
IML%	%	%	%	%	%
ALY#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
ALY%	%	%	%	%	%
LIC#	10 ⁹ /L	10 ³ /mm ³	10 ⁹ /L	10 ² /μL	10 ⁹ /L
LIC%	%	%	%	%	%

Codes: ESR	SI (international)	Conventional	mmol/L	Japan	China
ESR	mm/h	mm/h	mm/h	mm/h	mm/h

4.3.2. Alarms and Pathologies

4.3.2.1. Suspicion and Reject

When a result is suspected of being abnormal or false, it is not reliable and the instrument returns a flag in field OBX.8.

4.3.2.2. Normal and Panic Ranges

Flags when result exceeds normal or panic ranges are transmitted through field OBX.8, they should be compared, to obtain a full result information, to the ranges set by the user.

4.3.2.3. Analytical Alarms

Analytical alarms and suspected pathologies are transmitted in field NTE.3.

Alarm type	Measurement type	Transmitted data	Description
D	DIFF	ANA_ERR^BUBBLE_DIFF	DIFF channel bubble?
S	DIFF	WBC_ABN_MAT^ABN_NEU	Abnormal NEU
S	DIFF	WBC_ABN_MAT^BLAST	Blasts?
S	DIFF	WBC_ABN_MAT^NEU_NOISE	Presence of a significant large population of cells located on the left-hand side of the neutrophil area
S	DIFF	WBC_ABN_MAT^NRBC	NRBC?
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON	Separation threshold is not found between the lymphocytes and monocytes areas

Alarm type	Measurement type	Transmitted data	Description
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON	Presence of a significant large population of cells located in the separation area between lymphocytes and monocytes
S	DIFF	WBC_ABN_MAT^SEP_LYM_MON WBC_ABN_MAT^SEP_MON_IMM	LYM/MON MON/IMM
S	DIFF	WBC_ABN_MAT^SEP_LYM_NEU	Separation threshold is not found between the lymphocytes and neutrophils areas
S	DIFF	WBC_ABN_MAT^SEP_LYM_NEU	Presence of a significant large population of cells located in the separation area between lymphocytes and neutrophils
S	DIFF	WBC_ABN_MAT^SEP_MON_NEU	Separation threshold is not found between the monocytes and neutrophils areas
S	DIFF	WBC_ABN_MAT^SEP_MON_NEU	Presence of a significant large population of cells located in the separation area between monocytes and neutrophils
S	DIFF	WBC_ABN_MAT^SEP_NEU_EOS	Separation threshold is not found between the eosinophils and neutrophils areas
S	DIFF	WBC_ABN_MAT^SEP_NEU_EOS	Presence of a significant large population of cells located in the separation area between neutrophils and eosinophils
S	DIFF	WBC_ABN_MAT^SUSP_NB_ALY0 WBC_ABN_MAT^SUSP_NB_ALY1 WBC_ABN_MAT^SUSP_NB_ALY2 WBC_ABN_MAT^SUSP_NB_ALY3 WBC_ABN_MAT^SUSP_NB_ALY4 WBC_ABN_MAT^SUSP_P_ALY	Presence of a significant large population of cells in the atypical lymphocytes area
S	DIFF	WBC_ABN_MAT^SUSP_NB_IML WBC_ABN_MAT^SUSP_P_IML	Presence of a significant large population of cells in the lower part of the large immature cells area

HL7 Format

Special Characteristics for HORIBA Medical Data



Alarm type	Measurement type	Transmitted data	Description
S	DIFF	WBC_ABN_MAT^SUSP_NB_IMM WBC_ABN_MAT^SUSP_P_IMM	Presence of a significant large population of cells in the middle part of the large immature cells area
S	DIFF	WBC_ABN_MAT^SUSP_NB_LIC0 WBC_ABN_MAT^SUSP_NB_LIC1 WBC_ABN_MAT^SUSP_NB_LIC2 WBC_ABN_MAT^SUSP_P_LIC	Presence of a significant large population of cells in the large immature cells area
D	PLT	ANA_ERR^CLOG_PLT	PLT channel clog?
D	PLT	ANA_ERR^UNST_PLT	PLT channel unstable measure
S	PLT	OOR_PLT^LOQ	Result out of LoQ (Limit of Quantitation)
S	PLT	PLT_INTERF^PLTAGR	PLT aggregates?
S	PLT	PLT_ABN_HIST^ABN_PDW	Abnormal PDW
S	PLT	PLT_ABN_HIST^SEP_RBC_PLT	RBC/PLT
S	PLT	WBC_ABN_MAT^NRBC_PLTAGR	PLT aggregates or NRBC?
D	RBC	ANA_ERR^BAL_RBC_HGB	RBC/HGB channel balance
D	RBC	ANA_ERR^CLOG_RBC	RBC channel clog?
D	RBC	ANA_ERR^UNST_RBC	RBC channel unstable measure
S	RBC	OOR_PLT^LINEARITY	Result out of linearity range
S	RBC	OOR_PLT^VISIBILITY	Result out of visibility range
S	RBC	OOR_RBC^LINEARITY	Result out of linearity range
S	RBC	OOR_RBC^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC	OOR_RBC^VISIBILITY	Result out of visibility range
S	RBC	PLT_CONCENT	PLT Concentrate Mode
S	RBC	RBC_ABN_HIST^INTERF	Interference?
S	RBC	RBC_ABN_HIST^INTERF_RBC_WBC	RBC/WBC interference
D	RBC_OTH	ANA_ERR^UNST_HGB	HGB blank measurements out of the intensity ranges

Alarm type	Measurement type	Transmitted data	Description
D	RBC_OTH	ANA_ERR^UNST_HGB	Intensity instability during the three HGB blank measurements
D	RBC_OTH	ANA_ERR^UNST_HGB	Intensity instability during the nine HGB measurements
S	RBC_OTH	HGB_MEAS_BIAS^INTERF_HGB_WBC	HGB/WBC interference
S	RBC_OTH	OOR_HCT^LINEARITY	Result out of linearity range
S	RBC_OTH	OOR_HCT^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC_OTH	OOR_HCT^VISIBILITY	Result out of visibility range
S	RBC_OTH	OOR_HGB^LINEARITY	Result out of linearity range
S	RBC_OTH	OOR_HGB^LOQ	Result out of LoQ (Limit of Quantitation)
S	RBC_OTH	OOR_HGB^VISIBILITY	Result out of visibility range
S	RBC_OTH	PLT_ABN_HIST^SCH_MACRO_PLT	Schistocyte / Macro PLT?
S	RBC_OTH	RBC_ABN_HIST^ABN_DISTRI	Abnormal distribution
S	RBC_OTH	RBC_ABN_HIST^DBL_POP	Double population?
D	WBC	ANA_ERR^CLOG_DIFF	DIFF channel clog?
D	WBC	ANA_ERR^LIGHT_BEAM_DIFF	DIFF channel light beam error
D	WBC	ANA_ERR^UNST_DIFF	DIFF channel unstable measure
D	WBC	ANA_ERR^UNST_DIFF	Low correlation between the resistive and optical measurements on the matrix
D	WBC	ANA_ERR^UNST_DIFF	No cells counted in the flowcell
S	WBC	OOR_WBC^LINEARITY	Result out of linearity range
S	WBC	OOR_WBC^LOQ	Result out of LoQ (Limit of Quantitation)
S	WBC	OOR_WBC^VISIBILITY	Result out of visibility range
S	WBC	WBC_ABN_MAT^INTERF_TNC	Counted WBC abnormally low
S	WBC	WBC_ABN_MAT^INTERF_WBC	WBC interference

Alarm type	Measurement type	Transmitted data	Description
S	WBC	WBC_ABN_MAT^NEU_EOS_NOISE	NEU+EOS/Noise
S	WBC	WBC_ABN_MAT^SEP_LYM_NRB_C	Presence of a significant large population of cells located in the separation area between the background noise low and lymphocytes areas
D	ESR	ANA_ERR^UNST_ESR	ESR channel unstable measure
S	ESR	ESR_ABN_SYLLEC^HIGH_SHIFT	ESR high shift
S	ESR	ESR_ABN_SYLLEC^RECOV_SHAPE_DELAY	Recovery Shape Delay
S	ESR	ESR_ABN_SYLLEC^INTERF_HCT_ESR	HCT/ESR interference
S	ESR	OOR_ESR^ABOVE_MAX_VAL	Above max value

Transmitted suspected pathologies list:

- Erythrocytosis
- Anemia
- Macrocytosis
- Microcytosis
- Hypochromia
- Anisocytosis
- Poikilocytosis
- Cold agglutinins
- Thrombocytosis
- Thrombopenia
- Leukocytosis
- Leukopenia
- Lymphocytosis
- Lymphopenia
- Neutrophilia
- Neutropenia
- Eosinophilia
- Monocytosis
- Basophilia

- Large Immature Cells
- Atypical Lymphocytes
- Extrem neutropenia
- Pancytopenia
- Aplasia
- Malaria P. falciparum?
- Malaria P. vivax?
- Dengue?

4.4. Curves and Matrix Transmission

4.4.1. Curves and Matrix

SEQ	LEN	OPT	Input type	Element name	Example
0	3	R	F	Segment ID	OBX
1	1	R	F	Set ID - OBX	1
2	2	R	F	Value Type	ED ED (Encapsulated data)
3	41 20^20	R	OL ^ AN	Observation Identifier	RBC^RBCALONGRES RBC: measurement type RBCALONGRES: graphic name MeasurementType^GraphicName 20^20
5	No limit	R	AN	Points	EncodeType^Graphic Data
6	10	R	CL	Message type	"HISTOGRAMS" "MATRIX"
7	No limit	R	AN	Thresholds	EncodeType^Thresholddata"FLOAT LEstream/deflate:base64"

SEQ	LEN	OPT	Input type	Element name	Example
11	1	R	F	Observation Result Status	F F (Final)
16	41	R	AN	Operator name	Technician

4.4.2. General Decoding

The image data must be uncompressed using first the *base64* and secondly the *deflate* algorithms.

The data must be converted from binary to text format.

4.4.3. DIFF Matrix

Matrix manufacturer message record is as follows:

- The Message type field (OBX-6) is set to "MATRIX".
- The Measurement type, first component of field (OBX-3), is set to "DIFF".
- The Name, second component of field (OBX-3), is set to LMNERESABS.
- The Thresholds field (OBX-7) contains the "Encode Type" data in first component. The Threshold data of Thresholds field is the second component of field (OBX-7) and contains the FLOATLE-stream/deflate:base64 coded value of the DIFF matrix polygons.
- The Points field (OBX-5) contains the "Encode Type" data as first component. The Graphic data of Points field is the second component of field (OBX-5) and contains the FLOATLE-stream/deflate:base64 coded value of the DIFF matrix.
- The Observation Result Status field (OBX-11) is set to "F".
- The Operator name field (OBX-16) is set to "Technician" for example.

Matrix thresholds

DIFF matrix polygons thresholds data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE FLOATLE : IEEE 754 floating point value transmitted in Little Endian byte order (Intel)	X min value for Matrix start
4	X display max	FLOATLE	X max value for Matrix end
4	Y display min	FLOATLE	Y min value for Matrix start
4	Y display max	FLOATLE	Y max value for Matrix end
4	NumberOfList = 3	FLOATLE	One list for X coordinates of polygons, one list for Y coordinates of polygons, one list for box identifiers
4	ListLength	FLOATLE	Always 0

As matrix thresholds are never displayed nor printed, matrix thresholds must not be sent too (ListLength = 0).

Matrix points

DIFF matrix shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Matrix start
4	X display max	FLOATLE	X max value for Matrix end
4	Y display min	FLOATLE	Y min value for Matrix start
4	Y display max	FLOATLE	Y max value for Matrix end
4	X scale NB	FLOATLE	Number of X ticks in the list to display
4 x X scale NB	X scale	FLOATLE	X tick values
4 x X scale NB	Y scale	FLOATLE	Y tick values

Number of bytes	Data	Format	Meaning
4	NumberOfList = 4	FLOATLE	One list for X points, one list for Y points, one list for the number of points for this coordinate, one list for the population to which the point belongs (X, Y coordinates)
4	ListLength	FLOATLE	Number of elements in the list
4 x ListLength	X	FLOATLE	X (Coordinate)
4 x ListLength	Y	FLOATLE	Y (Coordinate)
4 x ListLength	Qty	FLOATLE	Quantity (number of points for the (X, Y) coordinate)
4 x ListLength	Pop	FLOATLE	Population to which the point (X, Y coordinates) belongs

PopulationID shall be set to:

- 0 for LYM box
- 1 for MON box
- 2 for NEU box
- 3 for EOS box
- 4 for IMG box
- 5 for ALY box
- 6 for LL box
- 7 for RN box
- 8 for RM box
- 9 for IMM box
- 10 for IML box
- 11 for LN box
- 12 for BNL box
- 13 for BNH box
- 14 for BASO box
- 15 for LOC box
- 16 for BNBUBBL box
- 100 for NOT_IDENT box

4.4.4. Histograms

Histogram manufacturer message record shall be in accordance with the following specifications:

- The Message type field (OBX-6) is set to "HISTOGRAM".
- The "Measurement type" is the first component of field (OBX-3) and is set to one of the following values: RBC, PLT, WBC or ESR.
- The Name field is the second component of field (OBX-3) and is set to one of the following values: RBCALONGRES, PLTALONGRES, WBCALONGRES, TRANSALONGTIME.
- The Thresholds field (OBX-7) contains the "Encode Type" data as first component. The Threshold data of Thresholds field is the second component of field (OBX-7) and contains one of the following FLOATLE-stream/deflate:base64 coded value of: RBCALONGRES thresholds, PLTALONGRES thresholds or WBCALONGRES thresholds.
- The Points field (OBX-5) contains the "Encode Type" data as first component. The Graphic data of Points is the second component of field (OBX-5) and contains one of the following FLOATLE-stream/deflate:base64 coded value of: RBCALONGRES data, PLTALONGRES data, WBCALONGRES data or TRANSALONGTIME data.
- The Observation Result Status field (OBX-11) is set to "F".
- The Operator name field (OBX-16) is set to "Technician" for example.

Histogram points

ESR histogram, PLT histogram, RBC histogram and WBC histogram data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Histogram start
4	X display max	FLOATLE	X max value for Histogram end
4	Y display min	FLOATLE	Y min value for Histogram start
4	Y display max	FLOATLE	Y max value for Histogram end
4	X scale NB	FLOATLE	Number of X ticks in the list to display
4 x X scale NB	X scale	FLOATLE	X tick values

Number of bytes	Data	Format	Meaning
4	Y scale NB	FLOATLE	Number of Y ticks in the list to display
4 x X scale NB	Y scale	FLOATLE	Y tick values
4	NumberOfList = 2	FLOATLE	Number of list of data. One list for X positions and one list for the Y positions (quantity on each X position)
4	ListLength	FLOATLE	Number of elements in the list
4 x ListLength	X	FLOATLE	X (Coordinate)
4 x ListLength	Y	FLOATLE	Y (Coordinate)

Histogram thresholds

ESR: Not Applicable

PLT histogram, RBC histogram and WBC histogram data shall be in accordance with the following framing:

Number of bytes	Data	Format	Meaning
4	X display min	FLOATLE	X min value for Histogram start
4	X display max	FLOATLE	X max value for Histogram end
4	Y display min	FLOATLE	Y min value for Histogram start
4	Y display max	FLOATLE	Y max value for Histogram end
4	NumberOfList = 2	FLOATLE	Number of list of thresholds. One list for X threshold positions and one list of threshold Identifiers.
4	ListLength	FLOATLE	Number of thresholds in the list
4 x ListLength	X	FLOATLE	X value of the threshold for each threshold
4 x ListLength	ThrsID	FLOATLE	ID of each threshold (listed below)

ThrsID for RBCALONGRES: None (so ListLength = 0)

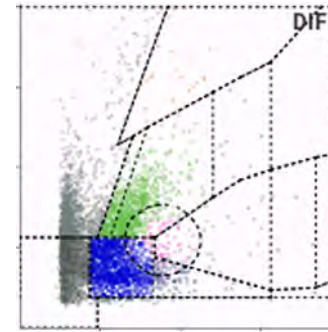
ThrsID for PLTALONGRES: (ListLength = 3)

Threshold name	ThrsID	Value
Pec	0	3
PltL	1	11
PltRbc	2	Mobile

ThrsID for WBCALONGRES: None (so ListLength = 0)

4.4.5. Example of Data Frame

4.4.5.1. Example of Data Frame for DIFF Matrix



```
OBX|3|ED|DIFF^LMNERESABS||FLOATLE-stream/deflate:base64^7b131F1Vuf
+7EQSkKCX09gYIvYN0ZMPadCmigKJC1IMFPXaPeo5HNx1SSCUhBZKQkNCDQSpOy
AQQDplh4hUASmCiHrwzs/3+13vy/3jnvuGOd3xv39znrHmGPvd
+21Znme71PmM585V6tV/hb9o9P64Kf+uu3W/
r19Wt0zqlbrgsqfM0qZUsrw8v85pVxYysjy/7jyWX7rnlm+jyqf5Z7upNx7USmnlv9PLJ/
XI9lr358un2NLUap8p677S7m2/D+9IFvL9zHlc0L5nFo
+J5fPUlo3uR3q7FLfaNehey8t5d5Szi1IRcmIT93TS7m5fJ+Z/nVLmZtS+t4q7XUvcZ
+5t3Vd+aRv9HdYKeeX72eXzztLubF8H5vnxqQ/Z5XPk9x/jQX6nJ26fmUa6f+F7k9rfGhU
+tG6pxSuz08/H04/aLeMq3tXgH9TjedoAdj6U7ItD+EfjNNc9VZnu+OSL/
nlHK5+9VIDBPL58WllH607st3xITo1r3cddZ86z5WyyqPhwSmlnGsetu523eI9dKD9aannbP
```

NY9IX+8GRW+byhfM7N2M7I91+5H8LOhOCptNEdZ56LvmDtTF/
T573ml3gMHX4ZXpwVGgwLL54K3W51W2pzbMbyWMZ5Z9qhD9eZ1/
BKPLo6NFuYPP8eWs0yjdXnN4PhS9Lm+PDljpBiTuRIUnhH3x4sn
+cZp136dk0pV5Ryv5+lpJdDp57x4fHZqfPMYBj
+nBz63h66n25aC7fgBt49UcplucYYflvKjZFPZGpi+gjt5+Rzeu5/
JvecY9wgG8LwFX6GZ1u/DG9oe0Ep0GhU7rsq/OS
+R0q5OvWfF3mm7QuNg9bsyBptn2g5UL9DB/EA/XO+5Uf3w7tyT/
eW1PFo6r8ivHow8vBk8AveLkg7JwSvT6SNx/
y8xrXAPJWslMz995pHwghjO8njVPI1xklfbwqvznZfhaG7wp/fBgsLQ//Z
+b3QGx0oXTHM/G/Ny7iRt3Fpc0Lwh67jnl+b3sL6hPD
+DI9f98wKjaDphXmGPv4qbYyJrFPvw+Hj7A/wGVyck7FdEqzRH4vDw
+ppzzburKyfjzdz3ZPi36Avt0PjAHM17g+PzQ52/dLx14erl1MvycFf/x/fbDzgow
+Gxui34NB6cyFvqd1S+RsbPhylWnSfSS0qG0UcnpNcDvR2Oou
+UNkeTfbYRJs3Snm5fP9T+fxD+Xyxfl5eSrm39Wr5v5TWn8snv3Ff
+d56tpTfifJOZX3xfPn8fSni2e5r5fM5f9Je608pL7kd2uu+ldrecd3U1X2lfJbS/
aPb7nLt3fz2x/TzWd+nPr2bNi/Ksy/9e9qgX4yj+1b5fD5t/in9YjzPesZURf3d5/
L9D2mf30r/uoq/n2tul/NHXolvG/2zq+0O+/8n0U118vh2a/
z11ZwyttwbaEA2e99hbNc1eCF1fTjvvhjvZmz0483Q6AV/1/XnM5aX3Afd95p/Ux/
fCp3eDc3+kP6/G5q+it9T12j40gANhZPXQtcXP0CrP+aZP3jMrUX5/bWM8W3/prr
+EPq8IT6k/XrM9FE4ez78ejO0e9M80z1vpx/P5t4XwvM3wq/
fG1e99Tqt7mbF7zugfO7SafUOL9+rTqu9cfm/
XcpG5drR5VqnXDU0IL1K2bNcW99F1z9ePjcsZZvyvdzWrN8cn3dcs/
Pymept7V9KRuU74PL55bleqm/94vyfVC5tm9ppzzf27r8f3D5LP1p71c+Kau7/
XbpU3eH8ln+b+9erm1S7j2qlFJPa0i5VvraK/W2dnM/
ejtmDKXt7mfdp97m5Xtpv1v62yvtVcs19u5tmm5Rv
+2K2Wln2+tU66v57Gldp9zu23q3rZ83y40OMPfW
+Vaa2u3Cw27u7vPPa5vVa7vU75Dn1K6W3m83dJWw//
yWWjaLnV1v1zK1u5va9dSdirXN/V9i0a4392+9HFF97H1BY8bfomPu7uPra+H7qWe3mrl
+nbmdZs6yzPtg0r5VLnGWP4ptB9iekE3+KVnSn2tnUv5XvleeNrulvuOLJ+lrfYmHn
+38KUFXQp2nuU/8v33hGmS3ut8ln43N3ZWOitXcqB4c+u5kF7TY
+p9bVyDfptUe7ZJ7jB0n3pFVq2St/aZUy98nt3X/erzdi3dOE7elDGva+WzzXcJ3jPc
+AEHvfWdT9bhZbdz5TScv96pc42fCnjWnRq+f
+LkYd9zP9WoVfrG6W5sufaOxhPXfpZsNLaz223v1n
+L33tiTa7+4RvQ8wffiffLAvtQvMW9Pm8+dcu2G0V+nQLb3qU75ZrRwfT
+2csu7lenm1/0tgCE91C0+72xkQPWd0wdDjYeAXDrb3L/4Vm3f1Mr95pkac+Y6XvrDz/
iXJ9Fcs7vBAO1vGz7U+YDpKJwqv2quVzU9MCFrWPMJ+FgQPcr/
aupnt3Dd8P3VuFbu3DTWvJEngo7XWhOX2CHuimX5gmwha82d/
8644s14+JXlrfMtWCzwxLvT0if9Dpi9Ynkvs1rV8kq7u5ndbqbkv8gZ8HBAs7h/foNXi5U/
Tal0zPFrQvctAteOh+PphC7oosd/dwOz30Zam91PTCDpCP+SGNuChrhW

+tL8RnH7COBEtj/LYGHd78+isvaKr9xvAvTC4o+mHXIIIPg9On6FPJ596muTC6nmVq
+piorXLvovK9B17hNTJReN9e2zlo+WNcuxp/
+g4PtZAPsQFgFhmUHfhM9PxeKYEflnKIdWD3m
+YXur9d5LS9jvvHmNFRwn6f60RuuyfHnqAXvMx+Qith+4ceF/
1qh7f0qYd07bOuQz67h5vH4LFVZLM9hscgPUg/x1pPSaetGeyXersFX62DwpOtbL/EP
+hdMNCrzBPoJZrvY9nrRYehO9qI3tYR1u3QErqKNti475Tfvh0ZLlJrFv739jaPZF/
3TCn1tOhb7Eh3J+NM/N8qPNg7OhKb+fHoSfg+LP3bzHpT/
BtsvqOzuoe5XmQUmkgWdrZOoD/yEbxvkH/tLcy5vYiK9a53Z/
7DrBam949NuGsXX7Wu9LRivLreS/
Y95MP9W0aP0gtrLwvpsD25vWpsaTeLm97YnojN3ePHZiW/MMGkr24d2/x46X
+xadUq59yTIsHfBp0x38otekXzq2t6JL+b2Nbiny3dvGNhq
+gwXJ897Wce1vG7fSmfhBGxuX0pWbm+eyXX3BHHj/SvTHHun3irEV+xir2IP2I22/
heH1rJPAnnyprdJ/bAfjyU1Bx37KNJG87xA7uontPzq
+9RVjjz6g76APuhG91ldNL3q5u1bGAw7pG/qn9L91dPT5luYH/eo7odMaelp4HlyCB3wk
+TPwaH65Z3L5v5QWnzPK55zy7PmF59PL/xd1NA/
XnHS452Lder7PHlx4FvEc4nXMAZm7M3dkjs/cdn4p/E8Mg7kh83fm1VNzH/
PqMudvEaca4XBuUHvdfmrkgc29icYkFKu54aeaR/D4sz53o9jXnXOh7FUMY7rZ1D/
Eu5pijML5m7EstgPs48/VaPh/munmU8M32v5sVjP9D
+gvL5UCm3VQpXJea21Hd15RjdtNCJOMAV6Qtz9zPSB8RL3s8/
bkm9V8Zek5vyaLZ1ekP8ZfVJ47M8+v47r0mz4T45homioGQ33E2U6qPNcm3jlvNlafN5d
yu/ukuNaZ7qPaHW9aqf6R4c9l+W2i72euLz5Mye8Lw19iCsSYzgp/uB/
6ExPoBUUxHlejghXoeH/6w9yf+ANxj9szbvo1J79NC1/nfKB/
U9LfMcELtCDWdUdoTqyEGNLs4CSxKI0fi/GMSjvESC5OvXPcz
+7diWKzYFttQkdoe6rHpWcnZ9znhd9dt6nxEgs7LTg9N7ya7PaFMfg92lgkpiL
+EBE51phQTGRY6HRpZPHk3HeXcdZ9wH1XvaNT5y3Bx7TQcpafkcyNM40kR8S2bvR4F
SNDhq9LXdd6rIpf07fzc+/U4HtUxgPG6MuJ4fOo/D4i/
RmZPI2RazNSJ7iq1ytmWFbf2TqIt8rXF6Ztk4PfxOTI2yPzVjnRT5ODy5HhRd1DI846x1pY
4QxpFjY9Mo6jdvk9WazF+RdoinEwv8bbBzaXgyr+qPs0vvECd7onJMc2Fol7id6Do8/
YdXtVxf9AHdcFrwm7ia6PNQxvvr/P9M7u+ZZqwHCBvDg79R1gGkxY+PPhjt
+7XOc2ne49KR5pjjiqGA6fST2Xut40e/MOOQSy4PukfPcd/Jkcdx1UD8mP4Qv52YsZ8V
+I1kXCve2XP/hKfhwrN8mJtnRqc/50XOahvB5wXh8dhgmfYeiJyi5+4x3STD54Q/
M4lDeHJxsH1n+Mt1sHZ35GG0ZUM6g2dPzBgmm/SC
+itqcHnTeHrrMjISPdf8e37jAnR70zTU22Otl7QOK7O77F1Gh98mZA2xgR3NX4mZFxTPK
BX6p1rPCqmTZ9ux6r
+Alf78jvJ4cG0feSuxEZ96jwdoRxoLWIR9PGdRnLuNBifgUIOkjX7ogOSuxcGDo/7Q/
P2OtnL6/6bYTGPC74ylqE
+ggmZm50ZmJuf5OdEZTwcn9+Se8wdkRpiCTo9UinsrRn12aJ41OcnEONNf8pK
+yD7fFxxelnvAyEmWb9GlcU4Jz6nzmfi1PNa+H7NGNJ6y8j0w54YS30mox1Vtr7F
+NU9z0SOj+e/k3+gKyMrP5vtl99nFsNyHnsiuSUz8TptSbLmG61nsE3kg25J9juReYY/

4LglbpmZnxZ4xQeL8+4JqSei4LP30Z26rU0dM71xov8rQuqfopsneo8x77u1TJ
+Ve8cZf5lj8H5OZGFYeHB22I9omkomhoUvjA0dzXpT7A5ro5KTS6sB//HqPdnMqg2p1h
+ZQvpN3I3yjLUQu0KNLwrtldfF/s+2ZNbBq5JV0wxzeXjPJRN5kfvnJvxs5f7Y/
g5z32Tflw0/6VXhptmsjHLz7hpJQ5wfvwqn9NSt8nGItaF7sr7flbOmauaS7e0uZN4fED/
k1tjE7/0DVPmu6trFOqnO2+saasOuq1/
imWX917XW5Me18Nfi8J74aF57RzZbB2Wvg4Iffeku/nuh7xcJQx3QRNW7WOPjf8GRFe/
aYaWfSq9kHzkZP8nDADH8HYxNR9dvo5LnlA7eaHT6cEH78Mny8zzfEjJvI8sOhLby5KX
KFVjs5dVxvDAvzM6oBn/
HGYP6M0G9WZDX6WTqilzGNt4zJFxmuiQz55mX6nvt89DHZzKuMylH9H288aQx0Bd06
wm+LtremXa57w7zUHi+KBGc7zdXA/kQjOX8jOGK0H9KNSD3I4evwUHdl3r9U/
J2mWmlN5Lw8/MPcXDqcEYz5Nvc3GPix8Gel7JHP0aU7ail+r/s8KD64N/x/
1NdF6fDANfy+uBnTMpelX/Nh
+nEy27GkegC47LXxLrkfNC9Uxltik7kuqAd05LbQ8O32aFjzcGmzOtHyozRI+RrTlunYr
+RPyxWaHN/
WabZ1DMzey3asG8kqYE9+TsV9UDeiuxyODZxr30tN3he5nBtszwrNjkavJpq/k+F63r7Xm
+8OLy4OtWcHJmMhs5hL9c+mJ6Su0vd+4kQ2cGNrW8zTae8Jq+fp8tfOCH
+Hu4+tem4Hfm4NXa8M9mPXRN+zgj+u9SLnVwW/Y4PvmZYX+YljwptLgr3bLO/1/
FdjrnNWroj8PRZ5G5F+xW/u99FuyrUZkbH7Mo4av/gAd7s/+v2tasBHTP6MeJ
+cEcnKjftnPsplPzU6v++Wq3ng9NCP8T/5B+Hh8MXBwMRI777daAo40q
+AjrtyfT8bQ3y/xUG9NDTzCw0LpA8515pndtt5QHNCJycq6xo/
k0Y0ZuTww9pn2AjrODR56/K3xAfh4ekGfhe1rVHyPSmIYHLxelfu5FTzM/
Oq8aiHfMqvrta5l/
tOf77TgAxi8wHSRHT0jMnOX6dhKrEA6Y0JoBY6fDuZvDpbG3S3+XbqvnR0jz8YO9E6fIPr
qmNLMMyMuwyPTF4f096Sfje8z4FE0uCIz6kdeJwcQM/
6/+JddDvtE8Y176cHz6c1nwf6wJHpLnkdG/
4k10k8gY513ASMzK4GfLF714ujXfpzC6/IOE+v+vW8cH956HWTes+ZHRcZuC00npj+3hd
+n59nR7v//dg4Kxi9NXR4KHgYlt/g9STLuWzkYx6HaPlg6PZM5PkM81h9GmUMa5U29/
Rwd0Mj0V1Ph0M3Re6MobHU+eduX5x6oLP96fds6uBPKqzck/ttzip/
mjee2uudkJoiv8ATS81RmWHp/136YFR1hOSh3HhG7S
+OnWfb9q1mOMe9kvsIsOx6citkiU74IjbbHyAN1+E2zc7vFrTjoxZXLkU5kFtxgKy5LXVP
chmJMIzPG6VV/XpNoNCbjOcPyrDnOqanrtvSve04MX+aEppmvS3bw95kDkKN0c7D
+q9w/LXiqY9RTct8Jaf+8XI0vD5jmigNORAZyHB839qQDe9VAfum88OG8yO+kasDWfK
+yb/BQ5HN85Oni0POZtDs146SfM1IP/UaX3pU+zDRNJYf1c2dGZkZU/
TpdcbN76rkzuiHzP9EYmW/A/EvttRfd1M5drhQ+SSebQlyJ3v6wG9Bht1rlyY6qBfL3kWuq
+i4lv9M3DVB/d1rXELUeb6PpoMP50+vZA1T/3Ex9uNG/
Vv1Orf19fssAzP7JMyYZclrHMCw1Pjmxw703un+h9meVDuB9unil+NMZJFvBpjszU8bGu
+d1dpuNnEh8VX2u/D1IZtvxOvsYEXxeFusY79wzwxkT
+bvDk9/5WOZQA5iz8gXJ1d9ef2tt4L5s80pmWbR1omWONTfWAway
+9Vse4fTtryNTp0G5vvyUNVH+9NXVcaH8p5qONCV6bf1LV4x3oAmi3ZMY

