



cobas[®] 4800 System

Host Interface Manual
Software Version 2.2



cobas[®]
Life needs answers

Publication information

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■ Revision history

Edition notice

The intended audience for this manual is Host Interface programmers and the Roche Field engineers supporting the system.

Every effort has been made to ensure that all the information is correct at the time of publishing. However, Roche Diagnostics reserves the right to change this publication as necessary and without notice as part of ongoing product development.

Where to find information

The **Safety Manual** contains important safety information. You must read the Safety Manual before operating the system.

The test-specific **Operator's Manual** focuses on routine operation, maintenance, troubleshooting, how to perform a run, and how to handle results.

The test-specific **Instructions for use** provides additional information such as instructions on storage and handling of reagents, samples, and controls.

Screenshots

The screenshots in this publication have been added exclusively for illustration purposes. Configurable and variable data, such as tests, results, or path names visible therein must not be used for laboratory purposes.

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Feedback

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Preface

This document provides a basis for the development of communication between the **cobas®** 4800 software, release 2.2.0 and Laboratory Information Systems (LIS) using the ASTM/CLSI and HL7 communication protocols.

This document covers the generic structure of the communication between the **cobas®** 4800 software and the LIS. Customer-supported Laboratory Information Systems are not part of the **cobas®** 4800 package.

This document describes only the segments and segment fields which are used in communication between the **cobas®** 4800 software and the LIS. All other HL7 segments and segment fields are still valid but are not used by the **cobas®** 4800 software.

Intended use

The **cobas®** 4800 System is intended to be used as a diagnostic or screening system providing sample preparation, amplification and detection of specific targets from human samples. It is to be used by laboratory professionals trained in laboratory techniques and the use of the system.

Symbols and abbreviations

Product names

Except where the context clearly indicated otherwise, the following product names and abbreviations are used:

Product name	Abbreviation
cobas® 4800 software	software, cobas® 4800
cobas® 4800 System	system

■ Product names

Symbols

The following symbols are used:

Symbol	Explanation
•	List item
	Related topics containing further information
	Tip. Extra information on correct use or useful hints.

■ Symbols

Symbol	Explanation
🕒	Figure. Used in figure titles and cross-references to figures.
☷	Table. Used in table titles and cross-references to tables.
↗	Communication from cobas® 4800 to LIS
↖	Communication from LIS to cobas® 4800
☰	Symbols

Abbreviations

The following abbreviations are used:

Abbreviation	Description
ASTM	American Society for Testing and Materials, now ASTM International
CE	Coded Element (HL7)
CH	Chapter
CLS	Clinical and Laboratory Standards Institute
CQ	Composite Quantity with Units (HL7)
Ct	Cycle Threshold
CWE	Coded with Exceptions (HL7)
EI	Entity Identifier (HL7)
EIP	Entity Identifier Pair (HL7)
ERL	Error Location (HL7)
FT	Formatted Text Data (HL7)
GUID	A GUID is a 128-bit integer (16 bytes) that can be used across all computers and networks wherever a unique identifier is required. Such an identifier has a very low probability of being duplicated. The value of a GUID is represented as a 32-character hexadecimal string, such as {21EC2020-3AEA-1069-A2DD-08002B30309D}.
HD	Hierachic Designator (HL7)
HL7	Health Level Seven
ID	Coded Value for HL7 Defined Tables (HL7)
LIS/LIMS	Laboratory Information System/ Laboratory Information Management System
LIS2-A2	Specification for transferring information between clinical laboratory instruments and information systems
MSG	Message Type (HL7)
NCCLS	National Committee for Clinical Laboratory Standards, now CLSI
NM	Numeric (HL7)
OSI	Open Systems Interconnection (OSI) Model (ISO/IEC 7498-1)
SI	Sequence ID (HL7)
ST	String Data (HL7)
TS	Time Stamp (HL7)

☰ Abbreviations

Abbreviation	Description
TX	Text Data (HL7)
VID	Version Identifier (HL7)
XCN	Extended Composite ID Number and Name for Persons (HL7)

■ Abbreviations

What is new in this release

CMV LIS mapping and communication traces

Short description of all major changes in this version.

LIS mapping and communication trace examples have been added for CMV.

- CMV - LIS mapping (121)
- CMV ASTM communication traces (174)
- CMV HL7 communication traces (179)

New order download communication traces

ASTM and HL7 order download communication trace examples have been newly added for the following tests:

- HBV
- HCV
- HCV-GT
- HIV-1
- HBV ASTM communication traces (234)
- HBV HL7 communication traces (239)
- HCV ASTM communication traces (242)
- HCV HL7 communication traces (245)
- HCV GT ASTM communication traces (247)
- HCV GT HL7 communication traces (250)
- HIV-1 ASTM communication traces (253)
- HIV-1 HL7 communication traces (258)

Workflow

Workflow

This chapter describes the types of communication that take place between the **cobas®** 4800 software host interface and the LIS.