+mRS6QhwvDg5MscxobfCev6o/p+7C0OzzXoeP7oSE648Md0x/980bGkbnV+F/
H4Wsan+c+Kw5yabA+Prxk7Xhi+PISZPOq/P45r8e2/14pH0wxowtDw
+nhwf3B7HDjVnGgWaHh3Mhm3ddCw94yHd8HxsemrqnRNcjGY7nOmEbl2kW
+Tz776Mjrc5Gv6eHfFcHy6ca7dDrjmpn6/1L1283u3yrHL6gT2r7/
sLn3hqdgXWYq60v1D66lnLdrf22ifm9zrGdEvpMdn8ko1NNW+I9bMvNofXr5lGrjn
+xTozOeCF8qXOkLwhN4A1rvuBiVmTx3Dz/dmSn1Ku10jPz/1mhwVTrHe5l3VQ5ir/x
+NWX0aE54341PKvj6OjNP1fKsXh25gfXb6Vt8P3r1AO/
fhvslf63i1yrH7VtGxf6T8k4BzsnQvFS+kj+QKmfHA/
lCml7Hq0GYkOMG17Bb2xw1pmgLW2pf2PCG9q5KbLWjzSI39UjOMzrUbwgV49zvfU
+vmer1Kfe9arqCj1tt/l/Egb/WcDH15WeS69KW9UtafB3X693Ag4+LtqOBvpNsS/c6yrMu/
eNly3fplx/iYajXlXroZCwU8zAuvqBtMnJzfZ1b9PpvaHh05uTlJxXD5ii
+nuUTWnMmNFJ2Qs1HBBzQIVxR5wP69Yh3TTQyqITim8IOZv9xgJOre0ZGfO9ymxg59nr
V96iO5z895DORLVaaP8jqX6hhXY0Mn+oTejb6Wjpng/0WP64PdEZHhokfJ4dHc+K
+RuXPMJ+XFop/Rk+Ri3Bo8lLuf7NhH43f0GrZgceesiG/
4EXdE7+BXkmvM7+AQDIftNSlodPY6l2ZwfE15nfrL6k79hRstlfouM3bw
+urQ5MaA9CREhcG89RPXuktrkM0HB081nHlsyljk0KfGldXhrb12sSU/DbbOkF
+JTR5PLlwwvToJo6jvhObxae4JTgqeqKbeT1FuSbUDa7rdvblQ/Kl0Rn3l/1ryvQx/
bHOuYh+SPXWz6w8+L3NMsv/Kz3UHXr/Qvj/H//mg95d9D1pmDtgVbjnPkkH53+XOs
+9GNqbdHDNeP8WnUZeOvf/2c/3yKthXpN4rPpe7LXmJ9CQPKlZgsX5lgnhjb
+w7lr3ZU9Scp9oj3ys/aMd7h2VamkfB0ZvRU9vXILt0QPPz+9j4Seiz9NDvL7bc/FDrz/
CljSjz/1sy7gujJ+DrjRkXOlutl46hnuF+hrx6xR/RB/U68RnBGfK7Q
+zAU5HXen18+Y73eBA3qec9D7oPrVbqHx++Qjt00vV
+VvIrw4xF8oHkr04PbtHBb1ku4HEbX2Ja5Dt7qtTGyPCXmd3tNpQ/Wu
+vmp12bzcvox0tzCywblKO+2vVQDws6zOS77dMj1YdOz7T9wh/0y1PvSVKe5SrLd+MtYf
+uMjy1/6waSS5TN6ExvFa9NNEY0w0OTeyPDkyAO+gXWllwJB4ezGYvsW/
CwNvp79Tq4F8jslV/zxK9V9RDfBkUnTe7aHBetZ5kil0zITrA9I25g4n5f9SyL+UTnq2fF8y
+vVB919rD8lxke5MnEPzdexPnV9Q2ugt3ZEfoHxJ9jkwPz7QsqNnYxufPQs/
sALGcup6dsLkfnrLCOs08RW5QPUC5yp1UD8P2vykil071xjW7/
Pt84RruscHOJSf488LW2/tlvvG/pgTtUJwSdliY7jGtOC1VnVwPru4+6/cj3hOb7pl
+6X5f1Givy8WVn7uhmDY668X8Xu+FBZPRf63sUxMfGntLwfxrGS+yNDPYYI4zrOpft
+iPCU7N57C0W683sH/
mV66zlThBf14W88lnopeQlXnRcCqHTqkG5gxvBFvUe5FIQmsC5waPE017yWK9zpVYhW
zgeZef6AY95IQD+2fpz2rRKxOqfr+qIrw+Wazl7ulyHc9uRrl3ar3UZf3mbkO1gm1/
QW01m5Fq9GnuscifHW2dKL1/p/9e0EY0r9n54xjg0mbw2mks/
wjAyA2TdDh6fCZ3zjfniAPcT2keu5rPNmsZ/aZ0MObNHJ2vtRrvUOK/
3B7yr6qL1yR7zvres8W+1zGFw
+P5KcYnJ60Z3sXVjDeZ3a97Kk85GV08+8a9nk2JLfvqzfi5VvTV9K/
W3ko9SJDlQu7aGuo5X9AvgDvfJ8Fx/
gAO8BIHebHGhtuyGxeH3n82Kjyl3uLZbc8U2Tg4oO3M/PtZmPYp+XcS6u9o8wzry0ai

+XXOHInB+vHOWW9xuw4i8bvYxtBh/6Ve3zuNljGf8BGXyOeKzu9ID4BybdnDg54/
yHPsHjm00Ljoe/
LtsfvMVcgHVo7v0s6BhQ7ad1PozD4K8YM6l8g4Pub8adk86ljJfRjtkv8N3XvLe2+D9twc5
nrFt/IMNkd7gJYzrVU/fsgKyeFeOm2UurvkNi/9sWLCq23curcN
+23jCf5DKUNxQD2dB2MDXxpflc4z7y7dHhdCr6eaLu2xw0v4L14DPbQq
+RQf8xjF27Xyzj7gqnk0JMPTRyAtrTfYHGPVziA9ssYl8pF3j77BpCb1Z0HDQ1oh/Exp9K
+laXyib83JHzdzDhFziQD5K8vad621vOz7OVQu5sZp/L/VzNt2K/EHFP9rPcmMRRegjk/
7e2+pD+RG/zXPVsHKYsEb+wyWM+/ID9I/MPMh/64c/
OU8B9fv64b2GwSPWwaH4H0H813/r+l9G4xB+ejl2eLZD4C875znI+/q6ybh/
crmsXC7XfDHvj2yKzjPqCDIBGSj6/9a+yTWSy02yhyB/blS2d/
DXQ9wBjUvolNMz9DX61nGdReP7C2lemicdJOcA
+eRlfl3F4iP5jj4t8+SKL9J09E9KX5NV3jDHtX6j3DeyRceCfLh/MLBecl
+Xftl9qVeNBe1l2jM7bKGN7pGpFSw/otO2pn03Old7dfrS792Se/
+hyMIHzWfa055A6gNru1gvaG7/0eg/aLBT9iGsEBkq96OrNZ6lsxdhn/
BpVdMHOWKvH7HB9rLBzwrmeftvtqO9VYwzYXAIY1q2gn0xW5q22htyeP/
SdOF9rFN2uMC71aO/kWnLGt+a77HOHa2fPfNWTa8oP2l0q9PRkY
+mXEvHXIHbwwxjrrRYbShfZx7R3fsFrIFtvh9D8sL81T6wdwFOdJ
+hP2yJ2J11wFv29nPAK75Hx0mGi0X/
bdEaE9fvk372JeP21ax90d7iFY2X5FhZAKdqL0p6wbv6Dv2qeC3LGYbhL0k3i1sfcz41v7B
ylJkZ53I4I7GvfZ9II/
srVvPvJa93tz2CF2tPUf7RK5Xzn2Mae3gcTnreuw99WND1N4a8RWWCUY
+Ejnc2foM3hN3hSay9dGz2gf00eBgl9gY7sV2rOCx0q7ioru5/9KP61h2tO9yxcjAmsYwe6
DUr3qP7ILRudxTaCHbfbh9D9muPYw9dDB41txstYx7VWNbtKiCjZVD3xVtPxRzWsl8lj1Z
KvQpOoU2wKN0DjYXGUWmBsU+gDlwFZ3OXjfxY5BthmRqHfdVayqrW1dpX+hi1svao/
kp16942+Kh54aWG7DVzr46+RbY/al/5Sot7La77IHdNfdGf+Ejotsk+/uWz/2DI/ci/4MH
+sgeJPbHicYb+hnfUrhebl58vrVsb4Tp1WL/
FrOe0L66xdKvHYK7jYKXIZGfQeEN9nql6KqtPCb5cPiny9hWEHNhX5h+Z6/
VKmmjFR17cPQovken078HVv4IMrul9Q77DrWfbdnw5SOHz875XD2YBOflzo7R2R
+JHt3K+py9VHp2acuBsEXbe0cfYXfSFv4wPMEuYleFxxVMG9lh+rNpaFx+1x7sD
+f7FrEFS1sW5QusbtuJ/yv9Mdj2X3sWN4p8rDNgs6Bx7StJR65njEl/
rx1sbW7e45+jh2UvN4oO3N9YrGNpkqkNwIPqOMi8lm2BXuaa3thp7X9dMr7Vx8w7yffm5
oFkbT23w3i0Vx5sr2ZdLTWu6TqFBXTE+vltQ9tS9ixq3GCJ76uGPweZf9rjuph5i/
8tf3CD6IDDttvZkUGmi+Yg2Hdo9FHLI2ibPfqyG5X1lvT6JrFxO4YuO5pXosGG6e
+huba06wXj2qv6UWNCvsmqwRiOX9J6HT9Wcv0R0x0dyp5FZFB6epDtFeNjT5/077LRV
+Ao8wNhdnn3vZfxie7b2B7K3m4a/2J/2xmdYTAkuvBD0a/whXa2sX7V3vWII1vxx8C
+9i0vb54gZ1rvBKPoOXQN+oi9v1XGu6nHrr3EnzKd8QM0h9kifsgBts+av+Arrmv7pfnvx
+wrSB/saZsgumKDwPSmoTt696PWQeLxTtZ3qhv9v7bpLT9kS
+OrXc9fVrU8ai6JPH0iejw6U3jflDpncfOPuZjq3cbPieafsL8gW7CUdTw
+hDALfjrWj1rHWNY2UXM86HygxyL/bslguc9YkP4bZ7F17jK

+JYOf9gCtwRHZAskSsrImeLWM7SDzAp1LQB92j61dwfKtec6W7qd8i62Cq60tp/
KVB7lt6falbN/kpzJfCtZ1ZgiytW348YnYIJ2j59a1LEIT+dQrh/
aLWVfKl9s49FnS4xLWPhJZG2wbobk9daxrOsMz6fZPRp4W51eK3jfN+P
+ROzYJp1+30T0ii2nXemsDUx79ECT25VPsaxilL5pLrWu5Vv2etdgYh2PXTz7iOtTrGQ91y
PfeA/rcrCudldJf1cN1gdFl6wUm7GiMSH
+xocXHda2DpAuZSyr5R582eVC849aP2kOu5btNfpDPgrPLOu6dd7GENsEyewy4c1yxo
+wPyhjpJ8fi05aM/9nPtqNHYY/
dY3o91X9iaxiXzQ3XjnXN981JkvQ9xnrfojFyuHhmvaPkrXL2l6yDbT3lqh1eoeI3Nb
+qaxJD4gDC9vGyV9Pij1renx6EyY5U1X+aeDg4s13EppoFWMe823l6wdlom+Wi16Yk3jX
+ehrGp+yC9Yxf2U7z14bWY
+JX4t5sgfq8cGmxsPqrvHw7mlo1t4H4w8GHRU7Bdz6M0l13NOrRb6+2l7TdAe
+FweY9f5wZxDhE5BC8mXvmi/9cafM4VUpz4ncSrX098k2dY5+ae
+kwpzrBirYx6craUzIF6LwV94voUO+ZafdYR6yAvuB6dd1Sf0cR61juJV/OdNel1lr/
bWlYUZ2R/+j62vTpbhN/4/9+sHzkjpt4rjx3kzBfm4C3OZnJM
+kHnjqDDf9CRfyFfGgxwTs6OsVflz77WF0NptJ2IPtm0H3fsm3B+zp6WHfnEg32/
zhDaKrayCv3Rv+jkU/u+VvqgeTB2+bPBAb7YsZGV/
Tr95zZxbo3qLbaVc0UUL8MeQYMjfk33pY7PMsg5T5rPc1ZGntWZJ8vbtig
+CsaryNfCyNDiwQyfyvifE43B9o86Om9B5+V8vuP5y4qmi2wGnuogY079gHYrBPfEB2qs
okc5t2L9yMgKwSu2pfl1zr/QvEsfHdVp9XHWA+dp/
HvGwjEwz229njf1/1RaMBZGZzzUPrYGmq6LeJznP5qfve/X7HZ//AR/
BySu4fDU2nDIsr8rS19aNs3KrWU7JXa1I25Q+sFNu+mn9Db8hXiwrrJjPlukFzz5Ujr9G/
stuD4gvxbGJ78g82sZ6RnlvKdG7XMc3oZ/l7g01v5lrq5/rhz9LWH/ljaYdPznEpGosV
+rRPKr+d0GIN5zyWwrehF3Z8Tgdn9nBW0TeNx/bXTEPOjdB5JEW2jzrz+X61ywjnJvT
+lYpP/T5E63Ck9ZPyvVC9+7Py32cPXFc2jvVstr9F/NB/PmF+dOib+X+FmdmnN/
RmTtxt8uJ+ZHnW+SQnBo9fMp9bx5f/6dulUr5pTOgMrGvKsz8r/bsoPC71tf+54/
OuSh85u0Pj+mkz+njil3M+JDvUzRIWpe/KETgy+C7jalHLgrVFEzo606hbrnG
+T6u0q3kJ8ZzNjl16fo/
tl5y1gyvmeVvEV4HvLes1YQle7hQbsYlto3yGzSKzx2Zs340Om0NP0NcW3GwNe0H1fFi
xbvxQ/Bfih+qmMVSsX0bpX8rpG+Do7+wRYfZRIuut01sabmf2lj8ro/
HPpGzuFnsLXNR4hKbp14+d7K+09x3eet12dXtopc
+HNlf2b6VYof7u27pW3Qq87ddLAvyY9a3PZU+Q3bqORTzlyVSH/
G9VnQyepPnib1sbNlr5Zwf+Uu7m26iOfZzddNL80VoD82jTYW+Y/OdGP+SX/
XsMwpBrGJdYnOUMKWc/8Bvkc8X9m6T3PXpfMcc+1WdAB+SB1v3jP+yhSvl
+rsF9aH4SI5EqxJ/jrrm6zdoj/
Oi21nfZu1YdbE670DN2adu7f89Ks9dZ7JOozUE73+qXiQ5Rplefdl+T3eckBHG9cKz
+BtVDW4VkJ/B/Os3bL0ztoqfWJtnVyAeg85vgDr6Od7jVW5E/RpkutX/
sTF6fuFXuPV2iqf5ET9svKZP+R/QL03cy95OfXzdlbpry3c+zHaD33xawVv5T7yX3CLuF/
kFe2eGg+0TSU3WS9vOhP5Qbc6LbkH7+r/pOvU+9B/
3XVv8dQuR43OU6nPKgpnt8qb6bOfycO5MPi82R8wtCV4dd5qSvr58r7ZWz1Hj7W0ou8

Kleg3n+UMyD0ZgE0npvCWnX2manf9IN8kcvDi/ociZzNrbwq+k0OxRjH+5TvMir3sxZ+c
+gNVuq9tGBrygC+VM/4jGO8caR8pjrnf7TbadV56fUevno/
6TkZPzmRdU7pGOOr3jup8dR75Ga4buU7zA6/Hw9frsi18V4z055A8hXOzPXzUt+dvZ/
hkhy9bQfss6bnBqflf6gw/n9/fjP46qB/XTky7ya5+dHLriffA1k9dmq/
7xp5WXUecUv5vnsYaUdbIRo89YHaF3Gjl1bdHXRI7PL78U/6mlzix/XnV9KsVXta
+1T9aaXz7PLuBeU6+OKTT7FfjJ+1vQzyvcTOjpnrH1Dua/43d0eeqc8N7nY02Jnp19fr1Q/
v96+f3m2P9y36Jj5fvP7F/IV/yu/QXIFRxtf1s+4L/YI5e/fnDs6tf9DH4bZyriT
+BfcMYZ5wBytpxy5DmH9LD4FMfaXhN3IfYkG4UNLr4J69vYL3wJ/Aedlck5W/vFrn3N/
sZQfAH6d7z9IHkLVafvWNZJtlNQQr5K8W+GFnpX1ha6YFGH8dCxrgN/eTr34x9/
O22elrGTg1XGhD/f92T5/47y/x86PpfwOPexPudNPv23U88O9nnb0KLC0/d++fxH+Z/z/
QtPuvM6Ouu/j/+XtX+vGDFxA+an+ODY3y1dr2I2xXb33V2+v2/
fvjeyXGnu9Yp9Ctk65PBfK9lv5aCj58glxq6TF/
rogOwJ19h55qLM9X4UuSjXDbuOfkLfkPPHPsz3o2N/WQ28W4Aze5n/fS7yynyT
+5F11keXi+25N7qLOSrn7rJHcbNKZ1/rnF9yHsmpwh/h88r15mz3kdii7j2ucv7mXdEJ
+DjENU+lzaMtdPYf3Y76kD1g0nHshXo++og9Qq9H/fy3WPPyJ3xd+vCU6FdyA5kL/
1vIM3x/Wnld8pXYB+zioaV8q5RNq4EzqY8p5cjo7L+HDjs6Z0Y674bU81T0XvH3yLHT/
AEbCt8YU9YHIDfPHBw7dWf6v0F4iv
+W9x1lZ4GFH1Re64X236ucd3dxaPCAx6z4Xm1v2QMEjn5WYf6pb4z7o8apaMBvjxl4uU
I00Q24JHodfyHK42d1i7OTVGSjbyZYO3zBdlK5Z8SpyHc7NjyYY/rJ78YmkPM4JLr/
cfOoXk/XnID4AT7vockQ9I62vpFu4h/6sElzVZxyh5+o50wvGvOTmPdNQ67H4+G8b/
+oTsc+OZUf5303KvjE6+MnlB3PdqdZniqeu3KmiNan/uTfpM9nZ251bWQJfs
+3bMjvzLjoN53M7YrTUPoJHxeY7zlR2zZL9CcJjFb5Fjz4toOjHEEvGz3McasclfnRweiV/
8WW4Fdnmd5ol3Fqd+qBt7jwfjQYVPNO+k8fgOvF35An7FHlRkPc/zCc8XUDjVNILuOvHy/
8p60hZGR4yv76sz/FkQv0afD3T/Zyfcskzqvn1zw
+0LPA4x32dg3M6djinPg1L5v3wsiJxoLi1B
+OHEKDi32f1r72j6y8HJ684fGp7QW5h70280LHO9lf/P3/
yOejtgar7Cs9aPeOQBdaj3PnBpf6FjSXgCe+CJOdtc6zHu0Tx8fvTch6x/
NYfNGZnMXVj3U14C59YSJ9mr47jyKvHD+Y0YGnkN5CYd6Xivcpo4i/
knjvEQ41AcjXgKMq3yJNZzHfa+ODFO8mkGd5x/SDzyVMc6FCcknVA4rMr

+Xn1Y4jjkXwnlqm4F/MF8gD2c3xHsYUNXYfyLQ6xf60z+L8V/
x4fmDgMcRzyUbdLTJY1uS0d61Eu2R6eM+jc3sGOI
+ncd2JLe8cf38HxHs0vWMMiFk3+DXF/1qVWih+/g
+nYg7b1ueq72P9WPSa2pgfzHORtuA2nnMoHtTn
+Kz6S3zvVPNIMcJ1TUOdK02uLDHP3XL/10zv/ncvbON+6Tzq7TL2w81H5QocnT580vzQ
+jbxMXKFdnJ7Wm+C77S5k3FAjFvr/9/KOIIYaJ/XZ5MRktT7LuKDDemCzFbs7ymNqfZ/
r9Me3ut/r+CxscFg5tghPmff0n3d8oOdNWINfpTOQW0eMnzUSzsCHfsM9fvii/eyr+bvyG/
KeAeVd72oMK7ePGB8Y/XTB4jmeB7bJaSMOSq4cn+R6sCbww2BkN/dT56kPNv
+JS3MGtTD23cgV6/
D7m25am2BsYKP0a1E37yRg3Zp10rXNP95HgAwxfq1fkY9CjJa4fqHPdObwWxqTwtk43
mlORz7Qpp5zC7/
lxxEes8763sVjED838P1Df9VxXIRyTXHZu54pLgPdbMfOe6pfGJyGJIXoVvt5Im4OzIPz8
BI6ZPeJ7Fnx2eJr2FMKe56kMeq9dTNEwPd0rwa01rjPNL01XrbxsEb8dqiF3rE249OHeTt
k5P8A2NNOXPrmtZqZ3PrCeXJr+A+SSdsHP3Fb6tEBv
+5471MG3h8qpt4BPuiaPzf9YldH72McFC3hsC3ZQ7/
i1jscf7JMjj29Z9UE7m6saZchuPLd//LXzdODqSvJ/6rPgqcRLWC/
bwc1rbqnOQN8kYiYOAc9Yvoef6xpf0+2ad/veQsD6qPWPgdajlUTxAf5Sxa71gXz/bS
+6E1pbAMfGYdazzhJfTLFesmek+MEhs/vOWk3Z9Zno7dEW+hkVHofNPcJ
+V97aR9bbyU7YKv3YxniVbX45e/
4ptA3GWvkkd5+e1zSe9C4Ccj51dX4v1p7WNB8VAyAf6trEkuwGPKl/
P2vbonSiDjVet2dZyf2x0LTLK2t9x5dq/Wt+gv5VltHP08BrR+dCuEz1QaKc1nM8br1q/
IAZ0nDEKWm4cjB9gzEtG0AWrmzeyS3kHgc6Z38W01XtYtnAfZSuPtZ6UvWL9Z3xk
+sjYLcou0Rlg/syO1ypW9P1Lwm8sOZ3aGTyM+Z//Z4H6tB7f44xvbXGuq3505tp3a
+8rPqdBlvYJhKnY1xgVPS1yve+k8KvHTv9ecN6H8B6oT/83N36X7ZoQ
+sRychmlInJ29bhwVdiV1alfKADjwim0D+8o
+XHlnFhY3PzRnYBvHbT1pHWC8qFHJLnNw7ODo2N+aJloLYnWtvdNvpga+sa5ZWQ/
1ywxjqp1us+Zd7wm9ZMJwun4P8My5HqZFzHxT9Jrh/
jky2B1t3om2MyhiOC3eQyYIPh3alTg4fKOnnRhR3FUdGvLeKvq/t+0RQZxXYcbLlu/
9R6QGvem3f6fT/5AWsbz0NPME7kUxwfpVvutX+eT9Zei9x3byjPjyvf5gvmu08I3njm/
brUd7H9Mz53ouPv2/mJtl/qDISzkbvZv+uYiv42C/
ax1a8g7I6ndPCPlv428P2uZVYxy1zAsVC2TuzdkkxPuvzZxtufCmo+wVsG
+QulcH68ck7ojc5SbPqDRfixxHOJG+PTM1ZmPXZA6rs
+cF18+eceKrTEYV7DGsHy7ptiQUd6DiK63Bufn/
jCfp7PKC7CPlt1hd94PqIyWlMaZhHMEbmwsR02NM52XEV4IYal3EqYp9Hh
+bTMpe92XuEdc5MzvpSVPUFzZnEL+j/e/OE9JTGf3i+0vpK+vCbzGOYOzGPYY8/tK7S/
5fNMz2bs8J0tsBOIWO8lW1thc8X9Se7eMyZ30086cbzXPntY7zPE8x2j1dN/N
+6Kw8LuZDXFH+uXKc4XnPozQ/hr+svTxx3mk+zZzszeCJudPixq3WwDnpxXjicyLr/
I1xZ5oa0Yw+Le0/bXEIM8IzpmzEed7LFO6F0wHxZpfD3YVWQN7/TmPjmtKOnvnr
+av4nCfC92Jw74YfL7o+bP2eC5n/CIORq4W9xX+CvcP

+P9WfU4LMctbgzvi0dCcmHrW2xSLRW6JA/w6c2swtEN4/VDm9cQ3H8+YwPT5qZPx/
dlyr7nz9zxXbdVnwSEDxlluNS0Iz8jobeExMkDcDpm5IX3fJHzoRfalB6yfuCt1cdYB8b27M
56LLYfCD1hmzfGRjBueHFK+f75ynPHJyMa6pRxVOFYOX+82bnT+GDQAsdC/
v1sOlavzSs4VIH5Zn4V+icev/eq7ZWzWdt1GnK2vcmxwgfkv/D
+WMeXstlZ9lvTTxjxJnSPxne78aC1z+uMAcWPwAB6kjgF9/6HdZPIzI/
NGIhxEWvZsnIM5fXoU/5fy/LAeoPiIStXXqv5UuXzY1aljjqocp5hzglXPA0MTMj9xD0eNr
+1Zkk8A5kbYZ636vc/vBLsz4leyxmC2psePYUcaw19C/dBcS/4dmxIHhJTujVxH
+LPYOelSrJlrLrX7wPap3Kc5viqfy9u/
V4Tncu3MPoPWj9mLAnLRc8pFn6FcSNsfcIY7D8zKWf26PuLkT3iwD+vFMOVDCy07tf6z/
zgvGBNMVdaJ846Onk+5ASTi0Zb9O0a5IM9F37Nd72KlxFzhf7Ep9/
KOIB9Tu4xlmXpwJyFUe9915kj0O6q4B0dmHPWWI9SXmc38kM87MjYDeLN8HdOdBv4
eyt0ezSyTzztWfNcWLzMEyV0Igh6uNgkxQ73sB7WfmPWOQ4doKPW0jgbmxg/
GPtz9N8JocHZxoriinf4d+XRn+a+SYaOjr66x21pHQT7QL+L7VFM/h3XpfE+FRm/
KHr5WfdPz+Sslq0VMvaCN9m2m9xH5QZgd6jn8sgoOmFeaN2Obr/SNO4/
B5/46T8sM4ojZz1S67CjHcFWmge0B3PzEjuGjj+rvGYyy/cL52Bkz9Ab+zDD/
FKc8DuVY553Re7QR+/7XrX/bPTQK8Z36yeV7ezlvqZ
+P1QNxLVfzr3U883kfl1yS5U7RTwa3N6Z+l43RoT5tyJPjLX4W/LFXktftq1so/9iOkufoDe/
UHI97XnrFu2RW9Yyqb1iyCty8YplWWsXxaeQHT8s8jiv+ljrPNjXq6Or3wl+0D9zo/
PA37LGNyQ3wPfxR5vj/yjg80yzLUzfmAohOYIV8GP+pB6zXF+Odaf9XnruqMn
+LX4MelXsj8ddG1hswT/yDLr59hO7MKzlj+txZ0afYK+rde/7gt/RmYt7hH3Qe+LWCY
+JBhmfWQ191M2/WLfr7wD6vx66MJ9N0bH3R6a/
sFyrPNPsEGjM77jVfsYrvOfzrW2JWuOy9yxvrepR638pvwGfF9P
+8LNMZeEfCzZE9bN7O5q3Oltmu6l/TYj1T/IJHrGXha6C/WS9AtljLm2b
+yzfAx8FGr2/9pb6Ckx+mvbvcX62tDTFGWI
+0vyWbiV39dXCf91f3Y5zzSlhj4D7yIlRv8xt8EdftZ7UmiR
+PPdfITeTdN9ky35bDZwNzLUnPc7Wv1f21X9h2mt9C//IHPv1whH8gnd/
CzaxYWPdQ3RgseN6pzF0wQ9CFp8xn2VvWFc8JevqNwRTD2Yt71OV5zDXxFdfzXpHO
nRj41R+LPRFTzOPwlfDHuD/gJfnTXfpEPLYngvG3ogcbGl+ymch9+OvoflnrV/1PDlpv4l
+Ony6jjHpTCzelcLc5hnLBXZKc56fVv3vYRZOTjP9tS6K/jrMciff5urQmTFPMx/
kz1wdnYL9ZF76eHh5cflFwPkGxoN0AffcEX8X/KAvkN0LoluR+XfNf+UG8Nvfg
+sFlI2t2/3YMIpDsb7la/GJnsh9c2NG5OYnLpqbFFpgG7SXiPqZF84Kv+5lmZnxMt/
YvLI9Bpffsl2QDrkg7YAZ7NKV5qv2y+PD3WO9KD0AH7DFV1mepL0uyfwUvxC57VpeNK
+B/8yHOZf3zcg7OnJq8lq
+RUd8oupfR5Oe5BlknrxaeTsZ45oPwJfk5MhOMR584aGV1+2hMVjDz0Ff/Cw6O+d3Ss
+jr7BPD8eu1jmgzwQzJxlb4vOekfmPmRZaY186Pge25d3o6leCL/D/
N8uDzsVdPvzrshNzmqXDn/K/JbfiX
+J74NNw0fCvq7ve1XXnOgz7MUbkyunU3lma2ubaiAvmLnd74wR
+VjXhX6fCZ7pK9hF3l6JxjA8qf8nLmWif7zlaHIF4M3dPa91r3S79DuU9FF+PXvhH/
4jedE74KrS0PH1+P7lf/Q8qrwGns2xXSTPUef1u9duDQYmJ/YwwPGdS/7e7WW/

Xp0GXOV2r9+qhp4R9kS9rOkx1hnx0/4tvksjLxnfoi3+CV/i2xeYFnG3Xlfm7S
+WgT0h64uNP4BsvSreidzGXkE9TnzyFrr0eGhrX0JlryAT9/qxpKf17f/p2XuZ80HyxzD
+Osnxp/8Fy8fvBf/KqhK2/GPPyS79m/SV/tNaptc+N7f+uaaC
+o3vuDt1oE3+PNsDYvtEnt9vPI/zckzZ
+Yb0jWcYvgy7I3JTYnwc8fs2hl7fNkd2gT9hv/D/4Oc/6Q3MAxjQ/8gr+43NLp97i/
kom0Fn47ztnHOWztWfIn3F5x3S0D5fvyNaM6Er4ulEIgy65wBd+2fyUbXrHulHz0/GxFX
+lz17Pj78YPYRuvzpz9fSX3XFQXcJQsXkPivjJWME7uFkhsSZ808Q65auEFvqffQbYhvm
eQ6su5jDYWvTAXRkt7U5yOzp3jTq/EQwvH5vDeZDQruBJerW3WU5bn/
b45dvdYMzXZ4ILPzxmHS3s4vcypusiu8jMVplf7WrsKLaQM1SVR4LNwE/8tTGn2Cw
+0JetZ+QrLbLe6tb6Ado9G9swx/jTOPHfrnC9rRz6Gz8gyfcmwD/
f6N6SAcxLdsxSdWzOaZyN0DkkekpwR20OdHYqd8hqrn5A8mfGZW6Z3hM0iMPRK7B/
oj07xsZH/262bhWDjn9OT59Y+6PnkJWHjLTFUMhr2awdYbOc/
heaP1GnoMwf0ybj1cD73QBv8W+6lzuVwdzh1rHKhaY/a1cUxw7L/u/mlfyi/
TFzD8vjGsuMw5uQ+bh29/jvkXxCzOd/1WfyPRUZ3iy7NGYSK5ZMXm3wtXSLQv8zxmV
+d7PaUA4Tefi84nHOMJnYnPQ5e6cPlbkPnj87y//KZ5pl2ymVaMnrokqr/Xab9+W3L2uZIt/
zZNXv9SXLtXJukzMrH545zi2xR+ND
+2sz56Wf96Sdl9NneP05y6FirUMjP6t7PVj7pDf2+oz2Gc/
LeiFrZdt73ZXzvrWvbKOO9le12c/Kuh/riStkTY81zLbXmbS2t6jivCBYAY4q9b+fdbp/
9fqw9mKxTjW44/e4s0bNehb7G7dx2zoLjDUw9jWN7GitTntI2WNffg85Q
+wpZz2afBFyRBhPvU6+YdaYf5BcB9bHDSka5fte4+SMC+07ZM1t
+6z75nwkrfWxTr52pzV9uPuqM6IYz94g/ftF1r73MU201kd/2HuwmcqBzWlfft
+Cwa1uFYT2fM7JfBx+vd2hu/
WdalWaM7zL9pPXNPr0nqHPY1nMOg9Uf2EpK7w9osa7vsGT3O6+Htl0t5pONzY1hzzl5a
7U+EXuv5mVInnb6ndZcN/G11nznE4ifH/f98Fj7K1byOLvZ+9ar989ljVh7GldPP/
fxvTqfgGvfM59Y71X+BHKU5FOWFsvZQqw7ssb76azvr+E8COWYbWA
+6XyGz3stU7+xLslezNfDo428jqxzYBjvxaqN+Lumv7Mu2io01n7xTfP5AT
+vnKBCN87E6RvRcZ7UrfmDb1Za21932u4fQuNi3bOPdMaPPtG9vPYwJrW0dcxpxfBP
bWdlucF6AzK4aZZuoD46r3K3JfeWZozqYNzchQUwjd/z1dp/
K4NshaMO2RwzK001p0cvn+j
+Dwal9T22mSi0DO1898XfkHP8g68Tpuh33v0LJvtJ9Tzhhn+XTZ7Xui433WBxR02/
rKcel92Apf+54fyh7Y+rvz35oGpHnopyigq2hl7kdZle6+07t
+EyMHTxGrR9v0OnPAdP5ohtZL0iW/imYPMJ9Es7lqy1KE9lf+cxgDtyB/rOwpZ0fN7F
+tZ5yhVYw+PW+WxOjt+35nm8aJR1gG9nEWIHMDtfb/
OjSEHbwXLCft3Jf0ucjDTPedcJU65qtkcYXwHL2BztsyMrWWEYpSk1fSNza6A
+PWeeQkXO2dmQDbeFz2uqYp
+QOLDqjfGdfEL8dG724pTgivBxyRnbz7zyvvcw6lhP2YqMXdG7Nfsadzgfa0/
k40hms8YPrnz7punQ+QfczKXODnHGNZa99m3a4zQ8vOMBtK2cTxlX7a0vkbdb2zszz
+7vx0855TUPv7yjfVocDFL3fN8w4ZVx6R8dB3vOkXJq1rROGPecBezU+tZtOjPz/
NCTHET2rH8uMreqcVbrWuWX9VKh6dxc9oqXvg8dGZsFH39gXmj/1Y62c9pn//

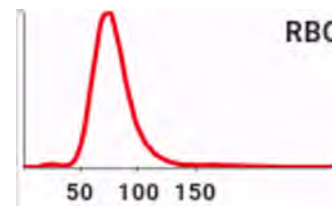
WO992TB7OicQ32pWeor/BUuTtrGaM6l
+oZ63GdWbWtCsI9nPMfyLulfeUOrRpdu1IkclDkYQPzSGdBbmybohyWes/
Yup3+81aUZ4Ys5PxEnf+4R2fgXJRDbEt01smPP9BXCjF/
3unPs2y97DH2Zrte5QKuaf2n3Mdz3db06cHg5rbF0imFDuTxKD90i2DxcPOLnB/lqD0V/
QivD/XYlbtTmU6yUfuZbjoDqLLO4Xfl2HzccokfgA5FN9R6te9vbkN
+w3puU2fzrWzCdb3bOkf5Zju7DmShlfixyT745SyrQouhL3WU76WzQQ6wLQAPrevK
+HNGiHKEDomvsL1p2DfB+kh5wcGw8oUHBxtrmm7CPP7ETuHtob5PZzWhc7fz7zrH8/
cd5yQNMdaUn7Zm6DUkPMMeHRI7yP/kLH87OgO+3B2dBt8PNt3Jb1Oe2CbGJ/
IT6CLlb21o/qHzdPblMdGl5Gpzbgl5IX/uzD92+f5YdMGng/P1bbfpHzwnf1LnSKxfsg/
Wt02QrZIBfNDZxNe0VG+I/LKGP96lnmd/7WDdY9kr217o32sm1iv4svJr9wvunUrywo4kC
+3cs54OTQ2Clxval6Tm67zJz4RHohHBHhp3V2fhhWn5g2fl2NAH4isUmi
+aUq5zNsKJxqHOQ4KnleuBjzrHb834O6sYNzrfa2ePSWcm/iz92dH31X4q
+gud2jc1969mHii/s9Q/vdCs/WB0fmWdJX7UOXNFj8mX285+RrvGw+dpn
+p6dZbadpGR400fnSUI//
I9+2D327Z38EFnpB3rvvWVtldVH7/2x3ngO9nvnKerZt5buh18XyH8HJQ9PcasS2D7Asol
3dw5HII6wTZVvT/
AaHnTGNZebBmvl1UHWAA1gVz7T1pZB7II0I6+zn7dXnxOR8yKlpze37mRvLxiWH8tc4
DjbY+Xicu504Xnvgch10QPTRXuHyuMlx/
hg58PpbJQVrFOR0V6dh7ITbA3+CnpkDesenRGHbS92gD3F9dk7yp9uWyzk77f3d
+nhnkmtc+TgzVaW0Z3Rc1Rkcn/rD+VScbKZ6yn0D
+i9+Eei3zRen6zku2d8hS3tp1VbmxynGs/XOdq8Cx+6t6WF+Uyr2P+Sg9T52HWiclf/
TosOmNI81HncnzV42BPuuYw6L4RtrU6lyN6rK9grT2m03+2MnONLvp8Nes37RVf2fST/b
ml/P6T0H3d1LOHaa7zvErbQ+daL00/vdOfKytf5rNuW/
PNTWN7jonc4Jsd2+nPCdZ8e0XTiJxy2cctzPeho8Nj9BrluMTz7klc/1RiRHcmf2OYxwHU
+xnImNXyvOYnLjCzMRziBkR65ieXIHrXE//
PlxiOb3E1pbsuK6fJt5DLISYMTGavzpuqPWYjXPHuMP9VMzv8cQl6rggMY0FXqdTnTdX/
bmlWg
+fmngma4zEQnN2qGLCxMcYA3GQC1Pvf2Qf1M2O72gNjtjQQ465KU8QetVngnwpsaDji
V9z73mJzdTvsWIN7KjE0+jv/aHL/YkTsgZUv3eH2MpfHGpUmJb1fyqfLvBvWte4L
+tpX01MFZORByW2M9zxRcXGnguPbgyfT0uch/ja2lyrfr/u2+E19RLbnGQ+a82c
+OVzphHtk9bEunDyYhR3BQO3OlalszfyTmKtZc11jkl/zZC9jfDzavNINCCOSC7UX0yv/
nexU8e7wcjTpx/WKukz+yWhOzxcPBg4I7S
+OGuV7ydmRox4oetT7OuC8Iv8I2KpcxMLY/2r3kvL2gZr04znLONBeZfPj37leF6LzJDX
+bBxLXotSsyM+OQRiWMeGXrfHpy/nrWg7O1s1/smibO+H5o+ks/LBr4r/
2t64nt3J14JDIlfNOxTLV7ua8rRwK5JO91imVDe1pZH3vLdJG81+8GZCyHVV5f/
kaePst8Zlx/rwbymKdU/e8aVdx9Qui2f/CdnBDTrvcbnJMUZgmH4nzX
+o8FeKzrGWemjrABPFg5J++0ocH851c6XMi03+N7BOL/
X1oPTyfvXgnOmvgutAQOhCLhkZHV/1nAoc252S9kL4Sk/29x8i6knADL1j/
nJpJzy2bnJJJC93+7t04Uj3Te8WQfbA9u3JV73XcskzipHvYzyJf4tCT8bGmiW5gw/

6Wa09vZf1FdY9D6i8H/h641Yxf9abDw/dkbWZAZKoveBcfzU4IAb+KY9fOQ/fDT3Jx/
hVeD7Xcqr17viZR5gQ2ZqVVDG65TbLuM4XezDr8bR5TDXwXjVwOzL4hOfjwm/
WjVjLezVjhqbQrGBQa3jw8UG3KfPd5/rVlXNct+R7aK2Gelm7JK5f73VfB9wRGLGj/65N/
L2j9w/xXlHG0kOLzka3zedInS4v+pf85H+Q5egu
+gTdo58rEcil2d4XGp7jtvDdkhvvZhzEuDbxdY7Wndi7Yc+3pW8/
ctF7Kx5PVT718sm7I7s4xfvdf6ei9OqcaWrXk2dJa47PGO7Zluge
+DjcOJFesKZEPODH6dmYwhF4cHz3Ivejml63H6nfX6uzmUjybk9syH7WG3VeVbe27/
W7qx40P2TfslmDI3r94MhE9hR6F3n49GvpckHJ8K/
EyxLsqVg6mFf07hes17SONv9btivrMd07j08ZS383NjH093H/
jy5xzOWHxgny1CbpGVbv9gJTTF/n3EtI669EzLnXyf7CFQDjKY5awndCx9QJbxVdC7rl/
OyPPvWbcol5cxX27+oJfklyDrd5pvsu0PTu8g+5/
s07S2E8wboVndBq5INdFj86wjlLewCnBE7kM+DEPpbxj2kveWdceF/
38ffNI609vhLdgpWZZBLfEp9xVvr4letB5VmJE19LXql4F1r8Og5fl6Rpq0wNcr5/
qgZ75gGdUa/+2R1fo9XqzXsXZ7o3ksW4IN4V7GcGJoCP1PSe78ue6r5OWs4LS
+97j0+7Lks7B+zjrnH22vJVvILzLajAusnfeB/
THvWBcplwN7tbTt9YL7wmNsDPPBasP5xp00TPjYQzk2z8SnTWj6n
+3EHiRHsFujY4OWRCZQbeMDi3Infux5Us0H2b6Co8z0v9axh
+1PpPpj866xHiUP0rf8q455TOjb9C3D0RGJkUnXh8ZhmZgGt8cnzv7LrTe+E
+Vfes6Nwq8532myh9CJl6tBt5viu9yU
+QBGwX9J1UDE6Gu8Pikl8DKtdG7eaew7OynogcmGX/CJbko5NYhRw8HM+TW/
XvoQ3+65rtyVvM+QeUEwfv6XaM/NC21xv7CgL6TnpppfUZeizBA29R1ZfQAMIC/
nxz6Jce+zjNUDuizHrdYlfBt8JHQ7xd6fJL9scEjdKpvl8O/JaznWvV7TtW
+yTIJfz7VO0XmwS8f/YO7yScul6P/
76JMrq4F5FHaTs0Tf36i6xJGwc171o3QVTn2s3MvNkrPXvy6MaL+PWG
+a80a2f109Mi9qfMet6e+7FcNvAv6d9aD/WfJF1wplxX9dEzGsiT0Nr7OqX5euXMnRO
+TX0G69fue7zSdpJNuDP3nRPyMwt/I12CMY3Jtsvsq+w9Gz3Ed+h37i41fKv716OgA/
A78iEVp/1mPT7ksYIR78ZMvC5agwTTLvHD7SGSG/8+LDECHI6qBHLUblb/S
+zOtM3Qu2PmRD9oFk78w7ZW/gGx+LL7EJaHtUxktZz8dWdk3h5zX100n
+RSMHfqSR3BFsH2i6aX5HLb915nfHxC64tOg95Bb
+J0zj3Su1zHWO7JBC6MD0Et5t043Z3fKfPcPbf
+nRgauDTagJXbvr8aocrvA09y0jzzh7/458kt8gXaut26QT/+d2L2rqoHzlP/ksemMlpfD
+8vy/FLB+RWmqewYcoRPsbnPHmF9o1evLR2d2Oy+WUcgBlu/D2dQ4pX8v5PjZDrD
+gzHj1jz1ppV5biZ4kqJMen9SnsIzPzX4sdak1hmIB
+mMcmLlu6es7WuKAScXQjfa4q6cPcy63cqJQeedQz3nLq2db8VJ97W8Veducg5trskZ
krbxM5YK2SPN2sCe/mZRaclbPzzzBV7JG+DPepbeJxaC
+1zu72850J9Ozlx09U9Lp3RcLDJfDojgPXRIY6Fao84v7FGt1LGxfg2Mh90Fs0uXqOo3xU
ADYjIE+FXGvTejusS/1QM94uORbY75ks360o6R3KvxMd3TVy7E/
stJvYKvvnFZveJHHgVc1n1pA5t0TrS6z/DjaPtMY0xHFcnfdLHgzrE5wjsX3GPdSxS
+LWWsPZorFe4onQ71PpY/3OA87UWMPY0Po3cdWtw0Nwunt+Z32ZtcEjHJ/

UvckiUP7BEMd/9S6NL/h+rUXtGpnAJ0SXoFvJ7UT/nR3d+njsCv8jS+rDMMR8k5/
hF6y7FevC1p9o+SwfeEtv3RvQFffftsVWTc89Dmd+/
YJskPZL8Zund52NHsUXMa75YOed6UGLfnluQ96ASj1fc9xDLINYaDnRMWPKlrlGt7Ti39u
ef2PH6CWtgG2b9mTUM5PMLwfJRjk9rvZ61ifUjgzsndj2143XnbxofrfMjs9NHZL2B2Psnqf
6zoZUbMMS81vnjBTtaG/6ycaJ8goOjD5DXNcMvYvz8zvzWTua/1jW/k74hE//
umHOvPgd7nzyHfvh25OkQY0vnSBzg+7WOynku5FtuWHnfJ/
ny7KPZrFJOOHVIEtObjJ7sXbOPezr2CHfd6y8v2GbfHJti/y/+rYM/+vU3I/
xib5HJL2dkkbK1XeA8Zz7DvYrdJ5gf11XRN7wnyEPeN32S
+q36uufGriFAfb1ssGzowNHBmbh4+lr4O9Jf491fxo3dbjY1OxFfgz0HPD6NHNrGdbP7M
+0xrC+saQsHGUSck7eKRjWCOq1+EOMa2Fz81S157B2ioD9kVnbnkRuY
+Gbjgi60vogIKbvhOizwcZN9KZ8HbH6EHyDs41RuocEckMunLdrEvIXb
+yHazpXGC6yhe5uRqIJzOfYI8wMSz2KV9rOspXeSTy2o2tPdf
+kOKxZ8Sm3xJdQjxqavys3PPL60/tLf6Utt32ejawIPObsMHPn4ptvPyU39mnivOcrN1g
+YR89MW5f70b3L8O67hKzDXZJ8UPm/8be2fBAML7KdoHn19/E58iuutezSWn6dP86qB/
XV3B2NnVQNZLvCdV7TAY1Ns5tTM09B76EJiN9nTr9zYz7sP2sN2Ufxd6Mjch5zm7POX/
5l3kCv/9wK3U6+JKNbBePC12MtJPIC+E+ednbUKdDTznS9Vji
+jc5mnsufgCfuq2qOPH3iO/XL5ucQdDnNfNMeoz0a4w/
xTnlwxMsf8of0w9m3X53fozHb8uQ85bqH85wuqgbWfH4R/X7f/qXkyYzot6x3sD2I/
1pT4fvjAs00H5rSi2YnZA3J9YnDTgg8wjfjxi7Arf7MNUwxzoTEUxHP/
vpXntvjdr6SPU9y2sHNysE5ca5Z1j+Yu9OmrlXN054ZXM6yvtEbxVfdXtm4vY0y
+6ujYynqfwmvBW73fAjr/3XZTc8Yy1t71tgvakukPdZyngl/AOm1ybJS3xLrnnPga/
2x7pfOI8OIWjE3ZKH7OBvFZd4u/Mjg+3M7xE7GJJB9q+kiOIHJHo+NYW/6sbaV8EtaYj
+kMniOFvXu20/+ONa0LrxZf5fv2DZUPwtrpdvbbdCYc+nVF+7eyvTmzrvfN
+IG0c1p02qb2d3SuNb7YfvZhW/U7Sje3j6QcYvzpvawTW3l/q9Z78WvxV+kXuZpXW+cq/
xb7vY91aav2aQf7LO7eCaabcpKfRbNia+2jevRez6wAXvbj9YZTd/
32ezKzclX3Mr2Xkem1qvMx/om91xzgk2Yp7rU24NfuSx0etfsb1p5Z2K9ftG5desH/
oNtQ3T2jR5A6xLFz
+DM9fJpxs6y6f6HfIPN7Le0885d5R31xYdgPGuF39gzMHdhfO91zDf5K9RNDgD5Dzv4Ge
UB7Nzpp39O70xZMWPFDm6Q98IsHiyRS5b3HpKzwPxBZ50f73mMcpXJedkp77XZwf60
8kmQgc94ziMMQcON08c97DO3gkXldm2QOUXOUgudbfur9+/Ao2/
m87uuu5X5kM5UOih4XtF9YbzTTxvwETijT3OkTcwf5frskvHDv+947IX9wG96R/
va9hVlv3e3z6B8teQn6YzJ9UOVY
+33C9uZF0l2iw2o8ULeiN4dyp4T9mH8wWeESgcS/2M/8oGWNdkF1jJoEz+
+zJ8lu0t1+nOzhSHAjwb6ffukih+RN83c4mn7VhrjYPv8yXhXFx
+5wxncjdy1pDmlvhxYO1F61mtvyEPH7YMKC8LfcizEYzzVd
+vHJ4nHDeRn5Xz8bV2jfyVrVp2gTX6HfW+vIObc1ZsFnIzYfJ+WtMh/Bx8LfhD9FD/
fNlff0ipy/X8qT5Z7bSldkXeWQp42ueSlTj8uOPgH9C6f7/rs/qGP+Le
+WeX3e8r1BZ4H6h1bS5jX2kv0O8deycNTjhLxEmhPDOi3sVGsK5c
+9KUVnJW36MqO47zMQ7eq7F/j5+OLb5/vXMefX72yf821dz3+Xnl

+0S2I3NCxf9XdsylNaUpTmtKUjSIKU1pSIOa0pSmNKUpTWIKU5rSIKY0pSINaUpTmtK
UpjSIKU1pSIOa0pSmNKUpTWIKU5rSIKY0pSINaUpTmtKUjSIKU1pSIOa0pSmNKUpTW
IKU5rSIKY0pSINaUpTmtKUjSIKU1pSIOa0pSmNKUpTWIKU5rSIKb8d5TW3k1pSIOa0pS
m/M8svXZTmvJ/Zmk1pSINaUpTmtKUjSIKf+FZdF/
orT3akpTmtKUjSIKU1pSIOa0pSmNKUpTWIKU5rSIKY0pSINacp/
phzWIKY0pSINaUpTmtKUjSIKU1pSIP+f1+av+av+Wv+mr/mr/lr/pq/5q/5a/6av+av+Wv
+mr//tX/b7NWUpvzPLPf9b1gub8p/efnu/OZl4X9z+cv/kDK93ZT/
5WWvpjTlv64ssXdTmtKUjSIKU1pSIP+f1+av+av+Wv+mr/mr/lr/pq/5q/5a/6av+av+Wv
v5XuXgPI0ZSXUpbb+z9fFpX7Vjlmg+Uvr3+Lw==|MATRIX|FLOATLE-stream/
deflate:base64^Y2AAggf/XRjgtlMDiAa||||F||||technician

4.4.5.2. Example of Data Frame for Histograms



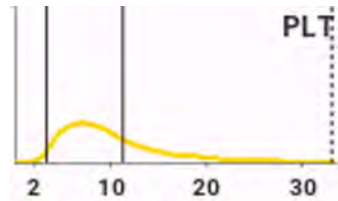
OBX1|ED|RBC^RBCALONGRES||FLOATLE-stream/deflate:base64^1dR/
aJR1HMDxr5ZZXuWVcnpNu8MfuXaXU9Ndku55vp8rLN1a2dKzTLPLmoXPappx
+eNxbfVCDDeFEDkYNv6NagjxILDSQVHZQyPSKncGEPa0U
+2FYil79ue4ZBt0J8evHfP89z3Xt/vnu5R6nMq0YG3owFif4YSq3USiXJM3icg0rtkYivJj/
icxmeeJHBtpHoaWW73bCivey7zLrKLDPREzDTBfkmY0zxbDataJIZaJWbjDejqUOMaTbB
8poY12qm6o8z9qTJlXvNwORc3ynywwn03yv14z5L/
Hd8TqcvEnjays6WUdTU3TMP10zl24479UteXN1vDZbM69O6kU6Vb9Ud/
Qt06xB9zeLvzvvrvBqzXq0z1WsA5GwDiY2aNamC60t2FuxLewy7J3Yu3BsPivHquDzGF4
1Y2ow32XcAdw6xh7Cfo/xh/
GPsJ4G5jjKmhqZ5xjramKuFtb2IfN9zPpamfNT7Dj259jHsU9gf4mdwD6JfQr7K+XvBs5/
zP8t9vfY2C3Y5/B/hH7J+Xz2D9j/4rdgd2F3Y19Afs37DT279h/Yf+D3Yvdj/0f9kXsS9iX
+Y4SV3iccJ6lrvIGSdXfKJ74BOGcS8P5idLRd7P4XJO49i5pybtV0gW3SSByu3AtJF7rlv7
mOySYuFO4LpLomSqZe0Y804RrJEI9F/YM7Luxs7BnYs/Cvgfbi
+3Dno09B3su9jzse7HnY2dj34edg+3HDmAvwM7FXoi9CHsx9gPYS7CXYudhB7EfxF6G/
RD2cuwV2PnYBraJrbEFO4T9MPYj2CuxH8V
+DHsv9mrsAuxC7Mexi7Cfwh4Sew12MfbT2Gux12GHsddjP4P9LPYG7OewN2l/j70Z

HL7 Format

Curves and Matrix Transmission

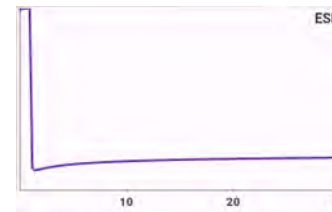


+wXsCPaL2FuWx8J+GbsEeyv2K9ivYm/DtrBLsV/Dfh27DHs79g7sN7B3Yr+JHcV
+C3sX9m7sPdh72bYlfdpmf58EuvdxrFysi+XMuV/i7grmrZD
+eZMXMSnB5THmj0I0TRVrqJJESTXrqBZlv81a3hl6BvyPI51PPDMAqZMUv3E3eZ1yyXAq
cjKcz5RTp/PdNuPq9pDlDcZvosMDzw+Oc1/76SmK0Ud0hhTrn06LqVgyzzFIH6Rm
+oJOc6yD/mR7HM8/
V0gZUygrpOzZvM8PqbZsjuewHwgNPiOdjPt55zODcfZMtqcx1k2T2J9Al3H/oF/oO/
wEfUZn7B+hWrb3827ROsrch0HKla8MPn9voX/5P7qonb6mE/
QJvU8HqYJKaRMVUYiCzvmYQ249eH7+zpxXOuucszb6gBqplqqp1Dmww69L7rC8o
+R2Grp+w/dH2h7LuLZr74mR7ou2EWocJXuUjDFSzRwn4/R9fla+q1munperwA=|
HISTOGRAM|FLOATLE-stream/deflate:base64^Y2AAgW5nMOWg7wliQUwA||||F||||
technician



OBX|2|ED|PLT^PLTALONGRES||FLOATLE-stream/deflate:base64^1dR/
TJR1HAfwR7gZ1Khj0hg5mjhFs0bEkkyK5/t
+bsYYNHDXGDpsmCwZ61xMkYyBJ5oSkBikYICQEKJBnXnKzjiDCUwKliQoA6C
+GFQGBpKndUbPLfrVrZ+/OOze++53fP9Pp/
Pvb7P85WkmcNFmT1J2TzrBb8wCyBJxcFXL8289t2jc6yJNjqcTDYvLinWGO4U/bV
+MsvXavlsfjN8khqphwdUiA3qyvkoJ46uaKkVfbWWeScwAl5Zn5NnltlbFaLZX5eYjDXRrR
cuU88FRMG3MwrxZnFGpGWSYemdCKCW2Mkk+OE+u9dclrPUi0DKfy
+k6xMHoPx2SjnrccjssTeT75HFsoWncXc3ypUI2Vc06IMEUc57yTYquxhnNNws/
rtMgMOytGUluExtAmigY6hNXjvlG06RXGbx3CvWJQ6Cwvjolk9Lnw1F0V60mVhOXJVBPV
YeW8JLxY5obxaha72uVCNUsBAdQfWe7shJ/AumCLcMRY/
D17pdyOkwBNbjV4obZ2PjmFvzBhemrcQQ0sWoTvIF+cilqJ+wziYkh9ASZYfDhT5I
+NEAFKaHsam3kDEtqyA1jkIT3g
+jkfvl8EP7tVq4L5xZxTQjC1NxQXDoeh99StGuJgNmyGsZJLcRmRuHQPDHI9luLNCU
GiVFPly4hFIFpzyA0Nw6PIT2LB2vj4dOWAI+B53Db1CZMuyZi3Hsz
+h5KQvuqZDSu2YYqXQqO7Uhf4f7taOrU8/47UDuazho7UWndxTq7Uazew1oZyF30Mutl
4qUVWayZjRfCX2HdvUilzWHtFvI35VXWz0VkrRh57eA1K4X72cQDLQfZS6WNNh5iP69jfn
cBeyqE2/gb7OvN2Wdu2vUtuH1mfyW0K2WPb9OvjH0eoWE5ez1Kx2Ps9x1aVrDnSnq
+y77fo6kBOUeP0/
V9pJtO0NalLe0n6XsKG4eqaFyNtdM1dP4A4W51tDZB9qmn94ciWN5AczMWh56m
+0fwXNdl+zO4PFes/

ZtwbdfHXINmTOS3cB3OYaDiE65FK75oaON6fEqzz2jWTrMOmn1Os06addHsPM26afYlz
Xpo1kuzr2j2Nc0sNOujWT/
NvqHZAM0GafYtzYZoNkyzEZqN0uWcZb6j2RjNxmN2Pc1+mH1Hp11/
pNkkzS7R7DLNfqlZFM2u0OwqzaZp9jPNfzGZIWbXaPYrzX7jdUlp6pSUxjvZFLNijK/
wUmpHXVSqnTOinHSWTEkq5RKq8q2R/ybQy//MZJtxG26G0pZhqYflsk/jc1ru9F/
rYlJpKJtcvtugdknGT7HPIzcbelOP99Xa1b8S+r0i7CLv4O2SBQ9R2kRzSL/48DX+R4r
+J/h9E/M+R/kMcn6lbNbfG8Ts=|HISTOGRAM|FLOATLE-stream/
deflate:base64^Y2AAAQ4nMMXQA6ldgMghPS3iYdVHE8cFs1ihcg32iDkA||||F||||
technician



OBX|1|ED|ESR^TRANSALONGTIME||FLOATLE-stream/deflate:base64^tdgHeFX1/
cDh41bcinvgFpxYtl6a3HNdULUKjjqKfrWivAtYtQ7UHKbYEpA9RCBsMIKAROZHd8MSM
Gwle2NrUWvteEpu/89tGiAo8Dyf53fueed8319O8tw8lQik/n2V3LnUqnt7EIRHeJzndffk/
593MohG3VZ0UK4g5+ZyBRdmZE94LcNxxsz8fMc7MirVPD7T+cwtNW7InJl/
d2Zu1ScyXZOZd25WZqWa2ZmdO3Xyfk5m3fK5rsnLrJk9wXX5mYa4tjCzQtZm1+/
IRCTyzj0s8XJGuYSZicK3yic6dzojv/
euQnzExN3VEzULX9VokqVKglWoledjETN7FsS5XOrJriJrM01EhnlHkp8U7Fmwh4StWvX
TITLej5RkFMnYT+JaoVvYJlGck99Tpb7GrOaubcFL9v9rZltzejA7WROV3Y3s3rwc8zrYw/
9zBxoH7nmDraXoWYPt58880fa0xhGzJjAmMyYypjByGfMZsxlzGcUMBYxljKWMwoZqxn
rGBsYmxnbGF8xvmbSYHzH+J7xz0TR9yW36kFhzeyDw3IFh4SeW1i79uFh
+dwjwok7jgw9w7BC1tHhzPjwrrljws9z7Ag54Qwa/
OJYZUqJ4eebZg94ZQwo9xp4ZYap4eec1it8Mzwm4pnh73qnBN65kU/
C4zzGRcwLmRczLiEcSmjluMyxuWMKxhXMa5mVGZcw6jCuJZxHeN6xg2MGxk3MW5m
ZDAyw6KfudyqScYtjFsZtzPuYFRIVGPcybiLcTfjHsa9jOqMGoz7GQ8wHmQ8xHiY8QjjU
ZNxmOMxxm1GE8wnmQ8xXiaUzvxDONZxnOM5xkvMF5kvMSow3iZ8QrjVzCrjNcZbzDe
ZLzFeJvxDuNdRuSeiFPFfVY9d3bgNfA/Q2ZWWZkRuZ05jd2Kwm/
CbmNbWHZmY2s4/m5rawlxZmv2c/Lc1vaU/
ZjFaMvozWjNaM9xitGG0YbRntGO0Y7RkdGB0YHRkdGZ0YnRmdGV0YXRldGR8wujG6
MT5kdGd0Z/Rg9GD0ZQOwchi9GL0ZvRl9GH0ZfRn9GP0Y/
RkDGAMYAxmDGIMYHzFyGbmMjxmDGYMZQxhDGJ8whjKGMoYxhjOGMz5lJGCMYO
Qx8hifMUyYrjJGMUYzRjPGMMYyxjLGMWJGzBjPGM

Output Format for Host Connection

Ref: RAA085BEN

4.5. Laboratory Testing Workflow Examples

4.5.1. Host to Yumizen H500 OT/CT / Yumizen H500E OT/CT standard test request

Message Without Optional Segments

```
-> <VT>
-> MSH|^~\&|Application|Facility|||20210726134529||OML^O33^OML_O33|MCID12345678|P|
2.5|||||UNICODE UTF-8<CR>
-> PID|1||PID_12345^^^PI<CR>
-> SPM|1|SID_12345|WB<CR>
-> ORC|NW<CR>
-> OBR|1||DIF<CR>
-> <FS><CR>
```

Message With Optional Segments

```
-> <VT>
-> MSH|^~\&|Application|Facility|||20210726134529||OML^O33^OML_O33|MCID12345678|P|
2.5|||||UNICODE UTF-8<CR>
-> PID|1||PID2_111^^^PI||Lname^Fname||19480827|M<CR>
-> NTE|1||Comment for Patient with PID2_111|G<CR>
-> SPM|1|SID2_111|WB|||||P|||||20210723161718|20210726161718<CR>
-> ORC|NW|||||||HABX_Department<CR>
-> TQ1|||||S<CR>
-> OBR|1||DIF|||20210522174812|||||PhysicianID^PhysicianName<CR>
-> NTE|1||Comment for Sample with SID2_111|G<CR>
-> <FS><CR>
```

4.5.2. Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host acknowledgment

Message Accepted

```
-> <VT>
-> MSH|^~\&|H500/H500E^112YADH47745^3.0.0.3b|HORIBA_MEDICAL|Application|Facility|
20210726134529||ORL^O34^ORL_O34|MCID12345678|P|2.5|||||UNICODE UTF-8<CR>
-> MSA|AA|MCID12345678<CR>
-> <FS><CR>
```

Message Rejected

```
-> <VT>
-> MSH|^~\&|H500/H500E^112YADH47745^3.0.0.3b|HORIBA_MEDICAL|Application|Facility|
20210726134529||ORL^O34^ORL_O34|MCID12345678|P|2.5|||||UNICODE UTF-8<CR>
-> MSA|AR|MCID12345678<CR>
-> ERR|||201E|||The Event Code is not supported.<CR>
-> <FS><CR>
```

Message Error

```
-> <VT>
-> MSH|^~\&|H500/H500E^112YADH47745^3.0.0.3b|HORIBA_MEDICAL|Application|Facility|
20210726134529||ORL^O34^ORL_O34|MCID12345678|P|2.5|||||UNICODE UTF-8<CR>
-> MSA|AE|MCID12345678<CR>
-> ERR|||101E|||A required field is missing from a segment<CR>
-> <FS><CR>
```

4.5.3. Yumizen H500 OT/CT / Yumizen H500E OT/CT to Host standard result

Patient - DIF

```
-> <VT>
-> MSH|^~\&|H500/H500E^110YOEHO4272^4.0.0.5|HORIBA_MEDICAL|DRLSCM|
WEBAPI|20240328164627||OUL^R22^OUL_R22|24032816462700002|P|2.5|||||UNICODE
UTF-8<CR>
-> SPM|1SID-1243191834||WB<CR>
-> SAC|||||||00000000|9<CR>
-> OBR|1|||DIF|||||||20240302011308|||F|||||||LabManager<CR>
-> NTE|1|L|
P^^REAGENT_EXPIRED~P^^OPEN~P^^PLT_CONCENTRATE~S^PLT^WBC_ABN_MA
T^NRBC_PLTAGR||<CR>
-> OBX|1|ED|RBC^RBCALONGRES||FLOATLE-stream/deflate:base64^1dR/
aJR1HMDxr5ZZXuWVcoppNu8MfuXaXU9NdKu55vp8rLn1a2dKzTLPLmoXPappx
+eNxbFVCDDeFEDdkYNv6NagjxILDSQVHZQyPSKncGEPa0U
+2FYil79ue4ZBt0J8evHfP89z3Xt/vnue5R6nMq0YG3owFlf4YSq3USiXJM3icg0rtkYivJj/
icxmeeJHbtpHoaWW73bCivey7zLrKLDPREzDTBfkmY0zxbDataJlZaJWbjDejqUOMaTBb
8poY12qm6o8z9qTJXlXvNwORc3ynywwn03yv14z5L/
Hd8TqcvEnjays6WUdTU3TMP10zl24479UteXN1vDZbM69O6kU6Vb9Ud/
Qt06xB9zeLzvvrvBqzXq0z1WsA5GwDiY2aNamC60t2FuxLewy7J3Yu3BsPivHquDzGF4
1Y2ow32XcAdw6xh7Cfo/xh/
GPsJ4G5jjKmhqZ5xjramKuFtb2lfN9zPpamfNT7Dj259jHsU9gf4mdwD6JfQr7K+XvBs5/
zP8t9vfYP2C3Y5/B/hH7J+Xz2D9j/4rdgd2F3Y19Afs37DT279h/Yf+D3Yvdj/0f9kXsS9iX
+Y4SV3iccJ6lrvlGSdXfKJ74BOGcS8P5idLRd7P4XJO49i5pybtV0gW3SSByu3AtJf7rlv7
mOySYuFO4LpLomSqZe0Y804RrJEI9F/YM7Luxs7BnYs/Cvgfbi
+3Dno09B3su9jzse7HnY2dj34edg+3HDmAvwM7FXoi9CHsx9gPYS7CXYudhB7EfxF6G/
RD2cuwV2PnYBraJrbEFO4T9MPYj2CuxH8V
+DHsV9mrsAuxC7Mexi7CfwH4Sew12MfbT2Gux12GHsdjP4P9LPYG7OewN2l/j70Z
+wXsCPaL2FuwX8J+GbsEeyv2K9ivYm/DtrBLSV/Dfh27DHs79g7sN7B3Yr+JHcV
+C3sX9m7sPdh72bYlfdpmf58EuvdxrFysi+XMuV/i7gmrZD
+eZMXSNb5THmj0I0TRVrqJESTXrqBZlv81a3hl6BvyPI51PPDMAqZMUv3E3eZ1yyXAq
cjKcz5RTp/PdNuPq9pDldcZvosMDzw+Oc1/76SmK0Ud0hhTrn06LqVgyzzFIH6Rm
+oJOC6yD/mr7HM8/
V0gZUygrpOzZvM8PqbZsjuewHwgNPiOdiPt55zODcfZMtqcx1k2T2J9AI3H/oF/oO/
wEfUZn7B+hWrb3827ROsrch0HKla8MPn9voX/5P7qonb6mE/
QJvU8HqYJKaRMVUYiCzvmYQ249eH7+zpxXOUucszb6gBqplqpp1DmVw69L7rC8o
+R2Grp+w/dH2h7LuLzr74mR7ou2EWocJXuUjDFSzRwn4/R9fla+q1munperWA=|
HISTOGRAM|FLOATLE-stream/deflate:base64^Y2AAgW5nMOWg7wliQUaA||||F||||
technician<CR>
-> OBX|2|ED|PLT^PLTALONGRES||FLOATLE-stream/deflate:base64^1dR/
TJR1HAfwr7gZ1Khj0hg5mjhfS0bEkkyK5/t
+bsYYNHDXGDpsmCwZ61xMkYyBJ5oSkBikYICQEKJBnXnKjzjIDCUwKliQoA6C
+GFQGBpKndUbPLfrVrZ+/OOze++53fP9Pp/
Pvb7P85WkmcNFmT1J2TzrBb8wCyBJxcFXL8289t2j6yJNjqcTDYvLlnWGO4U/bV
+MsuXavisfjN8khqphwdUiA3qyvkoJ46uaKkVfbWwEswAl5Zn5NnlIbFaLZX5eYjDXRxR
cuU88FRMg3MwrxZnFGpGWGSYemdCKCW2MKK+OE+u9dclrPUI0DKfy
+k6xMHoPx2SjnrccjssTeT75HFsoWncXc3ypUI2Vc06IMEUc57yTYquxhnNnws/
rtMgMOytGUluExtAmigY6hNXjvlgO6RXGbX3CvWJQ6Cwjolk9Lnw1F0V60mVhOXJVBVP
YeW8JLxY5obxaha72uVCNuSBAdQfWe7shJ/AumCLcMRY/
D17pdyOkwBNbjV4obZ2PjmFvzBhemrcQQ0sWoTvIF+cilqJ+wziYkh9ASZYfDhT5I
+NEAFKaHsam3kDEtqyA1jkiT3g
+jkfvI8EP71Vq4L5xZFzXtQjC1NxQXDoeh99STaGuJgNmyGsZJLcRmRuHQPdHI9luLNCU
GiVFPly4hFIFpyzA0Nw6PIT2LB2vj4dOWAI+B53Db1CZMuyZi3Hsz
+h5KQvuqZDSu2YyqXQqO7Uhf47taOrU8/47UDuazho7UWndxTq7Uazew1oZyF30Mutl
4qUVWayZjRfCX2HdvUilzWHtFvi35VXWz0Vkrh57eA1K4X72cQDLQDfZs6WNh5iP69jfn
cBeyqE2/gb7OvN2Wdu2vUtuh1mfyW0K2WPb9OvjH0eoWE5ez1Kx2Ps9x1aVrDnSnq
+y77fo6kBOUeP0/
V9pJtO0NalLe0n6XsKG4eqaFyNtdM1dP4A4W51tDZB9qmn94cIWN5AczMWh56m
+0fwXNdl+zO4PFes/
ZtwbdfHXINmTOS3cB3OYaDiE65FK75oaON6fEqzz2jWTrMOmn1Os06addHsPM26afYlz
Xpo1kuzr2j2Nc0sNOujWT/
NvqHZAM0GafYtzYZoNkyzEZqN0uwCzb6j2RjNxmN2Pc1+mH1Hp11/
pNkkzS7R7DLNfqlZFM2u0OwqzaZp9jPNfqGZIWbXaPYrzX7jdUlp6pSUxjVzFLNijK/
wUmpHXVSqnTOinHSWTEKq5FRkq8q2R/ybQy//MZJtjxG26G0pZhqYflsk/jc1ru9F/
rYlJpKJtcvtugdknGT7HPIzcbciOP99Xa1b8S+r0i7CLv4O2SBQ9R2kRzSL/48DX+R4r
+J/h9E/M+R/kMcn6lbNbfG8Ts=|HISTOGRAM|FLOATLE-stream/
deflate:base64^Y2AAAQ4nMMXQA6ldgMghPS3IYdVHE8cFs1ihcg32IDkA||||F||||
technician<CR>
-> OBX|3|ED|DIFF^LMNERESABS||FLOATLE-stream/deflate:base64^7b131F1Vuf
+7EQSkKCX09gYivYN0ZMPadCmigKJC1IMFPXaPeo5HNx1SSCUhBZKqkNCDQSpOy
AQQDplh4hUASmCiHrwsz/3+13vy/3jnvuGOd3xv39znrHmGPvd
```