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Overview of communication

The LIS interface service interacts between the **cobas®** 4800 and LIS in only one direction: the **cobas®** 4800 initiates the communication to the LIS. The LIS is configured as the server.

The supported scenarios are as follows:

Work order request (for full workflow only):

1. Query from **cobas®** 4800 to LIS
2. Acknowledgment from LIS to **cobas®** 4800 (HL7 protocol only)
3. Order download from LIS to **cobas®** 4800
4. Acknowledgment from **cobas®** 4800 to LIS (HL7 protocol only) or denial of order from **cobas®** 4800 to LIS

Test result upload (for full workflow and PCR Only workflow):

1. Upload of test results and control results from **cobas®** 4800 to LIS
2. Acknowledgment from LIS to **cobas®** 4800 (HL7 protocol only)

Communication scenarios

Each communication scenario consists of a number of messages, sent between the **cobas® 4800** and the LIS.

Work order query

The work order query message is part of the work order request communication scenario.

Communication scenario	Description	Info from cobas® 4800 to LIS	Response from LIS to cobas® 4800
Work order request	The cobas® 4800 asks the LIS to get order details for one or more specimens	Specimen ID ↗ Query is sent for each specimen. (If multiple orders exist for a single specimen, queries are all sent for that specimen.)	
Work order request	The LIS answers with an acknowledgment (HL7 protocol only)		↳ Acknowledgment (HL7 protocol only)

■ Work order query

Work order download

The work order download message is part of the work order request communication scenario.

Communication scenario	Description	Info from cobas® 4800 to LIS	Response from LIS to cobas® 4800
Work order request	The LIS sends order information in response to query		↳ For each specimen: LIS test order and Media Type
Work order request	The cobas® 4800 answers with an acknowledgment (HL7 protocol only)	Acknowledgment ↗ or denial of test order (HL7 protocol only)	

■ Work order download

Additional information for work order download

The **cobas® 4800** software sends a query for one specimen and expects to receive an order for this specimen.

If this is not the case, the software handles the orders as follows.

- **Two or more orders for the same specimen ID:** If more than one order for one specimen ID is available, all the orders for this specimen ID must be sent in the same message. The **cobas® 4800** software accepts the test order for a specimen ID corresponding to the selected test type.
- **Two or more tests within an order for the same specimen ID:** If more than one test is sent within an order to the **cobas® 4800** software, only the first one corresponding to the selected tests is accepted.

The following situations lead to a rejected work order query and the sending of a work order denial:

- **Ordered test is not available or activated in cobas® 4800:** The LIS sends orders to the cobas® 4800 software for tests or subtests which are not available or activated.
- **Ordered test does not match the run started in cobas® 4800:** The LIS sends an order for tests or subtests which are activated in the cobas® 4800 software, but which are not a part of the current run.
- **Ordered test has incorrect specimen type:** The LIS sends an order for a specimen with an incorrect or unsupported specimen type.
- **Order download from LIS:** The LIS may not initiate an active order download to the cobas® 4800 software.

Work order denial

Communication scenario	Description	Info from cobas® 4800 to LIS	Response from LIS to cobas® 4800
Denial of test	The cobas® 4800 sends order information for request	For each specimen: cobas® 4800 sends denial of not matching or additional matching tests ↗	
Work order request	The LIS answers with an acknowledgment		↖ Acknowledgment (HL7 protocol only)
█ Work order denial			

Result upload

Communication scenario	Description	Info from cobas® 4800 to LIS	Response from LIS to cobas® 4800
Result upload	The cobas® 4800 sends the test results of a run to the LIS	Run Type, Test Type, Sub-Test Type, Specimen Type, Test Result, Flags, Specimen ID, Test Time Stamp, Order Time Stamp, Accepted Flag, MWP ID, MWP position and DWP ID ↗	
Result upload	The LIS answers with an acknowledgment		↖ Acknowledgment (HL7 protocol only)
█ Result upload			

Result request from LIS

The LIS may not initiate a result request to the cobas® 4800. This will be denied by the cobas® 4800 for both accepted and unaccepted results.

Known restrictions

Character limitations

In ASTM messages, the characters | \ ^ & are used (in this order) as delimiters and are not configurable.

In HL7 messages, the characters | ^ ~ \ & are used (in this order) as delimiters and are not configurable.

Any character used as a delimiter should not be used in sample barcodes, or any manual text entry field (e.g. comments).

Recovery run

The **cobas® 4800** software allows you to recover runs following specific instrument issues. If the results from the failed run were previously uploaded (results = Failed), these orders may need to be reopened in the LIS to allow the new results to be uploaded.

Recovery run result upload messages have the following features.

For ASTM recovery run results:

- The run type is displayed as “Full”
- The flag M5 is sent in the comment field of the result upload (field C-4) of each R-record
- The result status C is sent in the R-9 field of each R-record

For HL7 recovery run results:

- The run type is displayed as “Full”
- The flag M5 is sent in field NTE-3 for each OBX segment, if field NTE-1 of that segment contains the value 1
- The result status C is sent in the OBX-11 field of each OBX segment
- For ASTM result upload flags, see field C-4 in C record (result) (48).
- For more information about recovery run, see the *cobas® 4800 System System Manual*.