HL7 Format

Laboratory Testing Workflow Examples



+21Znme71PmM585V6tV/hb9o9P64Kf+uu3W/
r19Wt0zqlbrgsqfM0qZUsrw8v85pVxYysjy/7jyWX7rnlm+jyqf5Z7upNx7USmnlv9PLJ/
Xl9lr358un2NLUap8p677S7m2/D+9lFvL9zHlc0L5nFo
+J5fPUlo3uR3q7FLfaNehey8t5d5Szi1IRCmlT93TS7m5fJ+Z/nVLMzTtS+t4q7XUvcZ
+5t3Vd+aRv9HdYKeeX72eXzttLubF8H5vnxqQ/Z5XPk9x/jQX6nJ26fmUa6f+F7k9rfGhU
+tG6pxSuz08/H04/aLeMq3tXgH9TjedoAdj6U7ltd+EjNNc9VZnu+OSL/
niHK5+9VIDBPL58WIIH607st3xiTo1r3cddZ86z5WYqPhwSmlnGsetu523el9dKD9aannbP
NY9IX+8GRW+byhfm7N2M7I91+5H8LOhOCptNEdZ56LvmDtTF/
T573ml3gMHX4ZXPwVGgwLL54K3W51W2pzbMbyWMZ5Z9qhD9eZ1/
BKPLo6NFuYPp8eWs0yjdXnN4PhS9Lm+PDljPBiTuRIUnhH3x4sn
+cZp136dk0pV5Ryv5+IPjDdP57x4fHZqfPMYBj
+nBz63h66n25aC7fgBt49UcplucYYflvKjZFPZGpi+gjt5+Rzeu5/
JvecY9wgG8LwFX6GZ1u/DG9oe0Ep0GhU7rsq/OS
+R0q5OvWfF3mm7QuNg9bsyBptn2g5UL9DB/EA/XO+5Uf3w7tyT/
eW1PFo6r8ivHow8vBk8AveLkg7JwSvT6SNx/
y8xrXAPJWslMz995pHwghjO8njVPI1xklfbwqvznZfhaG7wp/fBgsLQ//Z
+b3QGx0oXTHM/G/Ny7iRt3Fpc0Lwh67jnl+b3sL6hPD
+DI9f98wKjaDphXmGPv4qbYyJrFPvw+Hj7A/wGVyck7FdEqzRHZ4vDw
+ppzzburKyfjzdz3Vp136Avt0PjAHM17g+PzQ52/dLx14er11MvycFf/x/fbDzqOW
+Gxui34NB6cyFqnd1S+RsbPhylWnSfSS0qG0UcnpNcDvR2Ou
+UNkeTfbYRJs3nm5fP9T+fxD+XyxfL5eSrm39W5v5TWn8snv3Ff
+d56tpTflfJOZX3xfPn8fSnI2e5f5fM5f9Je608pL7kd2uu+IDrecd3U1X2lfJbS/
aPb7nLt3fz2x/TzWd+nPr2bNI/Ksy/9e9qgX4yj+1b5fD5t/in9YjzPesZURf3d5/
L9D2mf30r/uu/n2tul/NHXolvG/2zq+0O+/8n0U118vh2a/
zl1ZwyttwbaEA2e99hbNc1eCF1fTjvvhjfvZMz0483Q6AV/1/XnM5aX3Afd95p/Ux/
fCp3eDc3+kP6/G5q+lt9TI2j40gANhZPXQtCXP0CrP+aZP3jMrUX5/bWM8W3/prr
+EPq8IT6k/XrM9FE4ez78ejO0e9M80z1vpx/P5t4XwvM3wq/
fG1e99Tqt7mbF7zuggO7SafUOL9+rTqu9cfm/
XcpG5dr5VqnXDu0iL1K2bNcW99F1z9ePjcsZZvyvdzVrN8cn3dcs/
Pymept7V9KRuU74PL55bleqm/94vyfVC5tm9ppzzf27r8f3D5LP1p71c+Kau7/
XbpU3eH8ln+b+9erm1S7j2qfJPa0i5VvraK/W2dnM/
ejtmDKXt7mfdp97m5Xtpv1v62yvtvcs19u5tmm5Rv
+2K2Wln2+tU66v57GIDp9zu23q3rZ83y40OMPfW
+Vaa2u3Cw27u7vPPa5vVa7vU75Dn1K6W3m83dJWa//
yWWjaLnV1v1zK1u5va9dSdirXN/V9i0a4392+9HFF97H1BY8bfomPu7uPra+H7qWe3mr/
+nbmdZs6yzPgt0r5VLnGWP4ptB9iekE3+KVnSn2tnUv5XvleeNruulvUOLJ+lrfYmHn
+38KUFXQoP2nuU/8v33hGmS3ut8ln43N3ZWOitXccqB4c+u5kf7TY
+p9bVyDfptUe7ZJTjb0n3pFvq2St/aZUy98nt3X/erzdi3dOE7elDGva+WzzXcJ3jPc
+AEHvWdT9bhZbdz5TScV96pc42fCnjWnRq+f

+LkYd9zP9WoVfrG6Ws5ufaOxhPXfpZsNLaz223v1n
+L33tItA7+4RvQ8wfjfffLAvtQvMW9Pm8+dcu2G0V+nQLb3qU75ZrRwfT
+2csu7lenm1/0tgCE91C0+72xkQPWd0wdDjYeAXDrb3L/4Vm3f1Mr95pkac+Y6XvrDz/
iXJ9Fcs7vBAO1vGz7U+YDpKJwqv2quVzU9MCFrWPMJ+FgQPcr/
aupnt3Dd8P3VuFbu3DTWvJEngo7XWhOX2CHuimX5gmwha82d/
8644s14+JXlrfMtWCzwXLvT0if9Dpi9Ynkvs1rV8kq7u5ndbqbkv8gZ8HBAs7h/foNXi5U/
Tal0zPFrQvctAteOh+PphC7oosd/dwOz30Zamn91PTCDpCP+SGNuChrhW
+tL8RnH7COBEtj/LYGHd78+isvaKr9xvAvTC4o+mHXIIPg9On6FPJ596muTC6nmVq
+pJORXLvovK9B17hNTJReN9e2zlo+WNCuxp/
+g4PtZAPsQFgFhmUHfM9PxeKYEflnKldWD3m
+YXur9d5LS9jvHmNFRwn6f60RuuyfHnqAXvmX+Qith+4ceF/
1qh7f0qYdO7bOuQz67h5vH4LVZLM9hscgPUg/x1pPSaetGeyXersFX62DwpOtbl/EP
+hdMNCrzBPoJZrvY9nrRYehO9qI3tYR1u3QERqKNti475Tfvh0ZLlJrFv739jaPZF/
3TCn1tOhb7Eh3J+NM/N8qPNg7OhKb+fHoSfg+LP3bzHpT/
BtsvqZuo5e5XmQUmkgWdrZOoD/yEbaxvkH/tLcy5rvYiK9a53Z/
7DrBam949NuGsXX7Wu9LRivLreS/
Y95MP9W0aP0gtrLwvpsD25vWpsaTeLm97YnojN3ePHZiW/MMGkr24d2/x46X
+xadUq59yTisHfBp0x38otekXzq2t6JL+b2Nbiny3dvGNhQ
+gwXJ897Wce1vG7fSmfhBGXuX0pWbm+eyXX3BHhj/SvTHHun3irEV+xir2IP2I22/
heH1rJPAAnnyprJ/bAfjyU1Bx37KNJG87x7A7uontPzq
+9RVjz6g76APuhG91IdNL3q5u1bGAw7pG/qn9L91dPT5luYH/eo7odMaelp4HlyCB3wk
+TPwaH65Z3L5v5QWnzPK55zy7PmF59PL/xd1NA/
XnHS452Lder7PHlx4FvEc4nXMAZm7M3dkjs/cdn4p/E8Mg7kh83fm1VNzH/
PqMudvEaca4XbUHvdfmrkgc9icYkFKu54aeaR/D4sz53o9jXnXOh7FUMY7rZ1D/
Eu5pjML5m7EstgPs48/VaPh/munmU8M32v5sVjP9D
+gvL5UCm3VQPXJea21Hd15RjdtNCJOMAV6Qtz9zPSBr8RL3s8/
bkm9V8Zek5yvalZ1ekP8ZffVJ47M8+v47r0mz4T45homioGQ33E2U6qPNcm3jlvNlafN5d
yu/ukuNaZ7qPaHW9aqf6R4c9l+W2i72eulZ5Mye8Lw19iCsSYzgp/uB/
6ExPoBUuXhleighXoeH/6w9yf+ANxj9szbvo1J79NC1/nfKB/
U9LfmCElCDWdUdoTqyEGNLs4CSxKI0fi/GMSjvESC5OvXPcz
+7dIWkZyFtQkdoe6rHpWcnZ9znhd9dt6nxEgsLTg9N7ya7PaFmfg92lgkpiL
+EBE51phQTGRY6HRpZPHk3HeXcdZ9wH1XvaNT5y3Bx7TQcpafkcyNM40kR8S2bvR4F
SNDhq9LXd6rIpf07fzc+/U4HtUxgPG6MuJ4fOo/D4i/
RmZPI2RazNSJ7iq1ytmWfBf2TqIt8rXF6Ztk4PfxOTI2yPzVjnRT5ODy5HhRd1DI846x1pY
4QxpFjY9Mo6jdvk9WAzF+RdoinEWv8bbBzaXgyr+qPs0vVEcd7onJMc2Fol7id6Do8/
YdXtVxf9AHdcFrwm7ia6PNQxvvr/P9M7u+ZZqwHCBvDg79R1gGkxY+PPhjt
+7XOc2n49KR5pjjiGA6fST2Xut40e/M0OQSy4PuKfPcd/Jkcdx1UD8mP4Qv52YsZ8V
+I1kXCve2XP/hKfhwRN8mJtnRqc/50XOahvB5wXh8dhgmfYeiJyi5+4x3STD54Q/
M4lDeHJxsH1n+Mt1sHZ35GG0ZUM6g2dPzBgmmm/SC

Output Format for Host Connection

Ref: RAA085BEN

HL7 Format

Laboratory Testing Workflow Examples



+itqcHnTeHrrMjISPdf8e37jAnR70zTU22Oti7QOK7O77F1Gh98mZA2xgR3NX4mZFXTpk
BX6p1rPCqmTZz9ux6r
+Alf78jvJ4cG0feSuxEZ96jwdoRxoLWIR9PGdRnLuNBifUIOkjX7ogOSuxcGDo/7Q/
P2OtnL6/6bYTGPC74ylqE
+ggmZmds50ZmJuf5OdEzTWCn9+Se8wdkRpiCTo9UinsrRn12aJ41OcnEONNF8pK
+yD7fFxxelnvAyEmWb9GlcU4Jz6nzmfQ1fIPNa+H7NGNJ6y8j0w54YS30mox1Vtr7F
+NU9z0SOj+e/k3+gKyMrP5vti99nFsNyHnsiusUz8TptSbLmG61nsE3kg25J9juReYY/
4LgIbpmZnxZ4xQeL8+4JqSei4LP30Z26rU0dM71xov8rQuqfnsneo8x77u1TJ
+Ve8cZf5lJ8H5OZGFYeHB22l9omkomhoUvjA0dzXpT7A5ro5KTs6sB//HqPDFNMqg2p1h
+ZQvpN3l3yjLUqu0KNLwrtldfF/s+2ZNbBq5JV0wxzeXjPJRn5kfvnJvxsf57Y/
g5z32Tflw0/6VXhptmsjHILz7hpJQ5wfvwqn9NSt8nGItaF7sr7fIbOmauaS7e0uZN4fED/
k1tjE7/0DVPmu6trFOqnO2+saasOuq1/
imWX917XWSMe18Nfi8J74aF57RzZbB2Wvg4lffeku/nuh7xcJQx3QRNW7WOPjF8GRFe/
aYaWFsq9kHkZP8nDADH8HYxNR9dvo5LniA7eaHT6cEH78Mny8zzfEjJvI8sOhLby5KX
KFVjs5dVxvDAvzM6oBn/
HGYP6M0G9WZDX6WTqilzGnt4zJFxmuiQz55mX6nvt89DHZzKuMyIH9H288aQx0Bd06
wm+LtreMxa57w7zUHi+KBgC7zdXA/kQjOX8jOGK0H9KNSD3l4evwUHdl3r9U/
J2mWmlNb5Lw8/MPcXDqcEYz5NvcM3GPix8Gel7JHP0aU7ail+r/s8KD64N/x/
1NdF6fDANfy+uBnTMpelX/Nh
+nEY77GkegC47LXkLrkfNC9Uxltik7kuqAd05LbQ8O32aFjzcGmzOtHyozRI+RrTlunYr
+RPyxWahN/
WabZ1DMzey3asG8kqYE9+TsV9UDEiuxyODZxr30tN3he5nBtszwrNjkavJpq/k+F63r7Xm
+8OLy4OtWcHJmMhs5hL9c+mJ6Su0vd+4kQ2cGNrW8zTae8Jjq+fp8tfOCH
+Hu4+tem4Hfm4NXa8M9mPXRN+zgj+u9SLnVwW/Y4PVmZYX+YljwptLgr3bLO/1/
FdjrnNWroj8PRZ5G5F+xW/u99FuyrUJZkbH7Mo4av/gAd7s/+v2tasBHTP6MeJ
+cEcnKjfltnPspblPzU6v++Wq3ng9NCP8T/5B+Hh8MXBwMRI777dAo40q
+AjrtyfT8bQ3y/xUG9NDTzCw0LpA85l5pndtt5QHNCJycq6xo/
k0Y0ZuTww9pn2AjrODR56/K3xAFh4ekGfhe1rVHyPsmIYHLxelfu5FTzM/
Oq8aiHfMqvrtia5l/
tOf77TgAxi8wHSRHT0jMnOX6dhKrEA6Y0JoBY6fDuZvDpbg3S3+XbqvnRojz8Y09E6iPr
qmNLMMyMuwyPTF4f096Sfje8z4FE0uCIz6kdeJwcQM/
6/+JddDvtE8Y176cHz6c1nwfM6wcJHplnkdG/
4k10k8gY513ASMzK4GfL7F14ujXfzC6/IOE+v+vW8cH956HWTES+ZHRcZuC00npj+3hd
+n59nR7v//dg4Kxi9NXR4KHgYlt/g9STLUWzkYx6HaPlg6PZM5PkM81h9GmUMaS5U29/
Rwd0Mj0V1Ph0M3Re6MobHU+eduX5x6oLP96fds6uBPKqzck/tzxp/
mjee2uwdkJoiv8ATS81RmWHP/l36YFR1hOSH3HhG7S
+OnWfb9qI1mOMe9kvsIsOx6citkI7U4ljbBHyAN1+E2zc7vFrTjoxZXLkcU5kFtxgKy5LXVP
chmJMizPG6VV/XpNoNCbjOcPyrDnOqanrtvSve04MX+aEppmvS3bw95kDkKN0c7D
+q9w/LXiqY9RTct8Jaf+8XI0vD5jmigNOrAZyHB839qQDe9VAfum88OG8yO+kasDWfK

+yb/BQ5HN85Oni0POZtDs146SfM1IP/UaX3pU+zDRNJYf1c2dGZkZU/
TpdcnB76rkzuiHzP9EYmwA/EvtRfd1M5drhQ+SSebQlyJ3v6wG9Bht1rlyY6qBfL3kWuq
+i4lv9M3DVB/d1rXELEU6PpoMP50+vZA1T/3Ex9uNG/
Vv1Orfi9fssAzP7JMyYZclrHMCw1Pjmxw703un+h9meVDuB9unil+NMZjFVbPjszU8bGu
+d1dpuNnEh8VX2u/D1IZtvxOvsYEXxeeFusY79wzwxkTa
+bvDk9/5WOZQA5iz8gXJ1d9ef2tt4L5s80pmWbR1omWONTfWAWay
+9Vse4fTyrNTp0G5vvyUNVH+9NXVcaH8p5qONCV6bf1LV4x3oAmi3ZMY
+mRS6QhvwDg5MscxobfCev6o/p+7C0OzzXoeP7oSE648Md0x/980bGkkmV+F/
H4Wsan+c+Kw5yabA+Prxk7Xhi+PISZPOq/P45r8e2/l4pH0wxowtDw
+nhwf3B7HDjVnGgWaHh3Mhm3ddCw94yHd8HxsemrqnRNcjGY7nOmEbl2kW
+Tz776Mjrc5Gv6eHfFchY6ca7dDrjpmn6/1L1283u3yrHL6gT2r7/
sLn3hqdgXWYq60v1D66InLdrf22ifm9zrGdEvpMdn8ko1NNW+I9bMvNofXr5iGrjn
+xTozOeCF8qXOkLwhN4A1rvuBiVmTx3Dz/dmSn1Ku10jPz/1mhwVTrHe5l3VQ5ir/x
+NWX0aE54341PKvj6OjNP1fKSxH25gfXb6Vt8P3r1AO/
fhvslf63l1yrH7VtGxf6T8k4BzsnQvFS+kJ+QKmfHA/
lCml7Hq0GYkOMG17Bb2xw1pmgLW2pf2PCG9q5KbLWjzSI39UjgOMzrUbwgv49zvfU
+vmer1Kfe9arqCj1t/l/Egb/WcDH15WeS69KW9UtafB3X693Ag4+LtqOBvpNsS/c6yrMu/
eNly3fplx/iYajXlXroZCwU8zAuvqBtMnJzfZ1b9PpvaHh05uTljXxD5ii
+nuUTWnMmNFJ2Qs1HBBzQIVXr5wP69Yh3TTQyqITim8IOZv9xgjOre0ZGfO9ymxg59rn
V96iO5z895DORLVAaP8jX6hhXY0Mn+oTejb6Wjpng/0WP64PdEZHhokfJ4dHc+K
+RuXPMJ+XFop/Rk+Ri3Bo8lLuf7NhH43f0GrZgceesiG/
4EXdE7+BXkmvM7+AQDIftdNSlodPY6l2ZwfE15nfrL6k79hRstlfouM3bw
+urQ5MaA9CREhcG89RPXuktrkM0HB081nHlsyljk0KfGldXhrb12sSU/DbbOkf
+JTR5PLlwwvToJo6jvhObxae4JTgqeqKbeT1FuSbUDA7rddvbLQ/KlORn3l/1ryvQx/
bHOuYh+SPXWz6w8+L3NMsv/Kz3UHxR/Qvj/H//mg95d9D1pmDtgVbJnPkH53+XOs
+9GNqbHDNeP8WnUZeOvf/2c/3yKthXpN4rPpe7LXmJ9CQPKlZgsX5lgnhjvb
+w7lr3ZU9Scp9oj3ysZ/aMd7h2VamkfB0ZvRU9vXILt0QPz+9j4Sez9NDvL7bc/FDrz/
CLjSjz/1sy7gujJ+DrjRkXOIul46hnuF+hrx6xR/RB/U68RnBgfK7Q
+zAU5HXen18+Y73eBA3qec9D7oPrVbqHx++Qjt00v
+Vvlrw4x8oHkr04PbtHb1ku4HEBx2Ja5Dt7qtTgyPCXMD3tNpQ/Wu
+vmp12bcvax0tzCywblKO+2vVQDws6zOS77dMj1YdOz7T9wh/0y1PvSVKe5SrLd+MtYf
+uMjy1/6waSS5TN6ExvFa9NNEY0w0OTeyPDkyAO+gXWllWjB4ezGYvsW/
CwNvp79Tq4F8jSiv/zxK9V9RDfBkUnTe7aHBetZ5kil0ziTra9l25g4n5f9SyL+UTnq2fF8y
+vB919rD8lxke5MnEPzdexPnV9Q2ugt3ZEfoHxJ9jkwPz7QsqNnYxufPQs/
sALGcup6dsLkfnrLCOS08RW5QPUC5yp1UD8P2vykil071xjW7/
Pt84RxuscHOJSf488LW2/tlvG/pgTtUJwSdliY7jGtOC1VnVwPru4+6/cj3hOb7pl
+6X5tf1Givy8WrVn7uhmDY668X8Xu+FBZPRf63sUxMfGntLwfxrGS+yNDPYI4zrOpft
+iPCU7N57C0W683sH/
mV66ziThBf14W88lnopeQlXnRCcQHTqkG5gxvBFvUe5FIQmsC5waPE017yWK9zpVYhW

Output Format for Host Connection

Ref: RAA085BEN

zgeZef6AY95IQD+2fzp2rRKxOqfr+qIRwo+Wazl7ulyHc9uRrl3arz3UZf3mbkO1gm1/
QW01m5Fq9GnuscifHW2dKL1/p/9e0EY0r9n54xjg0mbw2mkS/
wjAyA2TdDh6fCZ3zjfniaPcT2keu5rPNmsZ/aZ0MObNHJ2vtRrvUOK/
3B7yr6qL1yR7zvres8W+1zGFw
+P5KcYnJ60Z3sXVjDeZ3a97Kk85GV08+8a9nk2JLfvqfzi5VvTV9K/
W3ko9SJDlQu7aGuo5X9AvgDvfJ8Fx/
gAO8BIHebHGhtuyGXeH3n82Kjyl3uLzbc8U2Tg4oO3M/PtZmPYp+XcS6u9o8wzyr0ai
+XXOHlnB+vHOWW9xuwp4i8bvYxtBh/6Ve3zuNljkGf8BGXyOeKzu9ID4BybdnDg54/
yHPsHjm00Ljoe/
LtsfvMVcgHVo7v0s6BhQ7ad1PozD4K8YM6l8g4Pub8adk86ljJfRjtkv8N3XvLe2+D9twc5
nrFt/IMNkd7gJYzrVU/fsgKyeFeOm2UurvkNi/9sWlCq23curcN
+23jCf5DKUNxQD2dB2MDXxpflc4z7y7dHhdCr6eaLu2xw0v4L14DPbQq
+RQf8xjF27Xyzj7gqknoJMPTRyAtrTfYHGPVziA9ssYl8pF3j77BpCb1Z0HDDQ1oh/Exp9K
+laXyib83JHzdzDhFziQD5K8vad621vOz7OVQu5sZp/L/VzNt2K/EHFP9rPcmMRRegjk/
7e2+pD+RG/zXPVsHKYsEb+wyWM+/ID9l/MPMh/64c/
OU8B9fv64b2GwSPWwaH4H0H813/r+I9G4xB+ejl2eLZD4C875zn1+/q6ybh/
crmsXC7XfDHvfj2yKzjPqCDiBGSj6/9a+yTWSy02yhyB/blS2d/
DXQ9wBjUvoINMz9DX61nGdReP7C2lemicdJOcA
+eRlfl3F4P5j4t8+SKL9J09E9KX5NV3jDhtX63DeyRceCfLh/MLBecl
+Xftl9qVeNBBe1l2jM7bKGNNG7pGpFSw/otO2pn03Old7dfrS792Se/
+hyMIHzWfa055A6gNru1gvaG7/0eg/aLBT9iGsEBkq96OrNz6isxdhn/
BpVdMHOWKvH7HB9rLbZwrmeftvqO9VYwzYXAIY1q2gn0xW5q22htyePl/
SdOF9rFN2uMC71aO/kWnLGt+a77HOHa2fpfNWTa8oP2l0q9PRKY
+mXEvHXIHbwwxjrrRYbShfZx7R3fsFrlFtvh9D8sL81T6wdwFOdJ
+hP2yJ2J11wFv29nPAK75Hx0mGiOX/
bdEaE9fVk372JeP21ax90d7iFY2X5FhZAKdqL0p6wbv6Dv2qeC3LGYbhl0k3i1sfzc41v7B
ylJkZ53i4I7GvfZ9l/
srVvPvJa93tz2CF2tPUf7RK5Xzn2Mae3gcTnreuW99WND1N4a8RWWCUY
+Ejnc2foM3hN3hSay9dGz2gf00eBgl9gY7sV2rOCx0q7ioru5/9KP61h2tO9yxcjAmsYwe6
DUr3qP7ILRudxTACHbfbh9D9muPYw9dDB41txstYx7VWNbtKiCjZVD3xVtPxRzWsl8l1Z
KvQpOoU2wKN0DjYXGUWmBsU+gDlwFZ3OXjfxY5BthmRqHfdVayqrW1dpX+hi1svao/
kp16942+Kh54aWG7Dvzr46+RbY/al/5Sot7La77IHdNfdGf+Ejotsk+/uWz/2DI/ci/4MH
+sgeJPbHicYb+hnFUrhebl58vrVsb4Tp1WL/
FrOe0L66xdKvHYK7jYKXIZGfQeEN9nql6KqtPCb5cPiny9hWEHhX5h+Z6/
VKmmjFR17cPQovken078HVv4IMrul9Q77DrWfbdnw5SOhz875XD2YBOfilzo7R2R
+Jht3K+py9Vhp2acuBsEXbe0cfYXfSFv4wPMEuYleFxxVMG9lh+rNpaFx+1x7sD
+f7FRFS1sW5QusbtuJ/yv9Mdj2X3sWN4p8rDNgs6Bx7StJR65njEI/
rx1sbW7e45+jh2UvN4oO3N9YrGNpkqkNwIPqOMi8Im2BXuua3thp7X9dMr7Vx8w7yffm5
oFkbT23w3i0Vx5sr2ZdLTwu6TqFBXTE+vlTQ9tS9ixq3GCJ76uGPweZf9rjuph5i/

8tf3CD6IDDttVzKUGmi+Yg2Hdo9FHLI2ibPfqyG5X1lvT6JrFxO4YU05pXosGG6e
+huba06wXj2qv6UWNCvsmqwrRi0X9J6HT9Wcv0R0x0dyp5FZFB6epDtFeNjT5/077LRV
+Ao8wNhdnn3vZfxie7b2B7K3m4a/2J/2xmdYTAkuvBD0a/whXa2sX7V3vWll1vxx8C
+9i0vb54gZ1rvBKPpOXQN+oi9v1XGu6nHrr3EnzKd8QM0h9kifsgBts+av+Arrmv7pfnvx
+wrSB/saZsgumKDwPSmoTt696PWQeLxTtZ3qhv9v7bpLT9kS
+OrXc9fVrU8ai6JPH0iejw6U3jflDpncfOPuZjq3cbPieafsl8gW7CUdTw
+hDALfjrWj1rHWNy2UXM86HygxyL/bslguc9YkP4bZF7I7JK
+JYOf9gCtwRHZAskSsrImeLWM7SDzAp1LQB92j61dwfKtec6W7qd8i62Cq60tp/
KVB7lt6falbn/kpzJfCtZ1ZgiytW348YnYlJ2j59a1LEIT+dQrh/
aLWVfKI9s49FnS4xLWPhJZG2wbobk9daxrOsMz6fZPRp4Wi51eK3jfnP+P
+ROzYJp1+30T0ii2nXemsDUx79ECT25VPsaxliL5pLrWu5Vv2etdgYh2PXTz7iOtTrGQ91y
PfeA/rcrCudldJf1cN1gdFl6wUm7GiMSH
+xocXHda2DpAuZSyr5R582eVC849aP2kOu5btNfpDPgrPLOu6dd7GENsEyewy4c1yxo
+wPyhjpJ8fi05aM/9nPtqNHyy/
dY3o91X9iaxiXzQ3XjnXN981JkvQ9xnr0jFyuHhmvaPkrXL2l6yDbT3lqh1eoeI3Nb
+qaxJD4gDC9vGyV9Pij1renx6EyY5U1X+aeDg4s13EfoFWMe823lw6dlom+Wi16Yk3jX
+ehrGp+yC9Yxf2U7z14bWY
+JX4tb5sgfq8cGmxsPqrvHw7mlo1t4H4w8GHRU7Bdz6M0l13NOrRb6+2l7TdAe
+FweY9f5wZxDhE5BC8mXvmi/9cafM4VUpz4ncSrX098k2dY5+ae
+kwpzrBirYx6craUzlf6LwW94voUO+ZafdYR6yAvuB6dd1Sf0cR61juJV/OdNel1lr/
bWlYUz2R/+j62vTpbhN/4/9+sHzkjpt4rjx3kzBfm4C3OZnJM
+kHnjqDDf9CRfyFfGgxwTs6OsVflz77WF0NptJ2IPtm0H3fsm3B+zp6WHfnEg32/
zhDaKrayCv3Rv+jKj/u+VvqgeTB2+bPBAb7YsZGV/
Tr95zZxbo3qLbaVc0UUL8MeQYmJfK33pY7PMsg5T5rPc1ZGntWZJ8vbtig
+CsaryNfCyNDiwQyfyvifE43B9o86Om9B5+V8vuP5y4qmi2wGnuogY079gHYrBPfEB2qs
okc5t2L9yMgKwSu2pfl1zR/QVeSfHdVp9XHWA+dp/
HvGwjIewz229njf1/1RaMBZGZzzUPrYGMq6LeJznP5qfve/X7HZ//AR/
BySu4fFDuNDlSr8rS19aNs3KrWU7JXa1l25Q+sFNu+mn9Db8hXiowrJjPlukFzz5Ujr9G/
stuD4gvxbGJ78g82sZ6RnlvKdG7XMc3oZ/l7g01v5lrq5/rhz9LWH/ljaYdPznEpGosV
+rRPKr+d0GIN5zyWwrehF3Z8tgd9nBW0TeNx/bXTEPOjdB5JEW2jzrz+X61ywinJvT
+lYpP/T5E63Ck9ZPyvVC9+7Py32cPXFc2jvVstr9F/NB/PmF+dOib+X+fmdmnN/
RmTtxt8uJ+ZHNw+SQnBo9fMp9b5f/6dulUr5pTOgMrGvKsz8r/bsoPC71tf+54/
OuSh85u0Pj+mkz+njl3M+JdVuzRIWpe/KETgy+C7jalHLgrVFEzo606hbrnG
+T6u0q3kJ8ZzNjl16fo/
tl5y1gyvmeVvEV4HvLes1YQle7hQbsYlto3yGzSKzx2Zs340Om0NP0NcW3GwNe0H1fFi
xbvXQ/Bfih+qmMVsSx0bpX8rpg+Do7+wRyFzRiuut01sabmf2lj8ro/
HPpGzuFnsLXNR4hKbp14+d7K+09x3eet12dXtopc
+HNlf2b6VYof7u27pW3Qq87ddLAvyY9a3PZU+Q3bqORTzlyVSH/
G9VnQyepNpb1sbNlr5Zwf+Uu7m26iOfZzddNL80VoDo82jTYW+Y/OdGP+SX/

XsMwpBrGJdYnOUMKWc/8Bvkc8X9m6T3PXpfMcc+1WdAB+SB1v3jP+yhSvl
+rsF9aH4SI5EqxJ/jrrm6zdoj/
Oi21nfZu1YdbE670DN2aduD7f89Ks9dZ7JOozUE73+qXiQ5Rplefdl+T3eckBHG9cKz
+BtVDW4VkB/Os3bL0ztoqfWJtnVyAeg85vgDr6Od7jVW5E/RpkutX/
sTF6fuFXuPV2iqf5ET9svKZP+R/QL03cy95OfXZxdlbpry3c+zHaD33xawVv5T7yX3CLuF/
kFe2eGg+0TSU3WS9vOhP5Qbc6LbkH7+R/pOvU+9B/
3XVv8dQuR43OU6nPKgpnt8qb6bOfYcO5MPI82R8wtCV4dd5qSvr58r7ZWz1Hj7W0ou8
Kleg3n+UMyd0ZgE0npvCWnX2manf9IN8kcvDi/ociZzNrbwq+k0OxRjH+5TvMir3sxZ+c
+gNVuq9tGBrygC+VM/4jGO8caR8pjrnf7TbadV56fUevno/
6TkZPzmRdU7pGOOr3jup8dR75Ga4buU7zA6/Hw9rsi18V4z055A8hXOzPXzUt+dvzt/
hkhy9bQfss6bnBqff6gw/n9/fjP46qB/XTky7ya5+dHLriffA1k9dmq/
7xp5WXUecUv5vnsYaUdbIRo89YHaF3Gjl1bdHXRI7PL78U/6mlzix/XnV9KsVXta
+1T9aaXz7PLuBeU6+OKTT7FfjJ+1vQzyvcTOjpnrH1Dua/43d0eeqc8N7nY02Jnp19fr1Q/
v96+f3m2P9y36JJ5fvP7F/IV/yu/QXIFRxtf1s+4L/YI5e/fnDs6tf9DH4bZyriT
+BfcMYZ5wBytpxy5DmH9LD4FMfaXhN3IfYkG4UNLr4J69vYL3wJ/Aedlck5W/vFrn3N/
sZQfAH6d7z9HyKLvafWNZJtlnQQR5K8W+GFnpX1ha6YFGH8dCxrGN/eTr34x9/
O22elrGTg1XGhD/f92T5/47y/x86PpfwOPexPudNPv23U88O9nbn0KLC0/d++fxH+Z/z/
QtPuvM6Ouu/j/+XtX+vGDFxA+an+ODY3y1dr2l2xXb33V2+v2/
fvjeyXGnu9Yp9Ctk65PBfK9lv5aCj58glxq6TF/
rogOwJ19h55qLM9X4UuSjXDbuOfkLfkPPHPsz3o2N/WQ28W4Aze5n/fS7yynyT
+5F11keXi+25N7qL0Srn7rJHcbNKZ1/rnF9yHsmpwh/h88r5mz3kdii7j2ucv7mXdEJ
+DjENU+lzaMtdPYf3Y76kD1g0nHshXo++og9Qq9H/yf3WPPyJ3xd+vcU6FdyA5kL/
1vIM3x/Wnld8pXYB+zioaV8q5RNq4EzqY8p5cjo7L+HDjs6Z0Y674bU81T0XvH3yLHT/
AEbCt8YU9YHIDfPHBw7dWf6v0F4iv
+W9x1z4GFH1Re64X236ucd3dxaPCAx6z4Xm1v2QMEjn5Wfyf6pb4z7o8apaMBvjxl4uU
l00Q24JHodfyHK42d1i7OTVGSjybZYO3zBdlK5Z8SpyHc7NjyYY/rJ78YmkPM4JLr/
cfOoXk/XnlD4AT7vqgbO5D/HdJGP9Z1Sdg+mt/C6jvlgwezeeR6ZlW8TX+eTufee/
HZ1bBo6mz4RK8EHpx/E/X6ZPOK9Ku8l/kXoXDCCj6w9JGUczA8Vn/mQ/eT
+3MyfBzv1eVLvGZvyUSaYdq3sNVackXEn5fT9sHKO61MZy5umt3DzRGQln
+id1P1w6n86Gp99eDncsq5wY/zPD4W/Z8fWiN7fwpOdjcNJPpOjknRI9R/X/
CHXT7NGFfM6JPGgtvlv8OFpu2dc4/
frnQoLQjvOxt62Mi7JO73d9NA6Wc4ZIPzulOu3RSZe9LhVn7Razv6l8rnPj
+66luO4OzxnDOxleD9t5iw16br3TfPWwZXLfOsAtcleXeZnr1f2P
+tcbfyZjrUe0l6+EakPGSrXIFf0IPuq3MnN8uwTwS7+32S3pby4v1hedB756eaZ
+kx87wTrBu2F+p3xpn1a24cGi1uPcD6UYnyvhXYHh38fsgwpzvy0dZl0zJ7RNzcEo
+i4y4Pjv4Se9Gm+8SZ7c3+wQY7/b023Op9EYxvhPspv2jN73Ojb/
pXPCUC2/2G909ouckQ9l62vpFu4h/6sElzVZxyh5+o50wvGvOTmPdNQ67H4+G8b/
+oTsc+OZUf53O3KvE6+MnlB3PdqdZniqeiu3KmiNan/uTfpM9nZ251bWQJfs
+3bMjvzLjoN53M7YrTUPoJHxeY7zlr2zZL9CcJfB5Fjz4toOjHEvGz3McasclfnRweiV/

8WW4Fdnmd5ol3Fqd+qBt7jwfyQYVpNO+k8fgOvF35An7FHlrkPc/zCc8XUDjVnILuOvHy/
8p60hZGR4yv76sz/FkQv0afD3T/Zyfcskzqvn1zw
+0LPA4x32dg3M6djpPg1L5v3wsiJxoLi1B
+OHEKDi32f1r72j6y8HJ684fGp7QW5h70280LHO9lf/P3/
yOejtgfar7Cs9aPeOQBdaj3PnBpf6FjXsXgCe+CJOdtc6zHu0T8fvTch6x/
NYfNGZnMXVj3U14C59YSJ9mr47jyKvHD+Y0YgnkN5CYd6Xivcpo4i/
knjvEQ41AcjXgKMq3yJNZzHFa+ODFO8mkGd5x/SDzyVMc6FCcknnVA4rMr
+Xn1Y4jjkXwnlqm4F/MF8gD2c3xHsYUNXYfyLQ6xf60z+L8V/
x4fmDgMcRzyUbdLTJY1uS0d61Eu2R6eM+jc3sGOI
+ncd2JLe8cf38HxHs0vWMMiFk3+DXF/1qVWih+/g
+nYg7b1ueq72P9WPSa2pgfzHORtuA2nnMoHtTn
+Kz6S3zVpNIMcJ1TUOdK02uLDHP3XL/lozv/ncvbON+6Tzq7TL2w81H5QocnT580vzQ
+jbxMXKFdnJ7Wm+C77S5k3FAjFvr/9/KOiyAJ/XZ5MRktT7LuKDDemcZFbs7ymNQfZ/
r9Me3ut/r+CxscFg5tghPmf0n3d8oOdNWINfpTOQW0eMnzUSzSCHfsM9fvii/eyr+bvyG/
KeAeVd72oMK7ePGB8Y/XTB4jmeB7bJaSMOSq4cn+R6sCbww2Bkn/dT56kPNv
+JS3MGtTD23cgV6/
D7m25am2BsYKP0a1E37yRg3Zp10rXNP95HgAwxfq1fkY9CjJa4fqHPdObwWxqTwt43
mlORz7Qpp5zC7/
lxxEes8763sVJED838P1Df9VxXIRyyTXHZu54pLgPdbMfOe6pfGJyGJIXoVwt5Im4OzIPz8
Bl6ZPeJ7Fnx2eJr2FMKe56kMeq9dTNEwPd0rwa01rjPNL01XrbxsEb8dqf3rE249OHeTt
k5P8A2NNOXPrmtZqZ3PrCeXJr+A+SSdsHP3Fb6tEBv
+5471MG3h8qpt4BPuiaPzf9YldH72McFC3hsC3ZQ7/
i1jscf7JMjj29Z9UE7m6saZchuPLd//LXzdODqSvJ/6rPgqcRLWC/
bwc1rbqnOQN8kYiYOAc9Yvoef6xpf0+2ad/veQsD6qPWPgdajlUTxAf5Sxa71gXz/bS
+6E1pbAMfGYdazzhJfTLFesmek+MEhs/vOWk3Z9Zno7dEW+hkVHofNPcJ
+V97aR9bbyU7YKv3YxniVbX45e/
4ptA3GWvkkd5+e1zSe9C4Ccj51dX4v1p7WNB8VAyAf6trEkuwGPKl/
P2vbonSiDjVet2dZyf2x0LTLK2t9x5dq/Wt+gv5VlTHP08BrR+dCuEz1QaKc1nM8bR1q/
IAZ0nDEkWm4cjb9gzEtG0AWrmzeyS3kHgc6Z38W01XtYtnAfZSuPtZ6UvWL9Z3xk
+sjYLcou0Rlg/syO1ypW9P1Lwm8sOZ3aGTYM+Z//Z4H6tB7f44xvbXGuq3505tp3a
+8rPqBdvYJhKniY1xgvP51yve+k8KvHTv9ecN6H8B6oT/83N36X7ZoQ
+sRychmlInJ29bhWvdiV1alfKADjwim0D+8o
+XHlnFhY3PzRnYBvHbT1pHWC8qFHJLnNw7ODo2N+aJloLYnWtvdNvpga+sa5ZwQ/
1ywxjqp1us+Zd7wm9ZMjwuN4P8My5HqZFzHxT9Jrh/
jky2B1t3om2MyhiOC3eQyYIPh3alTg4fKOnnRhR3FUDGvLeKvq/t+0RQZxXYcbLlu/
9R6QGvem3f6ft/5AWsbz0NPME7kUxwfpVeutX+eT9Zei9x3byjPjyvf5gvmuO8l3njm/
bVdU7H9Mz53ouPv2/mJtl/qDiSzkvZv+uYiv42C/
ax1a8g7l6ndPCPlv428P2uZVXyxy1zAsVC2TuzdkkxPuvzZxxtufCmo+wVsG
+QulcH68ck7ojc5SbPQdRfixxHOJG+PTM1ZmPXZA6rs

+cF18+eceKrTEEnYV7DGsHy7ptiQUd6DiK63Bufn/
jCfp7PKC7CPit1hd94PqIyWlMaZhHMEbmwsR02NM52XEV4IYal3EqYp9Hh
+bTMpe92XuEdc5MzvPSvPUFzzenEL+/e/OE9jTGf3i+0vpK+vCbzGOYOzGPYY8/tk7S/
5fNMz2bs8J0tsBOIWOflw1thc8X9Se7eMyZ30086cbzXPntY7zPE8x2j1dN/N
+6Kw8LuZDxFH+uXKc4XnPoZQ/hr+svTxx3mk+zZsZeCJudPixq3WweDnxpXjicyLr/
l1xZ5oa0Yw+Le0/bXEIM8IZpmzEed7LFO6F0wHxZpfD3YVWVQN7/TmPJmtKONvnr
+av4nfcC92Jw74YfL7o+bP2eC5n/CIORq4W9xX+CvcP
+P9WfU4LMctbgzvi0dCcmHrW2xSLRW6JA/w6c2swtEN4/VDm9cQ3H8+YwPT5qZPX/
dlyr7nz9zXbdVnwSEDxlluNS0Iz8jobeExMkDcDpm5IX3fJHzoRfalB6yfuCt1cdYB8b27M
56LLYfCD1hmzfGRjBueHFK+f75ynPHJyMa6pRxVOFYOX+82bnT+GDqAsdC/
v1sOlavzSs4VIH5Zn4V+icev/eq7ZWzWdt1GnK2vcmxwgfkv/D
+WMeXstlZ9lvTTxjxJnSPxne78aC1z+uMAcWPwAB6kjgF9/6HdZPiZl/
NGIhxEWvZsnIM5fXoU/5fy/LAeoPiIStXXqv5UuXzY1aljjqocp5hzgJXPA0MTMj9xD0eNr
+1Zkk8A5kbYZ636vc/vBLsz4leyxmC2psePYUcaw19C/dBcS/4dmxIHhJtUjVxH
+LPYOelSrJrLRX7wPap3Kc5viqfy9u/
V4Tncu3MPoPWj9mLAnLRc8pFn6FcSNsfcIY7D8zKWf26PuLkT3iwD+vFMOVDCy07tf6z/
zgvGBNMVdaJ846Onk+5ASTi0Zb9O0a5IM9F37Nd72KlxZfh7Ep9/
KOIB9Tu4xlmXpwJyFUe9915kj0O6q4B0dmHPWWI9SXmc38kM87MjYDeLN8HdOdBv4
eyt0ezSyTzTfWfNcWLzMEyV0lgh6uNgkxQ73sB7WfmPWOQ4doKPW0jgmbxg/
Gptz9N8JochXZxorinf4d+XRn+aSYaOjr66x21pHQ7QL+L7VFM/h3Xpfe+FRm/
KHr5WfdPz+Sslq0VMvaCN9m2m9xH5QZgd6jn8sgoOmFeaN2Obr/SNO4/
B5/46T8sM4ojZz1S67CjHcFwMge0B3PzEjuGjj+rvGYyy/cL52Bkz9Ab+zDD/
FKc8DuVY553Re7QR+/7XrX/bPTQK8Z36yeV7ezlvqZ
+P1QNxLVfzr3U883Kf1yS5U7RTwa3N6Z+I43RoT5tyJPjLX4W/LFXktftq1so/9iOkufoDe/
UHI97XnrFu2RW9Yyqb1iyCty8YplWWsXxaeQHT8s8jiv+ljrPNjXq6Or3wl+0D9zo/
PA37LGVNYQ3wxPfxR5vj/yjg80yzLUzfmAohOYIV8GP+pB6zXF+Odaf9XnrucMn
+LX4MelXsj8ddG1hwT/yDLr59hO7MKzlj+txZ0afYK+rde/7gt/RmYt7hH3Qe+LWCY
+JBhmfWQ191M2/WLfr7wd6vx66MJ9N0bH3R6a/
sFyrPNPsEGjM77jVfsYrvOfzrW2JWuOy9yxvrepR638pvwGfF9P
+8LNMZeEfCzZE9bn7O5q3Oltmu6l/TYj1T/IJHrGXha6C/WS9AtljLm2b
+yzfAx8FGr2/9pb6Ckx+mvbvcX62tDFTFGWI
+0vyWbiV39dXCf91f3Y5zzSlhj4D7yllrRv8xt8EdftZ7UmiR
+PPdfITetdN9ky35bDZwNzLUnPc7Wv1f21X9h2mt9C//IHPv1whH8gnd/
CzaxYWPdq3RgseN6pzF0wQ9CFp8xn2VvWfC8JevqNwRTD2Yt71OV5zDXxFdfzXpHO
nrj41R+LPRFTzOPwlfDHuD/gJfnTXfpEPLYngvG3ogcbGl+ymch9+OvoflnrV/1PDIpv4l
+ONy6jjHpTCzelcLc5hnLBXZKc56fVv3vYRZOTjP9tS6K/rrMcliff5urQmTFPMx/
kz1wdnYL9ZF76eHh5cflFwPkGxoN0AfcEX8X/KAvkN0Lolur+XfNf+UG8Nvfg
+sFlI2t2/3YMiPdSb7la/GJnsh9czNG5OYnLpqbFFpgG7SXipqZF84Kv+5lmZnxMt/
YvLI9Bpffsl2QDrkg7YAZ7NKV5qv2y+PD3WO9KD0AH7DFV1mepLOuyfwUvxC57VpeNK

+B/8yHOZf3zcg7OnJq8lq
+RUd8oupfR5Oe5BlknraxeTsZ45oPwJfk5MhOMR584aGV1+2hMVjDz0Ff/Cw6O+d3Ss
+jr7BPD8eu1jmgzwQzJxlb4vOekfmPmRZaY186Pge25d3o6leCL/D/
N8uDzsVdPvzbzshNzmqXDn/K/JbfiX
+J74NNw0fCVq7ve1XXnOgZ7MUbkYunU3lma2ubaiAvmLnd74wR
+VjXhX6fCZ7pK9hF3l6JjXjA8qf8nLmWif7zlaHIF4M3dPa91r3S79DuU9FF+PXvhH/
4jedE74KrS0PH1+P7lf/Q8qrwGns2xXSTPUef1u9duDQYmJ/YwwPGdS/7e7WW/
Xp0GXOV2r9+qhp4R9kS9rOkx1hnx0/4tvksjLxnfoi3+CV/i2xeYFnG3XLfim7S
+WgT0h64uNP4BsvSreidzGXkE9TnzyFrr0eGHRXd0JlryAT9/qxpKf17f/p2XuZ80HyzdD
+Osnxp/8Fy8fvBf/KqhK2/GPPyS79m/SV/tNaptc+N7f+uaaC
+o3vudt1oE3+PNsDYvtEnt9vPI/zckzZ
+Yb0jWcYvgy7l3JTYnwc8fs2hl7fNkd2gT9hv/D/4Oc/6Q3MAxjQ/8gr+43NLp97i/
kom0Fn47ztnHOWztWfIn3F5x3S0D5fvyNaM6Er4ulElGy65wBd+2fyUbXrHulHz0/GxFX
+lz17PJ78YPYRuvzp9fSX3XFQNXcJQSXkPivjJWME7uFkhsSZ808Q65auEFvqfQbYhvm
eQ6su5jDYWvTAXRkT7U5yOzp3jTq/EQwvH5vDeZDQRuBJeRW3WU5bn/
b45dvdYMzXZ4ILPzxmHS3s4vcypusiu8jMVplf7WrsKLaQM1SVR4LNwE/8tTgn2Cw
+0JetZ+QrLbLe6tb6Ado9G9swx/jTOPHfrnC9rRz6Gz8gyfcmwD/
fj6N6SAcxLdsxSdWzOaZyN0DkekpwrR20OdHYqd8hqrn5A8mfGZW6Z3hM0iMPRK7B/
oJ07xsZH/262bhWDjnr0T59Y+6PnkJWHjLTFUMhr2awdYbOc/
heaP1GnoMWf0yb1cD73QBV8W+6lzuvwzdzh1rHKhaY/a1cUxw7L/u/mlfyi/
TFzD8vjGsuMw5uQ+bh29/jvkvXxCZoD/1WfyPRUZ3iy7NGYSK5ZMXm3wtXSLQv8zxmV
+d7PaUA4Tefi84nh0MJnYnPQ5e6cPlbkPnj87y//KZ5pl2ymVaMnrokqr/Xab9+W3L2uZlt/
zZNXJv9SXLtXJUkzMrH545zi2xR+ND
+2sz56Wf96Sdl9NneP05y6FirUMjP6t7PVj7pDf2+oz2Gc/
LeiFrZdt73ZzvrWvbKOO9le12c/Kuh/riStkTY81zLbXmbS2t6jivCByAY4q9b+fdpb/
9fqw9mKxTjW44/e4s0bNehb7G7dx2zoLjDUw9jWN7GitTntI2WNNFfg85Q
+wpZz2afBFyRbhpVU6+YdaYf5BcB9bHDSka5fte4+SMC+07ZM1t
+6z75nwkrfWxTr52pzV9uPucM6IYz94g/ftF1r73MU201kd/2HuwmceqvBzWlfft
+Cwa1uFYT2fM7JFbx+vd2hu/
WdalWaM7zL9pPXNPr0nqHPY1nMOg9Uf2EpK7w9osa7vsGT3O6+Htl0t5pONzY1hzzl5a
7U+EXuv5mvlNNvb6ndZcN/G11nznE4ifH/f98Fj7K1byOLvZ+9ar989ljVh7GldPP/
fxvTqfgGvfM59Y71X+BHKU5FOwFsvZQqw7ssb76azvr+E8COWYbWA
+6XyGz3stU7+xlSlezNfDo428jqxzYBjvxaqN+Lumv7Mu2io01n7xTFp5AT
+vnKBCN87E6RvRcZ7UlrImfDb1Za21932u4fQuNi3bOPdMaPPtG9vPYwJrW0dcxpxfBP
bWdlucF6AzK4aZUoD46r3K3JfeWZoqYNzchQUwjd/z1dp/
K4NshaMO2RwzK001p0cvn+j
+Dwal9T22mSi0DO1898XfkHP8g68Tpuh33v0LjvtJ9Tzhhn+XTZ7Xui433WBxrX02/
rKcel92Apf+54fyh7Y+rvz35oGpHnopyiqq2hl7kdZle6+07t
+EyMHTxGrR9v0OnPAdP5ohtZL0iW/imYPMJ9Es7lqj1KE9lf+cxgDtyB/rOwpZ0fN7F

+tZ5yhVYw+PW+WXojtJ+35nm8aJR1gG9nEWIHMDtbf/
OjSEHbwXLCft3Jf0ucjDTPedcJU65qtkcYXwHL2BztsyMrWWeYPsk1fSNza6aF
+PWWeQkXO2dmQDbEFz2uqYp
+QOLDqjGdfEL8dG724pTGivBXYRnbz7zyvcwI6lhP2YqMXdG7Nfsadzgfa0/
k40hms8YPnz7punQ+QfczKX0DnHGNZa99m3a4zQ8jvOMBtK2cTXtLX7a0vkb2zszr
+7vx0855TUPv7yjfVOcDFL3fN8w4ZVx6R8dB3vOkXJq1rROGPpecBezU+tZtOjPz/
NCTHET2rH8uMreqcVbrWuWX9Vkh6dxc9oqXvg8dGZsFH39gXmj/1Y62c9pn//
WO992TB7OicQ32pWear/BUuTtrGaM6l
+oZ63GdWbWtCsi9nPMfyLulfeUOrRpdU1lklDkYQPzSGdBbmybohyWes/
Yup3+81aUZ4Ys5PxEnf+4R2fgXJRDdBt01smPP9BXcJf/
3unPs2y97DH2Zrte5QKuaf2n3Mdz3db06cHg5rbF0imFDuTxKD90i2DxcPOLnB/lqD0V/
QivD/XYIbtTmU6yUfuZbjoDqLLO4Xf12HzccokfgA5FN9R6te9vbkN
+w3puU2fzrWzCdb3bOkf5Zju7DmShlfxiyT745SyrQouhL3WU76WzQQ6wLQAPrevK
+HNGiHKEDomvsL1p2DFB+kh5wcGw8oUHBxtrmm7CPP7ETuHtob5PZzWhc7fz7zrH8/
cd5yQNMdaUn7Zm6DUKPMMeHRI7yP/kLH87OgO+3B2dBt8PNt3Jb1Oe2CbGJ/
IT6CLib21o/qHzdPblMdGl5Gpzbgl5IX/uZD92+f5YdMGng/P1bbfpHzwnf1LnSKxjfsG/
Wt02QrZIBfNDZxNe0VG+l/LKGP96lnmd/7WdDy9kr217o32sm1iv4svJr9wvunUrywo4kC
+3cs54OTQ2Clxval6Tm67zJz4RHoHBHzp3V2fhhWn5g2f12NAH4isUmi
+aUq5zNsKJxqHOQ4KneLuBjzrHb834O6sYNzrfa2ePSWcm/iz92dH31X4q
+gud2jc1969mHii/s9Q/vdCs/WB0fmWdJX7UOXNFj8mX285+RrvGw+dpn
+p6dZbadpGR400fnSUI//
I9+2D327Z38EFnpB3rvvWVtSldVH7/2x3ngO9nvnKeRzt5buh18XyH8HJQ9PcasS2D7Asol
3dw5HII6wTZVvT/
AaHnTGNZebBmvl1UHWAa1gVz7T1pZB7II0I6+zn7dXnxOR8yKlpe37mRvLxiWH8tc4
DjbY+Xicu504Xnvgch10QPTRxuHyuMlx/
hg58PpbJQVrFOR0V6dh7ITbA3+CnpkDesenRGHbS92gD3F9dk7yp9uWyzk77f3d
+nhnKmtc+TgzVaWOZ3Rc1Rkcn/rD+VScbtKZ6yn0D
+i9+Eei3zRen6zku2d8hS3tp1VbmxynGs/XOdq8Cx+6t6WF+Uyr2P+Sg9T52HWicIF/
TosOmNi81HncnzV42BPuuYW6L4RtrU6lyN6rK9grT2m03+2MnONLvp8Nes37RVf2fST/b
ml/P6T0H3d1LOHaa7zvErbQ+daL00/vdOfKytf5rNuW/
PNTWN7jonc4Jsd2+nPCdZ8e0XTiJxy2cctzPeho8Nj9BlrluMTz7klc/1RiRHcmf2OYxwHU
+xnlnMXyvOYnLjCzMRziBkr65ieXIHrXE//
PlxiOb3E1pbsuK6fJt5DLISYMTGavzpuqPWYjXPHuMP9VMzv8cQl6rggMY0FXqdTnTdX/
bmlWg
+fmngma4zEqnN2qGLcXMcYA3GQC1Pvf2Qf1M2O72gNjtjQQ465KU8QetVngnwpsaDji
V9z73mJzdTvsWIN7KjE0+jv/aHL/YkTsgZUv3eH2MpfHGpUmJb1fYqfLvBvWte4L
+tpX01MFZorByW2M9zxRcXGnguPbgYfT0uch/ja2lyrfr/u2+E19RLbnGQ+a82c
+OVzphHtK9bEunDyYhR3BQO3OlalszfyTmKtZc11jkl/zZC9jfDzavNINCCOSC7UX0yv/
nexU8e7wcjTxp/WKukz+yWhOzxcPBg4I7S

+OGuV7ydmRox4oetT7OuC8IV8I2KpcxMLY/2r3kvL2gZr04znLONBeZfPj37leF6LzJDX
+bBxLXotSsyM+OQRiWMeGXrfHpy/nrWg7O1s1/smibO+H5o+ks/LBr4r/
2t64nt3J14JDIIbfNOxTLV7ua8rRwK5JO91imVDe1pZH3vLdJG81+8GZCyHVV5f/
kaePSt8Zlx/rwbymKdU/e8aVdx9Qui2f/CDnBDTrvcbnzJMUZgmH4nzX
+o8FeKzrGWemjrABPFg5J++0ocH851c6XMi03+N7BOL/
X1oPTyfvxgnOmvgutAQOhCLhkZHV/1nAocq252S9kL4Sk/29x8i6knADL1j/
nJjPjzy2bnJJc93+7t04Uj3Te8WQfbA9u3JV73XcsczipHvYzyJF4tCT8bGmiW5gw/
6Wa09vZf1FdY9D6i8H/h641Yxf9abDw/dkbWZAzKoveBcfU4IAb+KY9fOQ/fDT3Jx/
hVeD7XcqR17vLZR5gQ2ZqVWDg65TbLuM4XezDr8bR5TDXwXjVwOzL4hOfjwm/
WjVjLezVjhqbQrGBQa3jw8UG3Kfpd5/rVlxNct+R7aK2Gelm7JK5f73VFb9wRGSGLGj/65N/
L2j9w/xXlhG0kOLzka3zedlNs4v+pf85H+Q5egu
+gTdo58rEcil2d4XGp7jtvDdkhvvZhzEuDbxdY7Wndi7Yc+3pW8l/
ctF7Kx5PVT718sm7I7s4xfvdf6ei9OqcaWrk2dJa47PGO7Zluge
+DjcOJFesKZEPODH6dmYwhF4cHz3lvejml63H6nfX6uzmUyybkk9syH7WG3VeVbe27/
W7qx40P2TfslmFDi3r94MhE9hR6F3n49GvpcKHJ8K/
EyxLsqVg6mFf07hes17SONv9btivrMd07j08ZS383NjH093H/
jy5xzOWHxgnym1CbpGVbvvg9JTTF/n3Etl669EzLnXyf7CFQDjKY5awndCx9QJbxVdC7rl/
OyPPvWbcol5cxX27+oJfklYDrd5pvsu0PTu8g+5/
s07S2E8wboVndBq5iNdFj86wjLewCnBE7kM+DEPpbxj2kveWdceF/
38ffNI609vhLdgiPwZZBlfEp9xVvr4letB5VfMjE19LXql4F1r8Og5f16Rpgt0wNcr5/
qgZ75gGdUa/+2R1fo9XqzXsXZ7o3ksW4IN4V7GcGJoCP1PSe78ue6r5OWs4LS
+97j0+7Lks7B+zjrnH22vJvVlLzljAausnfeB/
THvWBcplwN7tbTtt9YL7wmNsDPPBasP5xp00TPjYQzk2z8SnTWj6n
+3EHiRHsFujY4OWRCZQbeMDi3Infux5Us0H2b6Co8z0v9axh
+1PpPPj866xHiUP0rf8q455TOjb9C3D0RGJkUnXh8ZhmZgGt8cnzv7LrTe+E
+Vfes6Nwq8532myh9CJl6tBt5viu9yU
+QBGwX9J1UDE6Gu8Pikl8DKtdG7eaew7OynogcmGX/CJbko5NYhRw8HM+TW/
XvoQ3+65rtyVvM+QeUEwfv6XaM/NC21xv7CgL6TnpppfUZeizBA29R1ZfQAMIC/
nxz6Jce+zjNUDuizHrdylfBt8JHQ7xd6fJL9scEjDKPvi8O/JaznWvV7TtW
+yTlJfz7VO0XmwS8f/YO7yScul6P/
76JMrq4F5FHaTsSOTf36i6xJGwc171o3QVTn2s3MvNKRpxvY6MaL+PWG
+a80a2f109Mi9qfMet6e+7FcNvAv6d9aD/WfJF1wplxX9dEzGst0Nr7OqX5euXMnRO
+TX0Gb9fue7zSdpJNUdP3nRPYmWt/I12CMY3Jtsvsq+w9Gz3Ed+h37i41fKv7I6OgA/
A78iEVp/1mPT7ksYIR78ZMvC5agwTTLvHD7SGSG/8+LDECHI6qBHLUblb/S
+zOtM3Qu2PmRD9ofK78w7ZW/gGx+LL7EJaHtUxkTZz8dWdk3h5zX100n
+RSMHfqSR3BFsH2i6aX5HLb915nfHxC64tOg95Bb
+J0zj3Su1zHWO7JBC6MD0Et5t043Z3fKfCPBf
+nRgauDTagJXbvr8aocrvA09y0jzzh7/458kt8gXaut26QT/+dL2rqoHzIP/ksemMlpfD
+8vy/FLB+RWmqewYcoRpsbnPHmF9o1evLR2d2Oy+WUcgBlu/D2dQ4pX8v5PjZDrD

+gzHj1jz1ppV5biZ4kqJMen9SnsIzP4sdak1hmIB
+mMCMlu6es7WuKAScXQjFa4q6cPcy63cqJQeedQzp3nLq2db8VJ97W8Veducg5trskZ
krbxM5YK2SPN2sCe/mZRaclpbzzBV7JG+DPepbeJxaC
+1zu7285UJ9Ozlx09U9Lp3RcLDjfdDojgPXRIY6Fao84v7FGt1LGxFg2Mh90Fs0uXqOo3xU
ADYjIE+fXGvTejusS/1QM94uORbY75ks360o6R3KvxMd3TVy7/E/
stJvYKvvnFZveJHHGvc1n1pA5t0TrS6z/DjaPtMY0xHFcnfdLHgzrE5wjsX3GPdSxS
+LWWsPZOrFe4onQ71PpY/30A87UWMPY0Poc3cdWtW0Nwunt+Z32ZtcEjHJ/
UvckIUP7BEMd/9S6NL/h+rUXtGpnAJ0SxOfvJ7UT/nR3d+njsCv8jS+RDMR8k5/
hF6y7FevC1p9o+SufeEtv3RvQFfftsVWTC89Dmd+/
YJskPZL8Zund52NHsUXMa75YOed6UGLfnluQ96ASj1fc9xDLlNYaDnRMWPkrlGt7T139u
ef2PH6CWtgG2b9mTUM5PMLwfJRjk9rvZ61fUjgzsndj2143XnbxofrfMsj9NHZL2B2Psqnf
6zoZUbMMS81vnjBTtaG/6ycaJ8goOjD5DXNcMvYvz8zvrWTua/1jW/k74hE//
umHOvPgd7nzyHfvh25OkQY0vnSBzg+7WOynku5FtuWHnfJ/
ny7KPZrFJOOHVIEtObJ7sXbOPezr2CHfd6y8v2GbfHJti/y/Y+rYM/+vU3I/
xib5HJL2dkkbK1XeA8Zz7DvYrdJ5gf11XRN7wnyEPeN32S
+q36uufGriFafb1ssGzowNHBmbh4+lr4O9Jf491fXo3dbjY1OxPfz0HPD6NHNRGdbP7M
+0xrC+saQsHGUsck7eKRjWCOq1+EOMa2Fz81S157B2ioD9kVnbkRulY
+Gbjgi60vogIKbvH0izwcZ9NKZ8HbH6EHyDs41RuocEckMunLdrEvlXb
+yHapzXGC6yhe5uRqJzOfYI8wMSz2KV9rOspXeSTy2o2tPnd
+kOKxZ8Sm3xJdQjxqavys3PPL60/TLf6Utt32eajwiPObsMHPn4ptvPyU39mnivOcrN1g
+YR89MW5f70b3L8O67hKzDXZJ8UPm/8be2fBAML7KdoHn19/E58iuutezSWn6dP86qB/
XV3B2NnVQNzLvCDv7TAY1Ns5tTM09B76EJiN9nTr9zYz7sP2sN2Ufxd6Mjch5zm7POX/
5l3kCv/9wK3U6+JKNbBePC12MtJPIC+E+ednbUKdDTznS9Vji
+jc5mnsufgCfuq2qOPH3iO/XL5ucQdDnNfNMeoz0a4w/
xTnlwxMsf8of0w9m3X53fozHb8uQ85bqH85wuqgbWfH4R/X7f/qXkyYzot6x3sD2I/
1pT4fvjAs00H5rSi2YnZA3J9YnDTgg8wJfjxi7Arf7MNUwXzoTEuXHP/
vpXntvjdr6SPU9y2sHNysE5ca5Z1j+Yu9OmrlXN054ZXM6yvtEbxVfdXtm4vY0y
+6ujYynqfwmvBW73fAjr/3XZTc8Yy1t71tgvakukPdZyngl/AOm1ybJS3xLrnnPga/
2x7pfO18OIWjE3ZKH7OBvFZd4u/Mjg+3M7xE7GJB9q+kiOiHLJHo+NYW/6sbaV8EtaYj
+kMnlOFvXu20/+ONa0LrxZf5fv2DZUPwtrpdvbbdCYc+nVF+7eyvTmzrvfn
+IG0c1p02qb2d3SuNb7YfvzhW/U7Sje3j6QcYvzpvawTW3l/q9Z78WvxV+kXuZpXW+cc/
xb7vY91aav2aQf7LO7eCaabcpSfRbNia+2jevRez6wAXvbj9YZT/d/
32ezKzclX3Mr2Xrkem1qvMx/om91xzgk2Yp7rU24NfuSx0etfsb1p5Z2K9ftG5desH/
oNtQ3T2jR5A6xLFz
+DM9fJpXS6yf6HfIPN7Le0885d5R31xYdgPGuF39gzMHdhfO91zDf5K9RNDgD5Dzv4Ge
UB7Nzpp39070xZMWPFDm6Q98IsHiyRS5b3HpKzwPxBZ50f73mMcpXJedkp77XZwf60
8kmQgc94ziMMQcON08c97DO3gkXldm2QOUXOUgudbfur9+/Ao2/
m87uuu5X5kM5Uoih4XtF9YbzTTxvETijT3OkTcwf5frskvHDv+947tX9wG96R/
va9hVlv3e3z6B8teQn6YzJ9UOvY

+33C9uZF0I2iw2o8ULeiN4dyp4T9mH8wWeESgcS/2M/8oGWNdkF1JoEz+
+zJ8lu0t1+nOZHSHaJwb6ffukih+RN83c4mn7VhrjYpV8yXhXFX
+5wXncjdy1pDmlvhxYO1F61mtvyEPH7YMKC8LfcizEYzzVd
+vHJ4nHDeRn5Xz8bV2jfyZvRvP2gTX6HfW+vIObc1ZsFnlzYfcJ+WtMh/Bx8LfhD9FD/
fNLff0ipy/X8qT5Z7bS/ldKXeWQp42ueSlTJ8uOPgH9C6f7/rs/qGP+Le
+WeX3e8r1BZ4H6H1bS5jX2kv0O8deycNTjLxEmhPDOi3sVGSk5c
+9KUvNjW36MqO47zMQ7eq7F/j5+OLb5/vXMefX72yf821dz3+Xnl
+0S2I3NCxf9XdsylnaUpTmtKUpjSIKU1pSiOa0pSmNKUpTWIKU5rSIKY0pSiNaUpTmtK
UpjSIKU1pSiOa0pSmNKUpTWIKU5rSIKY0pSiNaUpTmtKUpjSIKU1pSiOa0pSmNKUpTW
IKU5rSIKY0pSiNaUpTmtKUpjSIKU1pSiOa0pSmNKUpTWIKU5rSIKb8d5TW3k1pSiOa0pS
m/M8svXZTmvJ/Zmk1pSiNaUpTmtKUpjSIKf+FZdF/
orT3akpTmtKUpjSIKU1pSiOa0pSmNKUpTWIKU5rSIKY0pSiNacp/
phzWIKY0pSiNaUpTmtKUpjSIKU1pSiP+f1+av+av+Wv+mr/mr/lr/pq/5q/5a/6av+av+Wv
+mr/tX/b7NWUvpzPLPf9b1gub8p/efnu/OZl4X9z+cv/kDK93ZT/
5WWvvpjTlv64ssXdTmtKUpvy/lwv2+n8u/13nzA/d6/+s0m7/15bWxgNl6b3/
v5XuXgPI0ZSXUppb+z9fPpX7Vylmg+Uvr3+Lw==|MATRIX|FLOATLE-stream/
deflate:base64^Y2AAggf/XRjgtlMDiAkA|||||F|||||technician<CR>
-> OBX|4|ED|CLEANER||CLEANER^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|5|ED|DILUENT||DILUENT^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|6|ED|LYSE||WHITEDIFF^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|7|NM|6690-2^WBC^LN||6.18|1E03/mm3||N|||F|||||technician||
20240302011308<CR>
-> OBX|8|NM|789-8^RBC^LN||4.18|1E06/mm3||N|||F|||||technician||
20240302011308<CR>
-> OBX|9|NM|718-7^HGB^LN||14.3|g/dL||N|||F|||||technician|||20240302011308<CR>
-> OBX|10|NM|4544-3^HCT^LN||37.9|%||N|||F|||||technician|||20240302011308<CR>
-> OBX|11|NM|787-2^MCV^LN||90.6|fL||N|||F|||||technician|||20240302011308<CR>
-> OBX|12|NM|785-6^MCH^LN||34.2|pg||N|||F|||||technician|||20240302011308<CR>
-> OBX|13|NM|786-4^MCHC^LN||37.7|g/dL||N|||F|||||technician|||20240302011308<CR>
-> OBX|14|NM|788-0^RDW-CV^LN||13.1|%||N|||F|||||technician|||20240302011308<CR>
-> OBX|15|NM|21000-5^RDW-SD^LN||57.3|fL||N|||F|||||technician|||20240302011308<CR>
-> OBX|16|NM|777-3^PLT^LN||204|1E03/mm3||N|||Z|||||technician||
20240302011308<CR>
-> OBX|17|NM|51631-0^PDW^LN||12.3|fL||N|||Z|||||technician|||20240302011308<CR>

-> OBX|18|NM|51637-7^PCT^LN||0.210|%||N||Z||||technician|||20240302011308<CR>
-> OBX|19|NM|32623-1^MPV^LN||10.3|fL||N||Z||||technician|||20240302011308<CR>
-> OBX|20|NM|96354-6^P-LCC^LN||58|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|21|NM|48386-7^P-LCR^LN||28.2|%||N||Z||||technician|||20240302011308<CR>
-> OBX|22|NM|731-0^LYM#^LN||3.63|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|23|NM|736-9^LYM% ^LN||58.7|%||N||Z||||technician|||20240302011308<CR>
-> OBX|24|NM|742-7^MON#^LN||0.09|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|25|NM|5905-5^MON% ^LN||1.5|%||N||Z||||technician|||20240302011308<CR>
-> OBX|26|NM|751-8^NEU#^LN||2.27|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|27|NM|770-8^NEU% ^LN||36.7|%||N||Z||||technician|||20240302011308<CR>
-> OBX|28|NM|711-2^EOS#^LN||0.05|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|29|NM|713-8^EOS% ^LN||0.8|%||N||Z||||technician|||20240302011308<CR>
-> OBX|30|NM|704-7^BAS#^LN||0.14|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|31|NM|706-2^BAS% ^LN||2.3|%||N||Z||||technician|||20240302011308<CR>
-> OBX|32|NM|55432-9^LIC#^LN||0.04|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|33|NM|55433-7^LIC% ^LN||0.7|%||N||Z||||technician|||20240302011308<CR>
-> OBX|34|NM|43743-4^ALY#^LN||0.26|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|35|NM|42250-1^ALY% ^LN||4.3|%||N||Z||||technician|||20240302011308<CR>
-> OBX|36|NM|X-MIC^MIC^LN||4.8|%||N||F||||technician|||20240302011308<CR>
-> OBX|37|NM|X-MAC^MAC^LN||3.8|%||N||F||||technician|||20240302011308<CR>
-> OBX|38|NM|X-IMM#^IMM#^LN||0.01|1E03/mm3||N||Z||||technician|||20240302011308<CR>

-> OBX|39|NM|X-IML#^IML#^LN||0.00|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|40|NM|53115-2^IMG#^LN||0.02|1E03/mm3||N||Z||||technician|||20240302011308<CR>
-> OBX|41|NM|X-IMM% ^IMM% ^LN||0.1|%||N||Z||||technician|||20240302011308<CR>
-> OBX|42|NM|X-IML% ^IML% ^LN||0.0|%||N||Z||||technician|||20240302011308<CR>
-> OBX|43|NM|71695-1^IMG% ^LN||0.4|%||N||Z||||technician|||20240302011308<CR>
-> <FS><CR>

Patient - ESR

-> <VT>
-> MSH|^~&|H500/H500E^110YOEHO4272^4.0.0.5|HORIBA_MEDICAL|DRLSCM|WEBAPI|20240328164532||OUL^R22^OUL_R22|24032816453300001|P|2.5||||UNICODE UTF-8<CR>
-> PID|1||^P||F<CR>
-> SPM|1|SID-2066613426||WB<CR>
-> OBX|1|ST|^Dosage category||CHILD4||||F<CR>
-> SAC|||||00000001|4<CR>
-> OBR|1||ESR|||||20240302011208||F|||||LabManager<CR>
-> NTE|1|L|P^^REAGENT_EXPIRED~P^^OPEN~P^^MISS_MATCH_BARCODE||<CR>
-> NTE|2|L|#####|G<CR>
-> OBX|1|ED|ESR^TRANSALONGTIME||FLOATLE-stream/deflate:base64^tdgHeFX1/cDh41bcinvGfpxYtI6a3HNdULUKjjqKFrWiVatYtQ7UHKbYEpA9RCBsMIKAROZhD8MSM Gwle2NrUWvteEPu/89tGiAo8Dyf53fuued8319O8tw8lQik/n2V3LnUqnt7EIRhEJzndffk/593MohG3VZ0UK4g5+ZyBRdmZE94LcNxxsz8fMc7MirVPD7T+cwtNW7InJl/d2Zu1ScyXZOZd25WZqWa2ZmdO3Xyfk5m3fk5rsnLrJk9wXX5mYa4tjCzQtZm1+/IRCTyzj0s8XJGuYSZicK3yic6dzojcv/euQnzExN3VEzULX9VokqVKglWoledJETN7FsS5XOrJriJrM01EhnlHkp8U7Fmwh4StWvX TITlej5RkFmNyt+JaoVvJYlgck99Tpb7GrOaubicFL9v9rZltzejA7WROV3Y3s3rwc8zrYw/9zBxoH7nmDraXoWYPt58880fa0xhGzJjAmMyYypjByGfMZsxlzGcUMBYxjKWMwoZqxn rGBsYmxnbGF8xvmbSYHzH+J7xz0TR9yW36kFhzeYDw3lFh4SeW1i79uFh +dwjwok7jgw9w7BC1tHhzPxjwrrljws9z7Ag54Qwa/OJYZUqJ4eebZg94ZQwo9xp4ZYap4eec1it8Mzwm4pnh73qnBN65kU/

HL7 Format

Laboratory Testing Workflow Examples



```
+t7BEUSnFpRSc+d+FpRSVUIyi4KzSC0sUIVJcSsHZpReWUIRkCskF5+y
+sJSi3RTvpuDc/
y3cTdEindTUGH3haUU7aW4iLz9ly4h6I9FJdScP6eC3dTILaWvryHggv2XriXoj0U76Xgw
r0X7qVolL8VIKLho74VIKCPdCkRkLLt57YRmKylhcxoJLyl5YxqlyFpex4NKyF
+5D0T4Up61lLai4b4X7WLSpxWUUsqFT2wh9R9BOK97Hgs9X+COLfkTxyji4/
KcX7mNR2vpji39CwRU/rfAnFv3E4v1QcOWuSr4ua+F+KNqPxT+h4Kri0o9/
bOEBKEqVfrvwxWnr/iq4ev8WHoCitHV/Fe/ngsoHrvAAFVKVP95fxQeo4JoDV5i2Hsii/dt/
AA==[HISTOGRAM|FLOATLE-stream/deflate:base64^Y2AAgQ
+OYCqh2hVIOoCYAA==|||F||||technician<CR>
-> OBX|2|ED|CLEANER^20240223000000^20240223|REAGENT||||F<CR>
-> OBX|3|ED|DILUENT||DILUENT^20240223000000^20240223|REAGENT||||F<CR>
-> OBX|4|ED|LYSE||WHITEDIFF^20240223000000^20240223|REAGENT||||F<CR>
-> OBX|5|NM|82477-1^ESR^LN||0|mm/h|0 - 20^REFERENCE_RANGE|N||F||||
technician||20240302011208<CR>
-> <FS><CR>
```

QC - DIF

```
-> <VT>
-> MSH|^~\&|H500/H500E^110YOEHO4272^4.0.0.5|HORIBA_MEDICAL|DRLSCM|
WEBAP|20240328164909||OUL^R22^OUL_R22|24032816491100004|Q|2.5|||||
UNICODE UTF-8<CR>
-> SPM|1|PX527H||QC3||||||CTRL HIGH<CR>
-> OBR|1||DIF|||||||20240224214212||F|||||LabManager<CR>
-> NTE|1|L|
P^^INVALID_REPORT_FOR_Q~P^^REAGENT_EXPIRED~P^^OPEN~D^WBC^ANA_ER
R^BUBBLE_DIFF|I<CR>
-> OBX|1|ED|RBC^RBCALONGRES||FLOATLE-stream/
deflate:base64^rdQPajR1HMfxX3/U6NSuHGfasrts6uyO5iq3JN3z
+32vsHRzNayusj96WZp0q1nGZfa4tnO1rAOjhhsyCDF7M5CjxgiOLSo4xGj1Rl|IRCzalZTM
Eciw3rd7Do7DGkUHH57f73m+z+v3e36/
ex6IMr9WmTwMLQ0qZVIKrtZKJYkne56TSu2SsK+1KuxzWZ54rUXbSoz20R62ItEx
+i7d3lysE6MBna6u0tRo8WzUkWiDrok0aup1NLWPmi7dW3GQuij6d6uyndIaZfvXDOhA
+xj2ndCiZ5r4xHfNpCo+IjPscbvBNJHqViabmmJj/WsNYpuuE1/
RWlJh4W6lhXJM05SbVudyMnFthmIMZ7xGTeRZXaK1hPsbWm8C4ZCpTGwwzM3URD
```

```
Zjb8WOYDdg78DeiWNzrRGriesxvBZqWjH3UvcObju1+7Dfo74Dfz/
z6WKMA8ypm3HeZ14HGauXuX3AeB8xvz7GPlwdx/4Eux97APsz7AT2IPbn2F9gfw5/jH/
Eeyj2N9gD2N/h/099g/Yx7CPY/+EPYJ9Cvs09i/Yv2Knc9g/4Z9FnsMexz7D
+zz2BPPYF7hHiSt0ibDO0t58maQ6LxdPfqJqW5tJ1YoaMnLtCfK4r2XuX9FbMIHT1LAmEZwt
7IfE2t4z3XC2vWuEfZHEaJfK/jPimSvskSTNPOz52NdhF2Nfj70A
+wZsL7YPeyH2Tdg12luwF2MvwS7FXop9M7YfO4B9C3Y29JLscuxbsW/
Dvh17OXYFdiX2HdgrsO/EXom9CrsK28LW2AZbsIPYd2Hfjb0a+x7se7HXyK/
FrsauwV6HXyT9H/b92HXy67EfwH4Q
+yHsEPbD2I9gP4q9Afsx7Mexn8TeiL0JO4z9FPZm7Kexn8Hegr0V
+1nsbdjPYUew67Gfx34BuwF7O/aL2C9h78B+GTuK/
Qr2TuxXsXdhv0bbvlTXNv3dEji9m3ONEjnfjJivS9zdxLhNMr6ombGbpXJlJPFjEq3bwzx2S
GJLC/NoEWW/wVzezH0D/
sXPrujwjejHe7ItikhXSQbnKYDJChyXdfqWHneMipq3fus3TW8BJ3QbzO9VqnvS25P2Mp
/
uNeEiTbyNvkQ3KUXCBzeaZyso7UE55VdZCPeeZBkiJpMsG5GXwTZwWVPSeorPm0vU
E1tJD+kuDk99luJYtpl3C8kWPmejG180gR9bPpT+fan3hnyC+Yxzl
+S74kn9Lv4cj49l7aTaSBbCJ1ZBXxkwXETAzJ5v1V6gz5kRwh/eQQOUDeJW
+RGNlOnjDZ73mZsyZFZKbJrtHvznoNOPvS5qy/7SR/H/L3ojCFe5Mf9q/nC3PSyuZi/
Vz77zI0xfWL1efSnRf7P8QqiJoimfcjvz1V8t+r/P7/9cs8d24tcuvt1n8B|[HISTOGRAM|
FLOATLE-stream/deflate:base64^Y2AAgW5nMHVAywVIOoCYAA==|||F||||
technician<CR>
-> OBX|2|ED|PLT^PLTALONGRES||FLOATLE-stream/deflate:base64^1dR/
TJR1HAfwr7gZ1Khj0hg5mjhFs0bEkkyK5/t
+bsYYNHA4hg4bJkvGOidTJGPgiaYEJAapGBSXIkJBnXnKj4DAUAKDgggJ6iCIHwaFoa
HUWb0P7g+8uaiNrfXs3ntu9/1+n89nr+89X0myXA7K1E3K4F0n
+IVZBEnSM9cwPWb5bbdGa1rmb3Y56l+3ustfY7hf9tR4yw4da
+WRmO3yUFKaHBGQKzeqS2S/riq5pKBZdtea5EzfMdmymviLaQcQ1qsUKLzfrn
+UhcM8+ItZF+ginutXi4IKNSE4LEk
+NhYmxsEhRXB4tNrlrhVtKvGgbTOL4XrE44gDnpluqkzOyxbZHjmcmyeC9+s5v1CoRoq
5pIRUh5zhunNip7GCa6uFI9sFkRZ0SQwINQmNoUXk97UJs8sVERHQLYy7eoRzSb/
QmoZEo3pUeGquiZT4G8J08pbw6zLz2RJeZbdDcbkKHa3zoRpxgl/
qPmxyd0Km7wOoDnHGSMwCuKU8ilBcV+w0uqGweSHaBt1hMby
+YDEGii1Bp58nLocsR83mFTAkPlaCdC8cyfdG6lkfJDY8ia3dvogaW4Uwez885/
osnn5UBj94OEWd5y1rYJ8YglmDgbh6PAjd559HS1MI6kxYRwPQ9H8cBx7KAIXhuQrE
QILvwFRMdGITz5RQRmReOZopfweGUMPFpi4dL3Mu6Z2lpJxziMum9HzxPxaF2TgPr1u
1CmTcTpPUnIO7wbDe06Pn8PKodTWGMvSs37WGc/
9OoDrJWkrCWvs14aXluVzpoZeCX4DdY9iNioTNY
+hI073mT9LISmZrOht6DkHWYfR7DScJS95GB5/TH28zYWduaypzW4jb7Dvt6d
```

HL7 Format

Laboratory Testing Workflow Examples



```
+s9NO5Ht
+Psr4B2hezxBP2K2OdJGhaz11N0PM1+36dICXsupecH7PtDmhqQeeoMXT9CSvVZ2hqx
o/Ucfc9jy0AZjcxuYbKCzh8j2KmK1tWQPWro/Ql8VtbSvA5LAy/Q/VO4bqyn/UXcG3eJ/
g24ve8z7kEjxnKauA+X0VfyOfeiGV/XtnA/
vqDZlZrRpVkbzb6iWtVNOmh2hWadNPuGZI0066bZtzT7jmYmmvXQrJdm39Osj2b9NPu
BZgM0G6TZEM2GaXaVZj/SbIRmozT7iWY/
T72jk46/0GycZtdpdoNmV9JsgmY3aXaLzPm0+41mv9PMTLPbNPuDZn9yXFla2iWlFv08p
c40T6nZbKdUDtspZVp7xThurxgSVEqpWWU9I
+bi0sl3RrKeOclaymkt6aW6bWMyzpqTJ9N3tYla0KZqBnZZo3OJqk2OTQHsX1m6l3qbp
uRKJuE2kTMEu9/mEWzRD1LpLukV9yZ2hnRz0F0/2HEv4z0P47tO/j3+Qs=|HISTOGRAM|
FLOATLE-stream/
deflate:base64^Y2AAAQ4nMMXQA6ldgMghPS3IyDVHE8f0tEuOELkGe5AcAA==||||F||||
technician<CR>
-> OBX|3|ED|DIFF^LMNERESABS||FLOATLE-stream/
deflate:base64^7b13sFzVte29SSKljAgiHrllktk06lPYEwyYMDGSTa
+BgdssH2vA752YxssMIllEYSOBEILBMkQEBlCBClaJLIB0QwmCCCyOFbvzFGS/
7nVX1f1fvuu++93VWr
+pzu3XuvNdecY44519pZv1V59X7RXf3ru16tRtVu71ZVS3dXrWW7q8bO5bsNu6v2juXvdc
rfG5W2bvl/g/K+ejlmKbf2xuV9vXLM2uXz7cp7/26do71t
+Zvff7X8X75rrfOK59Ve5b3RmmLILZmafuv7/i8/F2V6zRWLu8rVau216ufL9M+az0p1X
+b5VzNb5Vviv/t7nm7uWz/yytu3xWztleV/zNNf9Yvvt2+fvDZtUqfaq2LJ99w31qr
+NjG3uU77cpf69W3jcvbdXyXTmuUc7V4phuj62xd2llvI0tyueblPcih1aRQ4O+7JrFbFrev1J
+U65ffbm0fuWY35X3cny7nKfx3f131963tCXL30PK+/allf5Xfcr7Rj4HcuV87a3L/z
+NbBexXKut/
V01uHxXzluVflWfN6v2GuXzltv2TuXzrSyLdlD5X6L8f1A5pnzWXjzwGf12tXXyveLI/
eDy3elr42B5b3MS2Ow/0derXJMg/kpetDmd8i2y7Jp0L9Vyud7WM6N35S/y5w1fp55K
+NsdFq4WjuU1r8vanH2f5hactahq1/s+5UK3ou6afOU2TbYlxl7tVIEL0r8m+s57/
RocZu5b3lvF3G2N4u11z08tXx9KPls1q+fE5/B5X3cp2qHN9aK7JGB5bOOQ/
plq4wLI2njLTVdL29kGXY2CG6yXUZW5nTRpm71o/K+xrW+dYK5e+9LL/Gxv6b37QYe
+IH1Szh5XPIhyrfS33VtGXxvKWr2wOW9isHlcldePa5TeNoqftAe4HuiobY/7L8Y0Noq
+HwC7YbGt15ocxfqn8vU/0vcitfWQ5ppyvtbz1Wja3eX63k8fRWLg0ATdPMZ23NqltC
+KvhU5VPvY/iSf7a2TzDdyaX29fFaObZT+tAe778i9XWyu2sk6z7VbW7p/
jVWtZ5q3VW2flFrod+s89tn+umXLNZibxkL+vPHr8h1yKP2tdnGf0AXN0YrRk
+VjH2uknztblu1iv40dl+tB1nvp5drWo8Zmlj/
YhwzbfSlr5vndpmSG7mAL7XL9Frpb5qdaynqOvBpFf1v9bHOa329aFtKjFdKXgkuNRW2
PktleuSbztahxE8xhVNV3gjfoY7GTNvi1uH/
DeMfIdLLCpoqONOh3kW3jGx5rY6ngAONCXocYg3XMsaVhB8zH9rbXvPfvawvPlc7HM
c1gj4gOtxYy5iN3rQX81jb+5dWrtVe1LbDvHJdbA28QLewceEF2LhasLyZPq4d+13ReCr/
```

```
8KvYx9tN6TOyqXa17qDL7ci69ZXg4ADPRRX8EXZju8h
+V89n67D4K3wlvman4FvR8dZqxjzZ2zbWVWxXutM61Lj+q2Co43VrifoJ7iEvuqccq/
h34EU1ILYB3hc9bW0VfSjXrTa2rUj
+2NtutmvJYFPrC3JAhq3gLLqLb0QHGCPXqvaznwVPJZNVik/OXbC38QNJE76P
+W6Xa1W/83xUm1tm+E3Z8qr2qfL3e9qG5Avzt/z4L8rfRxbpPvbps/g+cB/
mWN0fLBtsPqSdYu+ck3h2kbB87Xtezmu3Te+biXBouYe3SyY28Ke
+lq3hRuNYOFW8TNfto00Diiif7W5fWuGLDjImoEuS/7rRh8Xz/bY+L36owrftGh9SriP
+gTyXSL8OiJ7uYH8kG1vJWCrfuJy/oy/oknxbf+u45LFzcGA922z798Z0eE+FfqFru0Z+
+3nMbfRiFeuWuM7+nt9qZWN2e+n5Pg3ulr3aKL6B/7clvi9h3RC24RtLq37h
+UCO8nEHls/R2YPdd9kDer1nfsv4wYkFyvGDomf4YmS5ge2QuQE/
wJvWAe6vdGJQ9G8l+1pdA31YsLwXnGvs68+qwhHgZLoO71+1z+Ta7c2MD
+3NrTPig4Os28wrsPSPBCE+Zv/a2sz4K07zjWDxutY7/Qa5/TR6iR7xPddcyjil/
xKv3dO4B3bKtxcuJrtePfZSZA6xmPEv2HDXFu+t8x68DY8PbGBHSrp1Xewf
+ve0zMNb9tDLVvws/JD29vXy0b2M0+CSwHszRP/YJz/Ywh2l
+4Wzh3VfrdKteCE7ULHoifDAiWN4Lxa1kvpbNcA3lsYhuWfxhkvJS9OfP5Sfw8fCIY2zTwr
L1fv64DjHqfdL0+XewDXGuxmK2UXH4wf4N/h+dwRZah8SXLGY5iO9t5rmWD1/
bfeG8xCj0Qbq1WnQTPF/edotfFC9m7ha0LWnu+rq/6Jp8LHL4Qca7Wvq5S679H
+kzfm2wsUR+HOz69+haV3BiK9sbvkXYh52Ak0fHtyT+YP405n7BzhLHtPaJ/
DZ0n4qiybFK7ePTRwcv1cwRzlxY+Jv+kv8YZwGx9yIOUo+6O/
+9kfyL8ebhkjWYF2zZl/wdaD9rF1htH2t8pltjBdgDnahzoPsAV8F8d7g
+VgtE9rt5njUmj3QvqWxpl9t/NDHKf7YOHMIB8b3wXUWt13KP6Bbq8c/7OW+cS7wUbi/
tI8VhjWCEytlbtdzH1plDqs17FerPelnsdn94vP6WG7oKnjic/W3fKRb
+4Rj7G28r35iWWre9o4eY8ubREfgweW8xH3gAL6U44TBW/
tcrY2DbVsh5+hfwW34HjrVljGw4uG1fR71dXnLCfyW79/
Y55Le0e8N4iN3iE4Oth01Domufi22JF1+KZi8InEBXyDusmlwpVyzPdQ+WXLsb5nil9EJ4s/
qZ9ZN/CBYqdgCfGw/2MRYS78U26xv7kL8JR7ezDW/
1D3PH8vWdvJxxFHif4sF738ZmRK/HZbxotOLB9v
+aCxiXNgquoLe4AerH76TsSmOGGAZCicYA/
yy8BvFH932p8hN8cc69g3tDkd8r6m5iEx2MB42FoInfb98v0j0vjvztEJ85b15/+72xxrvMsZ
SyQUbKvNYFFiWYAH/sUVsu/hKeBd
+BH9C7ga5oVfyqDAZnv4jj02xMHNOF07j6cz4qzdre/RL
+IoWVL5fzwGvAG2bYpTR9THmV366e42Rq59m6WMX1SvoDP6f8u8S18PjA2W2IBcVgw
bDuPnXkithAOFI+suHN/z6F0C3l+xbLEL2pO14uODTtelTfp6hYZ97Dic2aV
+flT0z6NHMc15bPxTflu5NY6u7y/1rTs0Ycp5bsxTeehmJ9nmo7/rmraT5XvWpOb5nK3lr/
B5hOdc2o9Vd6fa5rXtivrD5b2kl+pPvZ1iQuqv5d3clsY8pHy/bXlu7FNzXN1Vvn/
ovL3Z03nF05qqk+MpTW8/N0u7zeW91vK+5+b5jVg/PHI/
wdKO618d2FpV5T2QVNzo3l4PdcsfWkU/9d6pRz7QmK9pXHOzy0rOJLiUuKvN8vnyA/
fwPjL76pHy3GjmvJJ1QXlu3+W9n75/4Tsnmj+9a40p5vapzESVWZy9ZNGR99/
lf7p1zAhuFSyPCNpmW6l3Gh9WQ5biHjdeue8veE0spcta5sOv45pSkfQ5xXjSh/31W+K
```

Output Format for Host Connection

Ref: RAA085BEN

+MUZ73N4yVubOFn7m5q7pm7inkqldvdX97RhfcsC+Ezc3FZ0z6E/
N74zA3Y0d26ovOjN4u178N9bmTUYt7QwaXit4vuVeeV9nD5jrF8Wt6Zq7ty/
MvInfme2XROsp85Z/VY+f8lf9cq8ykdy87fLZ8h37vTL/TtxRx3TXkvcmpd2nTcWPC/
KjKVby6ftS6PPZB3QSbvlLJz7lbc3DLxUVNjydIN84Xyj16i8+JP6NE55bP7yjHlc3Htlstqovul
fOH06v+x5bMzmtaVc9JXdkfYRVV0h3Eib+TQKnOoeLH0Wzb3lmUsPwj+9kSO2AF/M5/
n5lpv5Pwjvut50vEH+EB5/u81dZrHfYUOsKj6sq+gtvQl+F21zro/L3pKYxmGO+sK1ojB/
EzpkTdOlP6+CY/
W1b0HOzE01MjbxZOAhVj9tW1KutpxTuaSnrlvCDM5d5rYFZ8ankPPdKL7qjvLZ6ZYd8hX
fkJjttZqOl+jHkuZxrSlr+TXmCDx+2niEzsr/cuwpGQ/6y7FnNh3XF/2u
+PvkpudhbvRtRtPxML99JVjF+fENt1hvKuybfh3XID4zZ4q/P4wOv+55128fCE7MzHwU
+Qp3sC/m7laMF/8wtf/e2ysfC+MeiNzAlbAoz90H4WjZb6V58N2h0cvOO5TcfC/
c15qqJD5HyV28V+nvE44GMNcvuln/K/Rd6t0lfdpDFi/YJ5L+wGckOLJiY/
mNjjAk7GJ35v9l
+ANnQ99arlmN1TvrGud8zfsKPySso37eVMQ0skR7eFdvCFsuxLWyx6Hbr6qbjcHT5MY
+herz8XfBZnG0HjwfdZkzqw3TbMbraKvMN5ybfCscU997eWAKHlxcJvle9pYFBUYSmWM
TcQ/3C3i/3OkXrY9tGCwws8yfOUGQnDnSebZb/xqfGWvelQ9gb
+ogfRZfvbTqe6W9MfK73NVdsjUpfTrb9ty6zPIUPY2JP99jOhecXGn9lgwvE91xf2qnB5DJ
PWqcpnyu3NyUYXXxTndf20WL8r1ve6LTiK/wp3AM/id2W89E39E0YUuan
+kvTudeV49emRDZgH7Z9fnCR/tJ3OAzcbHxwZj1Qvnh8/19tlq4U4WPvcVjID97Phiy
+NqyXp3+OrlGq+zeGt4JPC3lmWT9WZY84NpyDeK3altQ4bZGD/
PxDsXdwbLFEW8Xnty6IHTCv4ETRe3EO+k8u//
RgQI837IXzkPtCF1vFXsgjv6t6TGnJxqT5Cve81woL0Yc8LxtU/
3HPm6yjosjFNUAN8mG3onuwBmvtq9SfmK2fU31cmRf2a7g8vAD6ePF5X05x63VjbF/
5LK1OSd+svWm/ZGuie3ABcBY1ihOzVgWdw4CriMeiZ71sT
+WvTGnQ7qdc37VvoB4AfyuwCbmFMzqZ90nDyTu9bBtnGOEEbPib9r2Vfht/
Y0Nr5x5mWnc0JwU2VTT48uKHcETFS9lbReOUj3b9Ny27MeEKcwjPjbrwVeJS/
BJ6AXHPu3zqx/oFLHCDBGL54M9oyxbvX8YvTs781f6LE52ve1T/
rX0Q9wOrtPHHla8OliGnRGvNjP53r7mAfJx11/4KLomLjJVPuJ1v3uH76ENSbwGL/
Qrhypyl+uZr4nHfvUeim7hXt+Yd+j3MHj8VMnePzSS+Z8QnwiulY8Ho8fuM9YcJ/
hfOJccAH45hTPJ/4PfNDaEnZ4t/
2MfD26iY2j3c2xfmFPR0u9rrxS7wRDnytdVGYN12pTUXMJBYGnndFZu7OHEBvopYb
GJ+M9PjRm/gLe0h1i/kjuyU08FGibXwBc/
a3lgvVxyPDUaf4Z0F69AJ8elxwdWRwdtgudY290mQrxt/VW/G5YbOsR44B82SmZl2R
+ITEF3qn539lxMXkb5reC49xkrGsQd6KbRfbdDndkvvG/
U6LL2Mgwn1d9n5b5AiuK72uFJyk2G5/5xG7hMn+Kz1jVcTefwYXa4V/CEfYrWvfiz5ojYF
+4yOnW8/otzjMquEmn9vGpE+lb6yNdrACeeJ30EVhzd
+a9oVITMSNzCPr7cQr8k1zbGuKDeFjw+3L0APN117uH1ijDXOw9N3lv8gBfISX4udIV/Cht
+KP8FHvmYmp1rgHuAVeFD9PzFd1+B
+2cGFsnn4VfMGOpSdFn7Xeskp0EwzEt90bPHnE8yC7PNuYzvwK3+ZGxvC9R4OV7G8h

3t/OtiXZjXOfxE+Y3wXNfcWBsBd8Cfj1sf0Znq9xnRAB47qjMxbw9cngGLiaeEC8DTu6lvq
+qn21/DOYTS7igfT3E48fzFJMwf+fj+TbOvC4AmZszs9b4pjLrfdYoeKtYhxs1v/25sRA
+0Dir0Tvs/VveY1GfaOsGGI9N3xsf84O/AhVeCaYznAs+f8tNgzhmed8W4+KARLVfID
+HOq8Yr6cql7jO5T3RUuYfRxFiYpQksaHxzNNv277FHbjeUzn3F
+HRyAQ8uD19KLqmHDI4+bbLN89KjYGTiwZe6Qv72ce0dePoitzEkf0dR5YvuSsYBx8cn
V/pv0C9AlbPyfct4//1v+rOJcCf1ScDZ7Tnwctf/ng4cEvOO2rtInF0viERePLxqXPFWt/
8BnXWr/BWmHNGcnNIY8rjedwA/Ubv4Y/Jw8BL5ibz5HB9cE1110ZV//
gFhgBv14pdgF3Yrxfc25E6wMjraviHhdGx0+JnOCw4OdA82zlacDZHuu1/
CfjOTI6xrhBiPQryesz1qXn+HfKnf3zxx7IOdaefvLogtwS
+lGrj8zeMQ6YPH9ym3Crcn7XUE+K876JBICXYOINYNGTxllo85z3CQ5XOW
+aG0UXI7mUjFfcorq+3sef3gp7FjDtg3c1AjPO/OHDFsdjPgwwNnJozA365nPM5/
obztrkrcvIGP8GRwb+dO/S3POUyxH5ZnhErd7HqvkD8VXwJYO1z/
dOCrsWSCxGjaePTGy+Wetz4pnFs663un5Lcfa3qDa8iC+Bx+DSfbrnt
+ngssOsTrGMqR4ltYo2D8fwoWl/lnaRKPq4KI9D+GOJ88Pxi47f41rMem
+l85vDG2DP9hqtN8jzKtuBmx0fPXvQ8aZ/POdYv5UsKb2WvGrEvsYPw
+MPoKJz20lx3QvQGh3VTsOazHHeKMVNyREYzbBviGh
+lr2DzmMgHjH03fO90Y1+jMqfUmsOV1k3pSsOxrXls4ANxGXglfK/KMfj4JeKHSt/
aSxInFIOAo39L9637YM9yrcg37dy3GjrofhckTd4qc+nZlwTJEHkFXLSMuFD
+PVz11fobH9Y1vhs4g7FAP8He8F8c8osXZa6Gu4kTwmU
+zb72obhVlr3HBW8lQeBLPazzonvPglb0n4d5mktj511YjBFEMD8g2erxZaxH
+Ke54zvymN8yTYND20nh0jeXbxbpocR819ifaB1pqnVlmP55jptsHFw7smc3Bh7HG5ZK0
+RfTaya8ZxgGNxeJMwGky/Ov5kctfN4dLymY9rg/
Eveb1D52deWVN6Pzh4e3wXXGjtY5m48PuZ19PNH7XeSUwG/ol18N2B9i3KrZKfB/
jJ8OXIN/MuoH6jQ8albm8Lrh2kfVde1JL31izwW61r/Rc2zp5bHy/
YrtFg5vEfks57kTnlI9Epxcz5slvrmAL8lnkgMDkxkL9rq9/QN4As/WXl/
P75ZILP6aebhiqdPiW8Af9uuAA68ntww2woMwC+ws3YXTfb8uyTjJBf6Tvk/V2dtCF
+Z3Kr89DLRlfp7f/AZ/IFsU3o6PvPzbuz1OfssceL3M67J8X/kUrPmQ65H/
PaiYmfFidvg6mOCOCQ0s2z4A22p/wbnJl+IrvCjbe/xiCdhk+S/3nE+SDljOeGE8/JPPM3/
aX1D26wPv2C5w0uJ70nR4rfv8u2ld1ifrF3+PlfMk9TjKvKaS5gfdP
+3suMJeKoE4MvYBDYQw6evDBYzznAilm2dfmcccdZd5Rvwresbt7ReMdFYlb1jPyg6XT
7XXI78A/4Prv+M5ae+gLn14s5glv2dFWwFw9xDCzfSD6Y88M/
1owtjzc2al8lvuHj5C8XNC6JO
+9seSsX8nr04RHjebhQdsxvlnHnud51Frp8uFPLxsXmTNxHDDjDK8DydeuHN/
f8Xmjg6fYlnJZ2uOQz2GMy5qbVsmZaX3yReOS/AjXAtvlhZBfPdN4J/
8Gxj5sOYsTXWF90fpJOC/737S/qk/
iCfZsbGEb1D4OcGHZcHuw9gyPAdnlF4wLbV5OPBI9GR2cv706dzY2fmcqJMH7yxH
vl3Hca43XOW20T2nc1xWts6sOYyO0hj19849PYMvZovy9xTNvJh7HGldS09ELuE9l3W
518mlT7Ws0l29ZTukfJdcwFqeX83lMuGo0yxr5bT5jLzBlzld2OeW9PMqfw/
maD8UecB1He8lN162TUuGp1h34Slwl/0/x/

JjLQEc1FrBCV6PF6+bGz0ab91QnDDSWCmujs8mdjw7+Qw496O2G/FRYtmXbEPij/
2DocPt2yXLuziG8PeZnB/usaV9iXl/
6CGyWj52cVvsBhuEJ0+OzsKLwINvzMvFO582bijXiy2MsEyQga51YXAMnN7auV
+tecFB8ZF3e/zyeazvww/JZyYH31m9B+bgPM/
7fkmJ61cztPWFfV4ugPPAfCmUXDAeH3nJd1+eONTZ24UL5+gez74rcfxiYX9xzpmnBS4
qX7o+Pb5ryfuU/K1zB3txmnFNvOCS/k94U3KUdJ3LOhsURzDzYjh+LLuG9lvBnOjN004t/
7JUcHpsLjm5afcHVWMAW7ujDfj8t4rN2zVu3fSVzzzrSrl7fgIO1koOX7aDzb9re2WPHnLE
mpnxd1se1nneb+6y9TXDUMz2z38kczc3Gtla+fye2gc6uEzkd3Ce2zPn8lq/
+zfi2uTKH8tc7BRReQZ6a/jw1fw6VZ3ogeRZ0Yc/
YPj7y0fj6Sb62+F9Hn8603ioeuN3+QuvPs+Kvz3HOgJyXfD3+erXY9TWen
+IU1T1vzV25xkvCFdHnD2Mf6P+7sf+RifvGmZcbg7QWuamWjr8RTAZrnS+7VL8D5zaN
+t2jLvYie5bWCT6+2h0kTlirXvcuq9lJlv72Ln4upTjZ9ahxtp3VSOB47PoVw/9g4Wkx/dx/
8rprzG88l6mvlQ+NeHg8f3xUbhEwsZ97U2uYy5qtbhqvCezprE5enzLdZ7+ftw/
JhbCeih0Tt/
farqXnWb9THhy8HGbdld960zqktZ1X81tsnVb6pP17cEpsbjnvH4VTkV8Wp5jinLF46gXR
+XCOFOB/7RWvZf5Er5D+e6blsfRzhfLjw7z+GSDZwVfX7JstSYHlwLTi7QPID2Rx101ek/
8CGYMiC6Ps61rT+Tp/i08V7mDm2x72oPEHJ9kXWfOsV2ty4L1pyeuYn7li+K/
4cfww8XDZU+JHdE/+NS02BM60PY1xY0etn7p/J8FF2ckB/m88RM
+JG4GDzsv58SekEHI+RUHnj1/r5Vw/vlgAv0mR7Z5+ka
+8d7g3J8974rHL7Yty8eDrczh257DvVz4NZLb1PomOIOfvzq687ixWlp1c
+aefM3SXuuTP4MjYTNLdM9buxX/vz5zChZ08gUT7VO0P3Om7Qg/
DL8TP78jYyAncWXm7NlglXN8afAlvPIH5gefPNzxSCvrhFpTRVfute5jO
+rPOc7py1dek3Ov3e18AuO9KvO8cPzym9GDKvsN8Ef3Z+1jCWOKcqn41yXy/
eeZazjemfYjEk2Pcr+QrwlrHzOeKZ7BvYON8u+RK1VoUNL2fcov9GMjo
+N3XfWRE80nmm/ywWR1Zjkl5+0HimGOMVjkm5elv+H2X
+J25xmXdF9eujp7OjSa7YL5e1XS787/habAG+wznMsb9nFIPTjaduh9g
+v1gAu1jKewSEg5da3xv/gKvEuJ9bTtqf21k/n+U+i4c/6PPMO56cOdd9NnIB
+Mpz1mHlHtF0PGuvM7700fg0fC3c9QP/XnH8pfYF8Cyt+cJPuhNf5nut+2ELm8ZuWfsITg/
WSS7oE376lfsRYjXxoAc8Dq0LlJtw4lvsBzop18dvc03kUnhDI/d2yt/
Sku8QTcna8O1wR58MGOBTz6WPg+3LHXvySvGO/
kf7gNE1pwzfk7FZfKXjtw5fXkDfAXpzXnx
+2Xz8dp5bLRnabj807fmGZ8HauMdX4AJ7JL7Xv
+kOf0oeUftcnzNOSC9Ptv6wFsG9VpKRxC
+zsyfnxeDMxNgEertGMBScoDc2DrZfbz1RvMlcdtalF866zXvRjZBpJXM8rSotZNOV1jH
+N27oocrO6bjnPJ55zv/pf1b0zMnfzHmC8Phi5/Z3phzcelFY7vkO
+CWzMupwfCHEuMuGwwjZkbu4MCKmUPyMGDxutEtXsvviwylX9HIp/
zqK9Yn8clOZszOtc5evK3xNzDjO2y9acsX91zi38gr/Y3x6jKg6e/zlPW/
6dG18/0uOQzsClkRqz7Zvb4nBGZl8cJ7ptib2JlCj1rmu/LP59qDBEOYm/vBt
+R2fvWLe3DecyYrz179wZ7Fg22wOfg

+sVG2HepfrNGxHzOyHm3sf4K07GnEe4rc6ZcHDwdv813Y5z71d/
o7QPxrwsmlGjJP4ldTTYOK/
e7sXVK87OwuZV0bCHvV1EO9uPgc9g6wfbSWyObvamCMcvi3+6plgPTKcG1sFh3stL
/G5mcH0+5ljvjdX
+K32w9rj8VR07IP4oR6PQTH6PsYhXQdfx9w8nmtDg24z1XgnDojOXWuMATO4P0f
+AU7xaLBscuQGxnt2t56ZPGrbNqccx3KZ61vjR/
AR9wcT0XE4z3LWUfHNT5IDfTPyRP82Cmf9JLqJXgwMb34n+H6LZSJ+93J0A
+xhbrgGPB6fCFdlHgY4lu3ElsqLgX87nzPi/S+J7pNDgDO9/
f42Qvz85Pv8dlTrH1VYwbwvhV7Pc19kXj0/
rY3pUbfwt2ld90U2SC7E6OPkyrwlPINeDWzHPJ/p3in/vCb5xZjNjbcxVrvB/
k3x4XTjEbxJ99rTjyc8N7reE1lwGd09ie+aEzRvqWT4/PghuRVyb2eZtSvE4shW/
Bpq6zHUqP0Im+iY3vtg0qt71s7la1YmRNLvQ590U4DpeZaLkq1w+XgJ8925y/
l4+cBmtR5JDwWeh2bEm8clbO/bp/p/
iE8yTu0n32xKzo7OaxoytE4qJrwnXBosXC6fHLwyJv4DDgGf41YnWb62hwCsGxO4Lnm
uvDzZwfeZ8ZK6JfZxLlJrvYwZf1X8qu6fOdW4Jd1Fv4dbpsrPnWxMkT6PtEzIC+Ci
+MYR0ZPrfF3pwene16B1g4Njxw+kH+Rs/265a+3gL55P
+WnO8VrwYxbwtGU70X1x9HIC7AnM2KDbe0camRu4PT5vb49RfgH/Sex
+jvdOaH8qfOp125fOPy0Yxknkfy3IB4NzcMB7PV/
iFM9EH8nNLG5fqzhjYftNXfIMEy185h1s9v9K77JPTfZ/Y8Bn57qHI+5Zg3axg
+P3NeXt1tl8NnkTshg8dH1zDbvE9ie/IY75oztsfKg7+YnKBU9M6zhnBi
+QDfMnJ7w9OSq+g8vCV8DgmbYjrandkD0D5K5OsGwUK3X2YlyKbl/P/D1reWhP/
+KO55RrPd1j0zGnu5/yBVODdejujGdkQ8EcrtO2LkoW4A39Zp/PWGM08vfPZ
+0YLvRCMIlm1yJ7gOtyacYH1X6Qfj1iHituEX8CbyMv1NeeQXMEMfO2ptjetXz4dnT07/
X00WHGWSUp7QK/PPICBPcFYfvdlrktuEb26P/jK/
59azrlbsH2h4PmVsQFwCR2f4rFoXWqUf6d7/+ErYOsQxwSSc/mee/G0Z/
5N263qniwYLSHx4D1cAhwYFR5ziq+ntbe7gtsX2maUg+qsCQ6PLOGpvm6szl/raATx
+xuTq41OPYcXB68vNB+Y14Mv4I5LjGh9lgi3esc8pRcL1j3S/
N2U0eI9ih2GS0513Yis6Dre3gy0rhjkuZ78s/gtsfZ/8Psc6yjmOUh+X
+132dr9KayH3RqeUsZ933jc0RL+Hf0ZkLY8/4v/eTA0DP34/cXgimfGbOrHW
+W20DnTyWcBfc+NR7MLR2Bzf9c9N7Qcn732f7aGT/
LflTPuNTY1szsv7lftjdX5vOz0y0vkV39nEMX3FFDnM4N/
lvdqzaM8M8fw3uEZ1jv6F7GeH23le6QsZ
+X9ZZJ8X3jjXuKf5e0b5Ya6JrmqcoL02uom3b5HqKoeCR3LO/WYNjAhOMadjgk/kLI/
YVDuG2YvOuM4MGvyrNXArdIDj29dJPHcWJ+ri/oK7lilLg6LPFv2S5rgz/2913H+j5CYT/
yQ18LJ+s66V84ZO5bVP/
A3zXi20eYz2gPOTZwZvn7m8Hmx4yN2INLDunb3arHIZZxftGtC4ABxrv
+RdunWnd6mAM+y6Vx+zg2xaJOQ+x/
Qgn6Ncl1jc4ovl5o7LO1cdzoTWVYr6D9PPjYC268Hx+u4z1BHvV
+gb7W8hBUQCb7nqjdU77FD+ln+G66MaV7qO4L3yo12NQLS76Tj7sDGOs9nqtGz

HL7 Format

Laboratory Testing Workflow Examples



+3YnlOrEGwfpT8cGc/hXzxo5mXqZar7LSzJ++N6PwY26LyheRBsvdIOYyPg8vvZz5Ys/
319qX7LQYbs5gT7f3fJOsM9xhvXUHfvc+ Ez6xDPWW8IG1ckv0q+An4wRyfW/
fao8+PB3fRjXzMCGOo8BmeOMV
+S3W7iCmQRye3zNxPyx6Rcy0fxe7MGT71g8jtRutj554o
+TKwtk9s88BgG1hLTPiM9U72CTe62Piq/Bd2/aTtSzwJX4xPPsMYrjWM/
X0vkmle9OKF2CG28LmiDhgRj7fx/ciaR2FuX3UWN7oxL8X2K6YP8Vo1wY/
zrYvIL0wfvwosdOd0bPxoQ5dAEPxR/g07GZS9O0h46jyEec0561bimMRFz4XrOS
+n73N07W08oTxVjkr8Obvlq3yD2/
Fr4Dj2femnOkbXoOXfk20zmtuFsg9qfg2dB9+dol1Wxg12f5E6xdXu3+ap8+990hxYHiKeD
E+kHgazOtx/ySf3MeimASdu9Y+Rvq9aPoNv+vs89s32Mj+tmHeRyGbOs9+TXsUOI6cA/
zjo8TJsSVxu7WST7vKY9E6+svpD5z5oZxvffMB7TVcxrxa/O1h91n7coYFZy+079J
+1leCVZ09w5k7rXNw/Vn5PvsL5D9v8L4K2X9/x3Ts4WvIHKViOfRGNf/ga
+QBTrbfEacC/5j/9zMP5Eumea1eHGbh7nnrCOLM2CTffR4f+aTHybxK/
59Nnvxm25Vy1NcZL6vEytSVFD/EzvCB10f+D1oWsv0TPTZ99pBxThv/4d2vWs+qzn66S/
K7CfEd99vGIQfr3HN8Tmxgcrj5VMtCvp3r18/
KNimOe2MwJfW3b7+W5hwnGWre3vJOV1oG8fvSfnesbzE+8kB4SvIBTDmz6Jv/
GawMZr4RbbWuZeKuGGJ6Otb5oniRSdER5mrYZYZtqgaKhcGr+Ek
+KuNwocv8viE9Su6PofyCkUnuA9Iua8bvc+I+yEUS2IjJ/i6wsmRlp/
i4XbkP8q5e9XJlQYFA2bZLIW3AkzEr21o/
6+8atbaFAeBMQYhXvucnp3NXR8udap3VXPYPLbG8p5Lyl/n11+L991jSnv5e
+eseXzE8r40o7rRz/efnuc/hdd9V7Ktywfp/n0v5UvivHdz1a3q8o351dfis4y1A+nmwnLP/
3IPfyd285vnVR+Xwy/ru8P10+K
+cbWq7TuKl8dmU5zyPuW9dxPncvfX2xnOPd8k692XPLZ+eXVvrPrH8thzX+lv5/qHy2Vj/
rIXG0T6vff60VXG3DOitFvK3+W3Q68v71/4972XkAcox95d2snlmH.Jso/y+a5RI0CjH9ZT
+9pZ+DC2/7bqr/H9Wt3jc0DLO1jnlvYyp9zTm3+fg3D1/Kf+XPjQuYP7L52WMFflp52INLO
+0y8vvTrcMh5bjW2UsXcPdWuV8Q8u5GuWcjXKt3nKOLmRXzt04GZsovy/
Hdl0UjTm6qzvP9S8r35Ux95bztcu5e4o8h5Y5aZvZKF+6hnPv7fJ/143drhN7IP1t
+yxzbmoDygbXNM7LDicbm+STXzLmK3YhbgffFo6vxL9X9tdac
+7kLNYJlnUfznd64rap4Y/gdcS/xGbzlx9gxNgM/XFjirX
+2P5XeHXqjlzTHmn9it13n7frbozFfVxDs37z/N+eLfr+5XftqlbRU3f8jvq5LW
+1+0av9Tzo0YM3P6HpQ3tVo1g6sJWHXc3qGIFnAXXpgbjUP/d+EO3a7H
+rLyXc1FzjpigTS2h33arplCrEe9xOqlbtVgq8pnl/7H74+tv+pf1iv/jd
+6Wur39SGLedQnMQ4jyx/I7GrNhR1B0v/GoZ9Rxn793ztqvw/toHwxXiKXfj
+6v8bZezUFON71R0m1NPiHhGMc3R5Ty/
thyq8j11i1RX9EL3ib72nuFjuX7JVMuBOIKSMccVm1QtuCKX3mJ7rcPxmeU3PcYHyexXlk
nrm75+m98e6XO0v2/567rls1bk3VPsRHVLqe15hOXSYAw/sdzRBfW0Zc/
ZqyMhdp55fe9J/md2qBDi45T+5F+6/dH+X/
VQPpxdKD0v4GsqQNDXSZqt7HvmViR2kQN4zq1w5h7xeG7d7u2Ghyov+da9dPIK
+6eNYHt/uV79osN9j0t4kYbJ+f7G39W/cExqnLh1EsizrZ862aWNxvyuepX6gaz

+joqllvZc/W+r6Wao4R31LmbpyrCvubR
+ra8Oz4M5N90F18pDrF15bVT3MDbpd03QxX1u1Sw82r1YdKeqw7eOYV3Xp6OvGPr/
ul8Yfcl9A7gVWBt14I2tX1BjbxGNU3Tx83E7mUKrVsoKv06kLq3tfwBtqDHC/LWPcw/
1UTmKQz6u6v8iC/
DI8hvh4S2McsUHXRFYI6CC6Sj2yxqHGyepY4jvaP4+NYtMFZ1vHImOuKTr1uH0WdqO4
PHxZ+be3zaG0L5p1CnJY0x1HNTTr1/IYH6141RxlH+iBrA8Rz5GHuMCFtGzIIRfedGwg/
CSfAr8kr9+5v/ulcJ854XNzzSWUlweXn0ou5eGsw5Crnhs
+ON5xjdYSnsg57sj7tf5c6/3Zhy4ewvnhWegu3JP81BfZu0NeKTUDxP2IHeDc7A18MZzs7
HBS9jfbESekP6dapnCYdu43V37mgnDzv4frkis//KFOZje4ewf
+nziss87ZtEaKDFB7t9S7E9dkeJPevDD2MS15R2se6Wcq2Ch6uEVP8t9h10FM
+X3qGMy1v5UeR9q15LLY71hT+OD/OwQ
+G2366JSO6DwGtUYXTI1OrGL1OYcWniCajbfEZ5Ajp+5tfxEv8/
dG55P9a62YBjvVraueYljaPNWVofl/9nIN8X397VLU+Fn/
RMKq383RhlGTHaxSsHXqqfX4veny1eU5jdmnlYLx5WY/8bXq3a1geZT9ALgo/RL/
xndQEboGIP4sfO8o4Ln8Xv0ldP/o+tPCT3qnmIz3/LMdcv/
qELynvPXDQWeUYxgHedvaRwR/
QwYnRhcZ8n6fa38d4LrSWRe1TauWCKwNi76Vv5BWonyzc2t6Yqhi1jEX1hvt77tpFFlqL/
nHwaK2CE9+1V/B/m/gA5nVH+4d5dQj/3b6edXnqPOJXeuDI+9rnqublfvbpXcUnqs4s/
L3EaL2D/K4aZ/iWZnwHdVjBpU0jF+oDkt/+mvtBXUbV7gTLN7CPV41R/
C9xEntKwd6dPQ+qGbuXebVqse0Zv7JM5EHN9G18jPLZx3YFjnr4eDbWg
+opqUqQk91KtWvZLHBAOQT+413BDj1m6AbZz/q2cJ6X+lb4QuXC/nOr8HmX/
oXqWB0V+a/tc2rs8KH2m1jZjpm+72a80UhtS3i3642DB7zM/h9tHcN+W
+AnngTfs4T4p5vqF4Pv6Rln36hnlTQz7q19LHOiGvdb+vtW6gWqLuxXoiff79SDpy/
N7FsuadEvtN6478NTIN9occ7eugs9ovRp3KAfFrkZPuH
+zunv98BOYU3oQuXUbgQultfWMHO9pP9hwX3jrAc4XMu4gpBlpHmDc9uwlOvJWvy5w
op8732NdvM87vhiN8NXy02HOj5wcgr/1tS6qRTQwwODxpO88vnA
+ul04OZ4dbHOMxad43t86pVvCmtivt99zLvp1XPoum879Jlpphkbntbrdqkb9brEIMAzUQ
r/Wtg1K7+Arf3LfvbN0N8tU9T9T1R4X
+Z86CXhJbuYX4iDgEFrWc7Sq42jf5tGFhtaL8RRNotOY5N7W7fAMMXHzWAZvmKvZPkq
4T6ci98j1zzPQlySGGcH24L2d2JfX7E8yRvoeszH/
jkhNNoZtwqvXjUz2tt2pBuhB0WHigSPTh02N8fhH+UrWPza37+NYcT/
s7De2Ud2fuoN1D55UpY6r5vTLHrfwYpD1gDhJtrRh3pmLQ/J/OaaXUj589RBf8/BD
+YUH6Oag+sbE9BT
+d293Dfl4zeJ7Q6wnQrXDo7t7G97YJwcVx0bP9I0HujenyKToecbB1V7teG5gDeq5u5u4Y
s/9rnFYZH7EdHPRjCa6+3gucc+5T/28DVUH/wbwbCdco3iHxVfHORxqFYvfyg+
+gtfW2u0GwdHwTMwYiPPmWotH+p5Un3rQ30NsljzEqtK/se4n9pL9jvteqpd
+qeVwMZjgN30R6zEXkfmPna2/hFXMeY9cyOQZmrvSxr4REYDv6tH3zrso0qxism/
YV3fdt6pprvP7MP0/h29H1rzTy2sBYxP3YwqQDrGuqFuTseFW3cIbSL3TvZ/Efv7A/Jk/
F2jX4pxz9Y1+56y/dXtFz5sHv+ifYpatrG

Output Format for Host Connection

Ref: RAA085BEN

HL7 Format

Laboratory Testing Workflow Examples



+qSb6TbVHPVFgX9nWMsQKcR77Ky21jHWjnHjz53k2CwdjvX2NDwy0j
+cD1bdfyAXt53oWNDDeND1xnBIPwHe4sONW6Je2xpPFR9XuzhK8Za4ga4qWoRgyE7xV
73N/7rmRtftmz93whRyE1vFN2lJ08b+tzUf0dod3ADdO956117SbV2SHm
+Y6+9oPFR9+V8Z07UmjJ8cFYzfxr6DmFJ7ZeBNhcf1Tu52rLOMw3lxxxk7sS4tRcS7PuB
ZUUsRnsHto3tbBDfuvV8EWPcyLomTkBeYk/3QXmSA+wjVL//
MNsV66Bau2f837FudU2wj8E+dl/JvvZ1wnb83QbB/e8YI8IHfFeiw61c4/
fBixWj2wOcd1Qc0ZquHGzdVWzyPV9LPANZo4OH22epHjN7K7WV
+XJtgnmbh2cK7rWc2P8AHa0a3CCPAwcsGH80/HJMzWu8N/
KnWxurNPzJMgtkAvnf3JgX01/uEdj92Bh+X0Xv+/4nrU8V5LBDryH/T0w2levYc4K7lept6/
P8vWk1RNqxF9t537KvReOjHzTcNn8gwr3XOLTuGHf9jtmAu7YB1zOc+t
+OugcKBDjWd6bsGW8Yf72halCTWgfv5cucWt48s38Txxh/
L5rWDZtpaT6vd35ubXkdE3jT3kG3Wv4CGWIWrNo9MdXd7E54CT6N4p8BluvFnkx00
+BxywHk+j9YnDsg8owNHx16a1kvtFdvL59fzAbGPx1um1C91N3n
+wP1D39ykudbuVQ4UJl/8j+yUZ6bwfjhEj/1McrFDAzu/ST6dVT8QdNj1TOD8JdfNUb1FF/
MXnw94+0/5/s4cYhtf3tljYJB8zODHXyGOIZL238US/6zwLAv6+ufsvHP9SZAM2/
sGYK139sn2OoM8ajsUVn8FLN45Nwh83M89SvfQdg1kHRbdSDx8/wZ4H2dQmwd/
tbbM9iYUUhwxz78T5Bhg7VafIh5EZfWMvyerRDY4n5il
+rOdk91O4upttQHxwC1+XfKmejdJIHvcMvb7nVzFWnhVCf4V/4NKBHqfy61vHF
+9sfvXN2k2DL/tbr2Qn6NhnqjdxTMY1wDYrjtx5RlvTcieOUK56d/
tUxazJxSunvaH1iD1VOvcS7ovimlOMh8KTddwv5KBxdAW74BpDM/+d5w+ie0cYk
+G54mh7BCvIF9DvfWJXO/tv53XzDg7tTe/HHnsbhysXLeJ/93Uds66m/
jGj2wj4kvYyg7236wPyR/8OL5xS/tj1dbcdD7WYz93xcftGf9QZDB0tI9jTUV7Y+jLgdZ/
ntchOwiP1rNQDrSMW51nDm1vnyM/
wOcr2dY1L5sE6w4z5qhuDOPs5D2+Yt3Tc6+WCzYOCvbiD1e3HWndZM/MA/
iyWHCGXBJYvJZtHl9Jnkqf48/Wt67oeUJH2MeAm6qrF16l+SNPA74NiP1jx/CRIYnFk/
s3yi//m3FJ9Se2C6aAh6zDfd1YiM+Sj/+z51zrXv09z2BWxx54/
oDiziPn90m8dBf7QMmi2Lb2Wuwfuyf2W884J1ki1+OSA52b+0PY18fa8T+9/
q37wQ5uag1e+xPZR/uH5v9WtmTpDwu91+QfyYfz4U1tz+2vQ9TOxDZY8J
+5hW8zmrY5reZ3FU9jWw7nxbzsf+S/bHv+b1Zu3reTP7tTo1iKj9kKk3pD2vnzZ19B
+Ltb3jnO+V/v6bsi64ZzcRzU29ycx/vh2fDN7kLWvWjv2FX216P8kTXkesDmq6Xt+/NV0H/
DXvZ1J
+e7xz6toTytj5bJrlojr7nRoaYz02Pedilvc2KcAdRlcm73f8uUTvYZfHzr9XFkd1fEve21d97
KkfoRkNyE5bva0oNuznR/X3hD2rT/t/mmP2w8sO621lpfVze/
CoZ4P3TvOnu1fJrc9x9d5R5eyeWN3H+Te+L1XAIuRX9vzxyxH3Zs8vqsU8zwPiDVhGI/
xdCsN7CHacno011Z13jHc6u909MyVmTcFQP0Hb163+dtHevcu+JD9jKx32L/
6BdYRk6eNQL2BqeGSgE+7X1ud+4h5twveM6kS/
SzU0PuttPtxilyL3zJWjPG55YOHpB1ZPS2s9/11dgS9vLzpu8JGeO9fKoVzPrHjd4jorIm/
8e4nOccn0v2Yo3tZHYq4eO3uvfak83+y1mWoa6f7PzblzndOW3rKvi32Jnb3pfM7eFT0D
qHy3R9NrS9jm7Z4r7RtFv06xrsqel7Ev0x5LrvGLpmtR/rHp/f2MeRH7lu0Z5Tffzt4/

xsB9NMwJayu3W2e1JoUN3WVd1n7va2O73H/wqMeuOWc/Fusqd/p47R+eHixJf
+lputVsYfVkc+r9Ply64ruy0UvLrK+K7eyrPFN9rBA/csr25fp2cVHJ/7kp+JrXH
+dW0j2vuGLLAJ7jMpY9U+hRmRI7g3Mn2/3Xai/QZg4n8GS1L/gXtYdf/vUxnn/
f6d4jn20xUZa3/1KZIP9G9O7lfzIVNs4KfWT
+VTPzMMsr6sV7HHC85Q8Kzar2k9Otw4Dr7rXmXW0MAN5uuB3OPKvLlu+EiwO/f/
aY35PeMT+cQ9j/1sv1qH/DT6d75xQ/eQ4YsWCQaOdh
+0t4z9S19vek2SfVGL2m9jD5oLxscxY41X7Tw7Q3bLnhHmaEZ8EvnaWbEz1gGzr1P
+hNwy67pjmVp3HI8RfTrJczTvHmfW8rB7/CV7Ct/KXv4bs
+54V84xzjXDWHWNdmfBe6eZRsT3hU5V4c0rWuck72xdwbl7w22gMHL2CcKz8dnHu4
1bsg/pDZsdaR1U/NP3qKzT/Pc2BvnfxY8MvM3chg2wmea+1xZd/
WCZEjxBuBUB2+I2L4jv47n7bUbV3c14tacaItRtkz3flu7OPfV/PpfYWYJ/
7NH0vLz7nd7EV1k7htvjNBT3nysOCy6tbbtKhP2Wflr52WHP+/k/
WvcHnBYLZIOePU0MHnFT9bdZLpsbmFgp3Bn+/E92/
Kbj3s6br2Uz1HnLtk8fWdTdZS385WFg4gtaA8UPs/2ctGX3FV07zPROS/8TYP
+OcEBxgbtAvfMBX7C803n7mInqjv6/C9i9pzq/
7CE5vZk6jfdb35HxzgYvDDLbwrYhbP3Q95tIP87zPejCC/
aDP287Uc1t8uvsGz3OstD9z4vbH8r/de737vGcStboMHHWeT5ex0zLFLHWvlt++Z/
39Qect0nA2526p3j477ZtG/CNlcXxLWvOE51J5TZLhMfDDr7PBL9AtbvDT7IT
+Nfy2PLUPlj1k/R+Vt1LvKz5lJjHDNsCMsWn67tbMifMxWTPFz5F0dupPr/
sHx9wYfZFLI8nmvPrGvX3nEmfiZG4xt3GW3ECznuJZSCu/
Hbk8JT9i2qzHJ29auPiD6+MncHnkXnhN7q/
+XTjbbZp1YRukIN28XMqaRnN8UP9DPPAlc03o8zJ1OjTyd77Kp1yb4IznuD77cQZ/
4gdveR7w/Vvrf22/JPkYZS1UTAZnMtT5I//
qEtyB39pbwO3T62Nwb9K0mfTnjesjHibst4VhPOIn9EfP1cwygezXujm39P9fbqxTXPFxM
HWs5YJ+yM+AO697HOrPwMTP/
PqFNLgW5xyfvSjIEB89J33knsE7sp8amaeGuvYpf9kYKJudbjwQ1i7SPa9mv/
bhPGR5qd7LOGOV2l+NxYoVptifidd/EJv7nnFZev0bn197Y64x1mB3qncDhhznevkw//
huFJ7HcAA8PNU90U+OM/10P2euQ9COA9v+IZ1V3t8scfL8tkkY6XWY/7RnPe8E+5FEn5/
kvu9Hsx9Do3EDgt5zpf5u8MHjrMtCU/XtD8XjrwRHGG//JBgAtz0rviAF/
lb4obUNRGfYE4XsY1prHB3+Ax7kFZLHHC/x6n4ub/5heo/f2C5a28U8Sh8rJ9thvtHtX
+NfrEfGk6xvGNlxZvlvVODF52Ek98XHF/a8bhw
+tLgPrySGAcecaexpZxnuYjrwvPyJwg70Ni0yN9LXyS9LCf80nicOg/YyCfgEyw33ejjx/
HBsEY+old9XGslz6AD7vEuqya2/
DoBex7xXfBYWLJHyaWpt6ylw9GBuQKsJ1fn30vwuhwBLjSLbFP/Dp70qY7JtB+e+Z3tn
+n+8VU9BwrnsNm0cMf2DZkS4sn1zApOHa//YN0ljzGQNumcAIZH2s9V15jrcSGM4PL
+IFxIptj4OzPdWcV29C94+8HA7SsQniZu7VwH7ezD35Y0J+wVt0l/Nhm
+s5V6AY4lLrovSWPg+LPr0fXwtufpzz4RteN74ozuNeAc6F3r6X3AhYdLH7J849x/
d8wmWk3/jaKZE3dtF5fhk4Bb85zzivvN35zXn3XuheZeLPLYMzn+aerw0dQ/
D3vGdRwUEuyvywZ25Z5we0b6+jM8hmSmzyxOb85zpm9u90XyW+6Cz3Cb

Output Format for Host Connection

Ref: RAA085BEN

+uvSBveu7I1642Biif1Jvfvmk569ISp1vXdY9h4U/C/ZeDjSvlf3zb554/3cc0yXIST8e2brf/
kE6QB7nGNi+cpAYycG2Xa3F9XFcrph2dOZgZu6jQf/
h4PDR71qfVfMFbvKQdUO2dHj04oHYxxj7WNn9FPdf3POvGQ97Pa/1vEuef/
b5ID9DL1gbvC7fvWgsUC29qcZMJQkZLp++EL8sbPnKTPHhm/EjYOeVsRXiEe4Nwyb
+aL1SfLGBdVL+9X7rr/Rx0vz7ifWMcvjd2cG6D61j4rzwIUWMyeLgzDmYCZ7ta/
sX99zDNqS8+YjoNxiKdbIP8S3bpPCMvsOrjsucnhvbXjN9oC/o
+arhfnt7rpsDKT6Uflie1bKobbM6LPoN1oBL4Q9au7/PuiBsof4auUI48sPp+w+DeR/
a3uUnSr+V7x2RMRd/oholzDm6enTk+0Pjmu4jvdJ+VHWGkm/RPeZwX2wJ/8Zx7+X
+tk6NXDjaz4MphXNLVk/E5uBI2N1/
BseRBVz0qsZBXOOZdAcZktfAF03OeF6PrREvvRPZLeC/tXdpefsEPuv7BZ9PFHfB
+Ct8PutZA21buu79svH6whrKqj6P7i/sxFLwAGK9hZMrWNL2LT/
Fb8mlymVnGwCvzxwXljbReie/wPyyYN1HP5WPudY4WnVyluTokO1I47bynGsZ41Ujql/
1T3X4yHOMTD/IV8FjPgkegHsHBB8W7p5Xa1K5XDH88gmKOy5wvCb/
2MIPca5zgw3o4TSfX3mZop+KJbnm9c35/
li8LjNnKwcTgmevROZYNvMG7HH7DTmFv91u+dKdoA+T7CvkE8jj9SpB3hicAtuTp7/
suj9teEQ
+Pyt7EuVkzsiGPFozv8z25XmZnhzXiykeGiccU01YjGWI08HT6YnNMvgjUTgiuXx16GO3
+qeHGhYPEfg2VwlrjUVald8FDmnn0d2Mzw2N368VnIHht5OrLbn32euHntbtcfWC55BvC
U8xMPEeqNdkv/B3Y1t37p3c8nw8uHBZ3R/WnD23ug+WEGOAM59kW2hU/
dGdVyuQ8zWR6d7NeXijmJfj1N4Hv+D/7u7L1pnOMw6plzxPsZJPa9yaueb
+EDqUyuOnJ422/Oh+yrWTUz8cPD0003n1sCLm
+Mjb48t4JtZc1rdc6H8A9dZJ7HyJuYRwhT6ii3/R9M5tUfuf+Fws2kff2HO/XT478KR/
S3BDzBvr6afNbdQ5rgnsuYc3YmH3sq9Coua38tO0V24D3z4NF9HcfLLsa11o6vo8Szkfz
BJZmrTs3Pm4J15KzgWXAP1hj2ztrajekDOrKi1yIIW+QF4P9L2M9Jf9BLfP/RnnfIgt6yj5C/
hqu86DnWXtnU2FEMjV4OC/Z8ljl7i/P+tl3jenC1zHBps5zrH7uvovLwg
+KvotnrBWOMSLH8z/jYH9j/
8QCE4zVylXcbDkp1gbvVnL8oXtNPjNWyZetZrvQegU2vanPK+6LLF50DKkaHr/
LWGC6PyPeMdf4gfwzX+RRT028PCa6Bc/4SdP8YIplKa77u+g6OX1yrAuGw14fo/3Y/
RBmjEnsMsvxBGvUqhmVegviEIX8ErbYx/MgG8dGft80D34jesL1X4hdvGh5q+4tOb8Hba/
ii9gWY/vltqLPSGF+d05sFP+DDNaLX52ROXreeXrVgmUM/wjG/MQ
+RTHznbydcTYw8HH3R/ndz2PH
+Av6vKv1WTnnYIOqh7VU7HCzcJJZkTXzNDbjAnvXdG5HeYFhscuPjZnyO3AU7PAer2Vq
3+0V1In5BnCS+b4uPAaeDR7ia86OnbSW2Sd6rEfc8Y23XPFms5+1j/
5CsY0wjriOKudYL/U21L4lyXREe+7L5JT9HrcZaVeBd6zb3pxAoPR5bENeAUOLJm1vrp/
3vWF62Xkc/6q9cXxMPhWnDZPA9D6/fg2t2eZ8We8KnO/
fvcqwSfyr36WkNAVmmTt87zCaWH+JslvU9I90U9n3E9IbG97f+lv8gDjPtT
+HrqAoubg0nwcud4d7xMu/QfjH9JYO3wx
+Hx7cPju6l2cgCffRm3ONk634QnN7yNP7Bmch2uAvXcZVxTnw1tSi0m2fHN42Yzo3qL
We+nPbMu56jw//fnMw5LmF6qdCWbCZ+4wDui5Iz3rma848RW7g/GNPIZsRW40Hk

+6iifWzmKs4lhcMvUI5X
+E3u8Ggxb3xxBHH1u5Mx5uO6DsXtingPjWzr3sXHtn0VX0VPWdVZxfKA15Z/
aHtjHoOcmkIP7h/uAHsvX8Zh1RnW98qw8nesrsSHGxPiiZyelj+wN2yB4D5/D5+N/
4RqsoT6StWs++yD6hy97J/h1I3FL/oD5T31+f19q48BVWkdhvyp8a0HzZeks
+bLOeu8BwZpv+HrKw41L/hFcu9JzLr1HD9dNLN/O5/T/
27YI4T4xxWMehzDkcc08iMnWMdkp8RE+0cHuCYyYA8Juke+Z/X4uXfdZ
+WWP2JOn5fZ0YIFLF/5jdRAE85SxqKePS02/3gw6LzlbJjnAj1VHDg22HyBOBn854TmPJ
+k9bb+4S/9EiP6fE1Mqbqt037T/AAHSCfzVilf/GNf44eED9dnr0U5HOX6J5/z
+S3gznoCEh9wlsZE4pH/+K7Rr7V17tQa+9yg5HG2uUg0aeV9rO9Hx7+Aq
+4tmM627LsjnIN40f4LL88TP5LTIY1pHh7Eu7L1pnXLV7PqfeP3KsgomfBU8eyzmvCU
+EDxNHXWaZE0uJw8GDz/LcyTehN2Ns6/JDt2T+7s7+hmUcM4vzEMeDScxEi/
AXYPvFtmnIUJYitmlv/J69G3dHRnBb1rXKvAn/
D4+ezLHMOs9IU64JzOL84OqRwSr4EPg8Kbq/muMg1nPbeU4Tx2qNoPNMyd
+mn3d4jpQPh8PBPX4TOUzLecG5LRNX3ZnfwaU7tYzREXQaLcd33GO+pj1bfp
+wMUjX6o1dcNxiVEY69Oel6j3gxn7Na3nyGq2dUt1T/
Cfzejgk7ZBxZTgCvblGs6r3negOBKenBqO8kflj3ji1Njmssa+Vvih1i3gY+RV+lh/
xCuOTH7sIWO0eNIQz7dqVfze44KbC5tH2a917vFWfRlwm05qS4YuY+
+1o129kRWnecvvh9/St4bnXjEfk+21mV8k74unLiCc8MPyrh07/5JybP1SZxxu8eh
+8yznqC6rJxvAfsA8cPjXtPTvDwS2yFnQM702uAJ52Jc/
7DlBfWVlni63289nT8LD7DOOE1qixe/ZAwOOYK/zfZ8ELck/lZw9jD/LT/
Z2payM9nh4dvCLy4TMwuK/9jWzrkKZ9xhvbWvFDQdEZOMOU6Bj/
kw9Y0TKYI4f83Pauv1f19WUXTxb9d0HtlPlpz4ORr3l/mMrs++bixRzPI3Yxf5dq0fLWl
+qLUg+Dk87aPMD/HUUoljr0iu6klzDdkv67PY0TDLX/
wDjFnBvkq1yMBJ9BC97+jew7ZlrXdz7dWTI3s23Hq0r0/c3kjdluEyOvmcbU3zi/
3CEdezzYn7su7zumWGbYgXoRdwMHAr+KDaRxfZ72g/
5O3Ok4IDPJW1Jjg2tk7sia7C5eAabwQ/
JpirijfsZxxRDmu0safKsyvFFXqCz1z7a03f07B0Ytsfb7Bn9uMB
+J18M1Z8Y0L2FYyv7gzfn+W82KK7W6LTGjYFDHhUenLhe6n1nOImdFx
+OApwYwbrM9ar2AfywvGeOWKWBS5PnuV2IsB32F+Poo
+wFXAAXKku1vuyqPw2eLGBNXRe9E+Ac6mVbAn5tp5bqv6PzP7IdArjnsV69f3RZ4fuG
+qlcccv+a4Vnt2F3SckH0h37NyuOEC5uzy7wVLhaOrxfeDodgKfPq425NqLrLok/
v35ecvDdc8xbqmnY9pxiXVC7svMdXo9He6jxcflG7lurv09ovEhc95PMrbkoOCi8ARiOmw
B+Q3Jzb1sedWdgNHGp6+g7kLdc/fG3R9ZEpO77RgxPWWk/JEzAc
+IL4Ru28af8Ma8+98jHSy6KLWBpDJdeFT2Odi3fP2kWl
+V45fxRYuiP62MxefGqu074DfpV/C7Dea8559rFwePoe+zfVv8LcaM5xyTWOijh/QPb
+ulni3hmU1b6/kzdZtCwt4w53GG/EB5hReBEb2Mc9SPMk1kedXIO/GDOe+I3oB9r5t
+9VYV7ZP1bWX6J7/rNKbvDah9UvGQpxLPox9ef3MR4UTqZ+i+0BnRP/gS/
jWx3C3MvfjSJE7/
AixyAPxS5NiHx3ug297Ob4EDVobORVX1P4jb96Or6DHOHn0YNfZi7gWHAjckafWHbSt

+eDE/Dwlzw28aXLBpdai8FeZ8fHzYz/
KXFilb0KqgUDh069GOIB4SZ6+mflWLq7n3VVeZ1/eD6ke
+DV2cZsPdcA33+s8VYcBGxaN/MOFxmd/sBZketr8X3oIPzIXmOA1i/
+vekYYrL9SSvPeN1iFtGGBuq+HGNI3U47P8s67PiRDjrsbZn4SByP9WYeO8f4/
nRfunU52WtTPko+risdVyx3ku2FcXSV7VctLdhbq6FLI+x39Acvhb9xld8njz+Arm3gFiJ
+Aqu8d3oM3kOrjMu12Ks1/j8wrjY6/8drxxULzowcQojyQPAX+4Of7jrrwf3py/
v2+F6CA6OsXzTi5H91UhJ2SPzlnV0L/fZu4utT0q7ie
+Wrvbud5brVvi2w8YJ8Tz0cmnw8VTX0j21llrOd0YJV19xPasvRj4gxtso+r7zHAbON/
Flon4wclm/sl85ARHAF0Q0QRjH7gqX4/OPJa+cNy5wfbzLHPlyZnX
+6xHwln4Vp5ZqDHR3+vyO2wlTnWR9VZxyBDbudZ7r7KuKhb6Y/
Bptfi7h6OT4NGjniPIDO7M+F/KuJ+lvL
+VuU13Lk5j7GDZQbGVVvNP7Is7NvJjXkY7VtaaSq9xXxj2/
abXM5AVWlydnN2cz8POzVjAUDg4+wCGWh7Sc/4/wPim9Ya
+iSnglswHsfOYYNxx3V89c2uhxGi/ajrelp/wof+XveGv/mKult7M+/PRr5udk1cdUfzbbK
+xN7JmKN/wl
+uG9mHAyefNcNZIEsuBt23rlmz0E3Nb2fnHzfnPovpbdlz55X6SyvcSKR9VZKdnfnxorJXf
6Zf7XK6lnRzSnPeMaPIWckydfXQnRefBtqPD4R7z2pnuaeWcjc4cNuV7osl/
0PegFzUQt3z9v1o/vZsek0WlR+euVlj9+woH3l/fFH22Euu6Bj5jk6+5+roBnpzX2xl
+XBF4qu/2DYU1+HX8QubZS/xkZEjegV3JH/
xsvsjHb84+WNs54Zgyz3xG8ilvMgdsZ39ouMv2s9pD94S9quqk0pMNCE4fJxtTX5i
+cTJzwzdzl3SMJH8waT4OyybBkuTgFGPzmws8fq13LJ6+ggPfsq57Qc8Tfdel5HGF/
HxI9LIGy0RX/
xKc17uTtZ38wcrB7eeU3sCy64rH297gPfxBgsmz03vhuOv1L4KfOA3aAzC4aP4uvRt7M
dRyom+aZ1TM+lrxyzaB3oJctQPvlyY4vuC37MdiZfnGdUy59vHO6P38izEeTD6T/xFfq/
qeM53cPZ1/xVe/TQpUZZ/jNOFjAOCGOYb7gV+sP8PRd7RUB4B/agPpDr7lj
+3qy0dUvborTBpW1e2palDcrnHLNzaV8qbUBp6+ezwfnN+nnfMu98N7C0bXPMjv/
yOedZNufalP8P+pfv+XubNM67U/
7m87WxwVxn07S18v06OWa5nHuj0rYvbYN8vm3OtXXOs+O/nHurHL9KaRvm2K1z7l3y
+0E5L/1fPufYKG3dyHDj/G6TnG0djHGn9HX9HLNF+rVxWucayGyF9Jvf7ZDjNsnxm
+Y6Xf8yPmS5Uj4fnH4NTj85fsV8tkN+s3Pkt11kOcDXUF7ju4nP4KP4e2lq/
Gvn3sTjzTWEvcQnrCuO97HKjLz8VKLm0cpJwHXZn0BHgXOicgd9dn31le
+RcYNx1wSFwgPw0MQS4h/
2mRoTw4kzjIXAQ7JlrLKBvwn24LrhNTAPXHmm81hgWztoA99QQQ8CbsD/
iHuxvbrDnCeOQ1uvqK+T41jEPIB9EDsvHbuH58GviE/zjW+6f4mPOCYbA0cB34v
+pvqbwjihjmnX/BHGSC38b+ya+fHvl+HFy5x3JUTH+mbV85hyXtd8X5wJDCI
+EdWpN7y9gjeeCnmRM+727alz1qn6C1WcYlv3T2C4/BofA1z1onBZOjkjc/
15wnL2knOsZ
+xxhlzmræZN4gXwBPD7IGA9sdYvmn7+2T1Zb59g39x5pjX3lrNnT1hGnLdQuBDHsZdzY
HIQa1o3IHtZjxOayrle3Y41crZf4ufhmdyH8P9kRmx/

hKOH6pOXHOn7UJrl1yfNTb4062+hnlb/2F5aP0ffF0I95Hcmdw/fgW/sWr2/d5p/
65nJcBzT7T+KliddJb+Cr5oSnWWEGTnyQJe+Fj1bMetO8CrW0a+Kni/m/
UXyvdjPI55z5Ymfj67j+0fFVpf0fCuXhA97qTnv+V
+dvaJ67k5fx8HaF0KO42D7PeUcF00sMMN2rRw8+Qv2IX7Hvlq6NzY6Ni3r6fTz8cQFk
+Nj4UTIYWKwgHw4uQvmi32CnONe90v3uTBO+vB2uAjX3CixGGvvy7eNK9/
BPKzuXLB4RGrk6/mdT0a3l07M0bInsq8xSvP7TngDnB7dGmK90v096zifhJzkoz
+JbuGP4ZHERP3SB3IBx3p+tS9nAe+hFG/cNbg4KX6duizEiO/FHo52jK011OmWje4fBn8/
t40qhrq1+vBg5lfOXxy7BqexE/JK5G1Oy3rZ09E5+MMfghO3NeffK8W+wdcznxOC+eRrJll
+Vad+LOvmzD95FOypslZ3i
+XdWWMXj3s7fmKS44TOPhJxKXg3uPZC5n2xfAcfdvK6rH1HrGHC+fp1z3/e5Bbm/
dr3cE3mFr802zYi/cBX4n/xifhJfCr+Gh+NH98w3+E/8Zf48G1z3Er5nu/
wyRvkHPjWTFm7/PtW+c1W+X9AvtZ16d+ac+UteWpS7U98r760WPRjNfZRXnl/
fPy2e93aqdPvT27qr3pvl95eXvZ8o7NYC+6K66qA9Lzfw3ilfLMDQwvaac
+5zyGfVf1qOH1v+H526jH+FI5fzUt+Vmv4jXa+emhldqTPbch9apfWW8w+lvj/
1OKgZXj6jxrPBKbms+NKn6Oixhu1VH5d9v9b6qgOd21+6q5Rt1njKr+tbu/Od/
Hdo1wDd/2rNJ41sAV3apXRq38xn3kO8pvy7gal5ZWPuud3q16WjxLgLGhd
+Xaqm1HDTyef3BsOT/1+n9SfjvLcqCWb+c5BdTk5Vklvc93qzY6tXtbwzLuloeul8t31FQ/
uls1fTm+ZxSvZv5vnuPnNXDM0HKtxnl+vgC1yBplHqnx3jO5tDke9pm+Fnjv0/
jXfUxOkFDL3ctE87RdbzrvCXrXWTn6WajKkb24uO8OyGk1LvnXkt56DeZYtnG5zouaEu
G+PskXPfKsf18uyClqPqhvLZdOtsq+hX19WIPVSONvg+57Nxx3X4mxNctP9VgoVb
+kG7VklJNp13L8UWxVAuHeirUdaHOG/
VZtssx1Beixhz1bb4TnaQuErVBqVdJzXyeZ0Ddmyrviv1Pal3s6NtQL/
v1KikThV1yqjLRe3Y75hvqG4wtYgP6cQ5qAuDPIJnkHpHpe
+qgQdvWM9jo4aP6kdSn4h6fdQUOibj+Z77rFpnnGt7f67vqQtDDSVqSnGNPVI/
hnqN9IPfUZ+JmknUaaO2VMF01bqh5iH1Walfg5yoU0b/
DvV8qTYgfaGu0LbWfdWZ2t8yp86i7uOkrt7u+e3dxl3Fi+TW8c2/DGe5pjn/
vsqs6SpWfjt4OyS+HS54pPmY9mCSy4TPN8N3Lshn7GUaZ46kvBPY/Le8X5p
+kGO7w8cqLrgnn8+ML3nQfE2x6WT7CHGc7Eft//
BiuNUMc0ble64NF5yW406zD1bu5+Qcn+e/yFfl+X/qL+NIX9yl
+N8JzXnPxBHHneamPR0Xh7ecn3Wx1MVTraVB5iqqZbSpsbQQWETNNNVx3c1zRI1C1V
xj38ye/o3q5FP77FuOHajvxXIUN/Jrxif0s1f61tTSKzis+pg72q5UL5S1B2pA/
Ti6jh7CmdEVanZRm7ZTu29g9OdLseGiL9Sw7D2323WxWENkv/
G2zonpGWQFz6hVjMh9LwJaQOt3e3nW6websJ4qFG1sMej/AU8lrU6qKulnNga
+jo4BzrdhZ6u6ppjY1xOBL1JLbLb9JTW9e9i4I6W2AANDc2tpxVd2xr7/
fWc3JTB1d1HLFh6kRSIwvZlId9jCfUStMzcAq
+ql4jMeSM6B16cbf1Sjmt4eEZ8Nj9wo8eNydT7pZY8lfWe2ls1ZzFzn/iZ2modu
+2xkvVm9w+c7WlfbCO2db2K+z4gfFCdd6/
k8+pDfZH443q0jEX1OU60bjEs0LaY6xnwk44w2CfV3WnG8Fi8GuwZV1lj/0je/
Pss5SP0s1BI+wLFUHldpyZf5Uzw1s+0//r

+cR7RQcP8yYrZp1BkEp3f1tXn2RJVastSaVE3N3S0D6vRRE181/ra1viEn/
K1q13Ke8h11yxo/N05Su47nHvF8EfwZx2ssB/i5Slynl+eQfN94ST+kp+V6PfjXwi0q6hPvE//
IHH3XmD60cKbeB8r//yz/P1n+ntat5/jQenk2zzP2u70P13MVLtZ1vbiWo/ymp/
C1aqb9LM8iGlip8bBc++57yXo7XM5lmiO8e8ve91P4HMwoX6rqs/D2hfPZCeX+s/
PbmnJc2I3yw/L7n8W7Vo9W+Hfg1cTxzxL5XavRhN8QFa9o2pE/U4qM
+KvHcrvFBPEcFW2UtiLWbnW3Pqn9xZM5BreHfx67Xe
+amvmqFTckvh0s477vg6wHeobAl+Pf0HN889etf1WnLu6e8WtN66lw8SfBAOpVHuc+SJ
+/b57Z80T5Ds5BrV647F/
9rIQcCHWRW93qVre61a1udatb3epWt7rVrW51q1vd6la3utWtbnWrW93qVre61a1udatb3e
pWt7rVrW51q1vd6la3utWtbnWrW93qVre61a1udatb3epWt7rVrW51q1vd6la3utWtbnWrW
93qVre61a1udatb3epWt7rVrW51q1vd6la3utXtv3urGnWrW93qVre61a1udatb3epWt7rVr
W51q9v/hq1+1a/6Vb/qV/2qX/WrftWv+IW/6lf9q/1q37Vr/pVv+pX/apf9at+1a/6Vb/qV/2qX/
WrftWv+IW/6lf9q/1q37Vr/pVv+pX/apf9at+1a/6Vb/qV/2qX/Xrv
+h11JC61a2qeupWt7rVrW51+7+oLbnr//r21SH/Na23Ubf/Lm3WkP/aNvn/Q/vwv1EbWrf/
Yetp1O3/r3bNkLr9n9xm/E9qW9Ttf+vWaPz3b+/ra/ovtuv/nHbPkP93beFd/0ft/wE=
MATRIX|FLOATLE-stream/deflate:base64^Y2Aagf/XRjgtIMDiAkA|||||F|||||technician<CR>
-> OBX|4|ED|CLEANER||CLEANER^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|5|ED|DILUENT||DILUENT^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|6|ED|LYSE||WHITEDIFF^20240223000000^20240223|REAGENT|||||F<CR>
-> OBX|7|NM|6690-2^WBC^LN||8.65|1E03/mm3|0.00 - 100.00^REFERENCE_RANGE|
N|||||F|||||technician||||20240224214212<CR>
-> OBX|8|NM|789-8^RBC^LN||4.04|1E06/mm3|0.00 - 102.00^REFERENCE_RANGE|N|||
F|||||technician||||20240224214212<CR>
-> OBX|9|NM|718-7^HGB^LN||14.3|g/dL|0.0 - 104.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|10|NM|4544-3^HCT^LN||38.7|%|0.0 - 106.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|11|NM|787-2^MCV^LN||95.7|fL|0.0 - 108.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|12|NM|785-6^MCH^LN||35.4|pg|0.0 - 110.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|13|NM|786-4^MCHC^LN||37.0|g/dL|0.0 - 112.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|14|NM|788-0^RDW-CV^LN||12.5|%|0.0 - 116.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>

-> OBX|15|NM|21000-5^RDW-SD^LN||57.3|fL|0.0 - 114.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|16|NM|777-3^PLT^LN||182|1E03/mm3|0 - 118^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|17|NM|32623-1^MPV^LN||11.6|fL|0.0 - 120.0^REFERENCE_RANGE|N|||||F||||
technician||||20240224214212<CR>
-> OBX|18|ST|731-0^LYM#^LN||---|1E03/mm3|0.00 - 128.00^REFERENCE_RANGE|A|||
X|||||technician||||20240224214212<CR>
-> OBX|19|ST|736-9^LYM%^LN||---|%|0.0 - 126.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> OBX|20|ST|742-7^MON#^LN||---|1E03/mm3|0.00 - 132.00^REFERENCE_RANGE|A|||
X|||||technician||||20240224214212<CR>
-> OBX|21|ST|5905-5^MON%^LN||---|%|0.0 - 130.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> OBX|22|ST|751-8^NEU#^LN||---|1E03/mm3|0.00 - 124.00^REFERENCE_RANGE|A|||
X|||||technician||||20240224214212<CR>
-> OBX|23|ST|770-8^NEU%^LN||---|%|0.0 - 122.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> OBX|24|ST|711-2^EOS#^LN||---|1E03/mm3|0.00 - 136.00^REFERENCE_RANGE|A|||
X|||||technician||||20240224214212<CR>
-> OBX|25|ST|713-8^EOS%^LN||---|%|0.0 - 134.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> OBX|26|ST|704-7^BAS#^LN||---|1E03/mm3|0.00 - 140.00^REFERENCE_RANGE|A|||
X|||||technician||||20240224214212<CR>
-> OBX|27|ST|706-2^BAS%^LN||---|%|0.0 - 138.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> OBX|28|ST|53115-2^IMG#^LN||---|1E03/mm3|0.00 - 144.00^REFERENCE_RANGE|
A|||X|||||technician||||20240224214212<CR>
-> OBX|29|ST|71695-1^IMG%^LN||---|%|0.0 - 142.0^REFERENCE_RANGE|A|||X||||
technician||||20240224214212<CR>
-> <FS><CR>

QC - ESR

```
-> <VT>
-> MSH|^~\&|H500/H500E^110YOEHO4272^4.0.0.5|HORIBA_MEDICAL|DRLSCM|
WEBAP|20240328164814||OUL^R22^OUL_R22|24032816481500003|Q|2.5|||||
UNICODE UTF-8<CR>
-> SPM|1|SX944H||QC3|||||CTRL HIGH<CR>
-> OBR|1||ESR|||||||20240224214412||F|||||LabManager<CR>
-> NTE|1|L|
P^^INVALID_REPORT_FOR_Q~P^^REAGENT_EXPIRED~P^^OPEN~D^ESR^ANA_ERR
^UNST_ESR||<CR>
-> OBX|1|ED|ESR^TRANSALONGTIME||FLOATLE-stream/
deflate:base64^hdcHmFXvtQDgStdoLBFjiQppVCzRMWgscebeqyJEjYIllaZNAjRo2PU
qFw1lzJ0GHrvQy9Dh6H3PvQydBh6x7w8TF5ekvd
+8jnvHTZniN93P2b2OXv9a6+91gWzsk7990XqX3+0T9fKykoms7Kq+71/6v/
WLWZlpj906ocqZUX3Vym7Lqdw3oc5fs5ZUVrq55M5N9W/
INd67tF69+SuKH0st7j2y7neyS25uiD3pvqFuT179PC8KDdtdtg7Jbn1C+d5rzRXEO
+W51YrOOL9k7mlRmNv30q8l1MIIWaivGHVRM8elyeeLLk6IX5i/
skaiXTV2x1a9ZMsBKD8nMS9QsSFQtrp3gJgqO1EvkVHK28WWN
+gk5JBo0aJCoVvBWoqwoPyGfRj3yhomsrlw9JtkF9jVntbK3Da/Q/g7MzmJ04/
YQpze7r1gD
+EXiDZHDMDFHqNY3LFymSD2JPmUiD9NTjMZcxjzGAsZixnLGKWMVYw1jPWMMsZ
mxjbgDkY5Yw9jP+Mg4wjjOOMLxp8ZJxl/ZfyN8Y/
EqXsprv21ZP3CryerIH0jqW7JBg2+naxa/J3k/
JPnJNUwWa3g3OSK0vOS6arnJ9UzWVZ0YbLgyEXJmjUvTqptsndDeJcmckPcmj9a7LKn
OyTrIVyS/rHFclD+VUK1P9ULjGsY1zKuY1zPulFxl6MG42bGLYxbGbcxbmdkM
+5g1GTcybiLcTfjHsa9jPsY9zNyGLnJUz1XXDvFeIDxIKMW42FGbUYdxioMRxmPMR5nP
MGoy6jHelrxNOMZxrOM5xjPM15g1Ge8yHiJkcd4mfEK41XGa4wGjNcZbzDeZLzFeJvxD
uNdRj7jPcb7jA8YHzl+YnzM+ITRkPEp4zPG54yMPRIOI/
sasRrb24TXxP6mzAlxCrjNxnGnObi5WC34L8VrKoZWYreTRWtw2cmkjdlv5tBO/
nZwKGe0Z7RkdGB0YHRmdGJ0YnRldGF0YXRndGN0Y3RndGT0YPRk9Gb0YvRm9GX0
YfRI9Gf0Y/
Rn9GQMYAxgDGUWMIsYgxmDGYMYQxIDGUMYwxjDGcMYIxgjGSMYoxjGaEYxo5gxh
jGWMZYxjGOMZ4xgTGBMZExiTGJMZXhTGFUcloYUxiTGNMY0xznzGDMYmxkzGLMY
sxmzGHMYcxlzGXMY8xznzGcsYcxkLGQsYixmLGYsYSxhLGYsYyxjLGeUMkoZKxgrGSs
ZqxirGasZaxhrGGSZ6xjrGosZGxgbGBsZZYwyxibGusZmxhbGFsZWxjGNsZ2xg7GDsZ
Oxi7GLkY5o5yxm7GHsYexl7GPsY
```

```
+xn3GAcYBxkHGQcYhxmHGycYRxiHGUCYxxnHGccYLxBeMLxp8Yf2L8B+PPjD8z/
pNxnGS8SxjL4y/MP7K+Cvjvxh/Y/yN8d+MvzP+zvgH45+MfzL
+h5GVOlovK1VWUJWafzlr5bsr1bPH11IFR76Wei/n6ynfY6k65V9P1az5jVS1gm
+kfKelvqzvxVR5w2+mVpR+M+X7LTUo/1upwnnfSqWrfjvluY71ZMm3UzIVvpO6qf53Ur73/
H11DuMcxjmMxjZxYX8V1GFUYVRhXGuYxzGecyzmOcxziP8T3G9xfY5zPOJ9xPuMCx
gWMCxgXMi5kXMi4kHER4yLGRYzvM77P+D7jYsbFjlsZVRIVGVUZlAuYVzC
+AHjB4wfMC5IXMq4IHEZ4zLGZyZLGJczLmdczriCcQXjCsYPGT9k/
JBxJeNKxpWMqxhXMa5iXM24mnE1oxqjGqNa6tTf80rVWdUZ1RnXMO4hnEN41rGtYxr
GdcxrmNcx/gR40eMHzGuZ1zPuJ5xA
+MGxg2MGxk3Mm5k1GDUYNRg1GDcxLiJcRPjZsbNjJsZtzBuYdzCuJVxK
+NWxo8ZP2b8mHEb4zbGbYzbGbczbdmK7IZ2Yxsxh2MOxh3MH7C
+Anj4yajJqMmow7GXcy7mTcxbiLcRfjp4yfMn7KuJtxN
+Nuxj2Mexj3MO5h3Mu4I3Ev4z7GfYz7GD9j/
IzxM8b9jPsZ9zNyGDmMHEyU15eRy0gWewEl8IIMpKMKJCPFSDFSjAcYDzAeYDzleJDxI
OMhxkOMhxi1GLUYtRgPMx5mPMYozajNqM2ow6jDqMOow/
g54+eMnzMeYTzCeITxKONRqxOMxxiPMR5j/
ILx8YvGI8zHmc8zniC8QTjCUZdRI1GXUZdRj1GPUY9xpOMJxIPMp5iPMV4ivE042nG0
4xnGM8wnmH8kvFLxi8ZzzKeZTzLel7xHOM5xnOM5xnPM55nvMB4gfeC41eMXzF
+XajPqM+oz3iR8SLjRcZLjJcYLzF
+zfg149eMPEYel4+R3iZ8TLjZcYrjFcyRzBeZbzKeJXxG8ZvGL9hvMZ4jfEaowGjAaMB43
XG64zXGW8w3mC8wXiD8VvGbxm/
ZbzJeJPxJuMtxluMtxhvM95mvM34HeN3jN8x3mG8w3iH8S7jXca7jHxGPIOfkc94j/
Ee4z3G7xm/Z/ye8T7jfc7jA8YHzA+YHzl+JDxleMPjD8w/
sD4iPER4yPGx4yPGR8zPmZ8wviE8QmjlaMhoyEjzUg20oxPGZ8yPmV8xviM8Rnjc8bnjM
8Zf2T8kfFHRsaeDCdjX4aVsTfDy9jfiNlIjEbcRul0YjcSqzG/
sXiN5dBvYzMbyaCxuE7k0EbuJfJqI30R0TRhNGU0ZTRINGU0ZTRINGQWMAKYBo4BRw
ChgNGM0YzRjNGM0YzRjNGc0ZzRnNGc0ZzRntGC0YLRgtGC0YLRgtGC0ZLRktGS0ZL
RktGS0YrRitGK0YrRitGK0ZrRmtGa0ZrRmtGa0YbRhtGG0YbRhtGG0YbRitGW0ZbRitG
W0ZbRjtGO0Y7RjtGO0YxQyChmFjEJGlaOQ0Z7RntGe0Z7RntGe0Z7RgdGB0YHRgdGB
0YHRkdGR0ZHRkdGR0ZHRldGJ0YnRidGJ0YnRmdGZ0ZnRmdGZ0ZnRmdGF0YXRhdG
F0YXRhdG0ZXRldGV0ZXRldGN0Y3RjldGN0Y3RjldGd0Z3RndGd0Z3RndGd0YPRg9GD
0YPRg9GD0ZPRk9GT0ZPRk9GT0YvRi9GL0YvRi9GL0ZvRm9Gb0ZvRm9Gb0ZvRm9GH0
YfRh9GH0YfRI9GX0ZfRI9GX0ZfRj9GP0Y/Rj9GP0e9f/8/+ZY3+jP6M/oz+jP6M/
owBjAGMAYwBjAGMAYyBjJGMgYyBjJGMgYwiRhGjifHEKGIUMQYxBjEGMQYxBjEGMQ
YxBjJGMmWYzBjJGMmWYzhjCGMIYwhjCGMIYwhjKGMoYyhjKGMoYyhjGGMYyxhJGGM
YYxhjGGM4YzhjOGM4YzhjNGMEYwRjBGMEYwRjBGmkyRjJGMkYyRjJGMUYxRjFGM
UYxRjFGMUyZrjNGM0YzRjNGM4oZxYxiRjJgmFHMGMMywxjDGMMYwxjDGMSYyxJLG
MsYyxJLGMsYyxjHGMcYyxjHGMcYzXjPGM8YzXjPGM
+YwJjAmMcywJjAmMcyYjJlMmiYyJlMmiYyJjEmMSYxJjEmMSYxJjMmMyYzJjMmMyY
```


5. Appendices

5.1. Error Management

Error Messages Displayed on the Instrument

Message	Definition
H01	Invalid data at order reception
H02	Contextual error at order reception
H03	Host connection error
H04	Communication protocol error (low level) Only for ASTM
H05	Communication protocol error (high level)
H06	Communication protocol error at sending
H07	Host software error

Low Level Protocol Errors (Only for ASTM)

Message	Definition
LL_ENQ_ERROR	Establishment phase conflict ENQ - ENQ
LL_NAK_ERROR	NAK control character received from Host
LL_FRAME_STRUCT_ERROR	Invalid frame structure
LL_LENGTH_ERROR	Invalid frame length
LL_FRAME_NUMBER_ERROR	Invalid frame number
LL_CHECKSUM_ERROR	Invalid frame checksum
LL_UNEXPECTED_CTRL_ERROR	Invalid control character received while expecting a specific one inside a set

Message	Definition
LL_RESPONSE_TIMEOUT_ERROR	Timeout occurs while expecting a control character from Host
LL_FRAME_TIMEOUT_ERROR	Timeout occurs while expecting a data frame or a frame control character (EOT) from Host

High Level Protocol Errors

Message	Definition
HL_UNEXPECTED_RECORD_ERROR	An unexpected (at wrong place in the frame) record has been received and ignored
HL_NOT_MANAGED_RECORD_ERROR	A record not manageable has been received and ignored
HL_IGNORED_RECORD_ERROR	A record has been ignored (following a previous error)
HL_IGNORED_MESSAGE_ERROR	A message has been ignored due to: <ul style="list-style-type: none"> ■ an erroneous field value in a mandatory segment ■ a mandatory segment absent <p>Only for HL7</p>
HL_BYPASSED_RECORD_ERROR	A record of upper level has been ignored (following a previous error)
HL_TERMINATOR_MISSING_ERROR	The Terminator record of a message is missing Only for ASTM
HL_INVALID_ORDER_RECORD_ERROR	Order in response to a query is invalid, record ignored
HL_INVALID_FIELD_ERROR	Invalid field type or value, mandatory field absent, record ignored
HL_FIELD_LENGTH_ERROR	Invalid field length, field truncated or record ignored
HL_FIELD_REPEAT_DELIMITER_ERROR	Not allowed field repeat delimiter, record ignored
HL_FIELD_COMPONENT_DELIMITER_ERROR	Not allowed field component delimiter, field truncated