ASTM reference

ASTM (LIS2-A2) protocol

This chapter presents the lower layers of the ASTM (or LIS2-A2) protocol, as used by the **cobas®** 4800 software.

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About the ASTM protocol

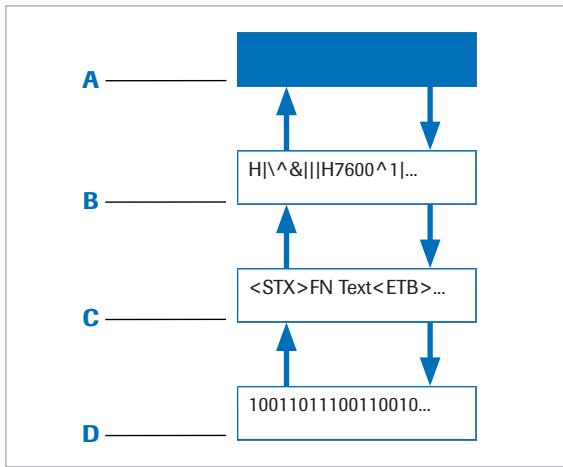
The LIS2-A2 standard is a standard for data communications between analyzers and information systems, maintained by CLSI (Clinical and Laboratory Standards Institute), formerly known as NCCLS. The standard was previously maintained by the ASTM (American Society of Testing and Materials), and provided a standard for communication between automatic analyzers and host computers, designated E1381-91 (Specification for Low-Level Protocol to Transfer Messages Between Clinical Laboratory Instruments and Computer Systems) and E1394-91 (Standard Specifications for Transferring Information Between Clinical Instruments and Computer Systems). The basic specifications of the standards are regulated on X12 of ANSI.

For detailed documentation on the standard, see the following publication.

NCCLS. *Specification for Transferring Information Between Clinical Laboratory Instruments and Information Systems: Approval Standard—Second Edition*. NCCLS document LIS2-A2 (ISBN 1-56238-550-X). NCCLS, 940 West Valley Road, Suite 1400, Wayne Pennsylvania 19087-1898, USA, 2004.

About communication processing layers

The communication process between the **cobas® 4800** software and the host is divided into four layers, as shown here.



You can find details of the ASTM protocol in the *Annual Book of ASTM Standards*. Copyright American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, USA.

- ASTM E1381-91 Low Level Protocol
Specification for Low Level Protocol to Transfer Messages Between Clinical Laboratory Instruments and Computer Systems
- ASTM E1394-91 High Level Protocol
Standard Specification for Transferring Information Between Clinical Instruments and Computer Systems

About ASTM lower layer

ASTM lower layer receives messages for a transmission request from the upper layer. These messages are then split into frames and sent to a communication medium to be transmitted to other parties. ASTM lower layer also constructs frames received from a communication medium to recreate messages to be transferred to the ASTM upper layer as reception messages.

 The maximum size for one ASTM frame is 240 + 7: 240 characters of text, plus 7 characters of frame control characters.

Messages equal to or less than 240 characters are transmitted as one final frame. Messages greater than 240 characters are split into frames that have character lengths that fall within the 240-character limit. The only or final remaining frame becomes the last frame and is indicated by <ETX>. All others are intermediate (middle) frames and are indicated by <ETB>.

Configuration and communication procedures for transmission and reception of frames are explained in the following sections.

ASTM message framing

Item	Method	Explanation
Frame configurations	For middle frame <STX> FN text <ETB> C1 C2 <CR><LF> For last frame <STX> FN text <ETX> C1 C2 <CR><LF>	<ul style="list-style-type: none"> Control character (characters enclosed in <>): <STX> is control character (HEX 02) <ETB> is control character (HEX 17) <CR> is control character (HEX 0D) <LF> is control character (HEX 0A) <ETX> is control character (HEX 03) FN: FN is a single ASCII number. FN indicates the sequence number for a frame (the frame number modulus 8). Frames of a single transmission phase are consecutively numbered beginning with 1, so FN runs from 1 to 7, then continues with 0, 1, and so on. Text: the data content of a frame (maximum 240 characters). Records are sub-divided into intermediate (middle) frames with 240 or fewer characters. Text is part of a split message. C1 and C2: When 1 byte resulting from adding each byte, FN to <ETB> for the middle frame and FN to <ETX> for the last frame, is expressed in hexadecimal, the upper character (161) is C1 and the lower character (160) is C2. Characters used are '0' to '9' or 'A' to 'F'.
Frame character configuration of text	Characters other than <SOH><STX><ETX> <EOT><ENQ><ACK> <DLE><NAK><SYN> <ETB><CR><LF> <DC1><DC2><DC3><DC4>	<SOH> is control character (HEX 01) <EOT> is control character (HEX 04) <ENQ> is control character (HEX 05) <ACK> is control character (HEX 06) <DLE> is control character (HEX 10) <NAK> is control character (HEX 15) <SYN> is control character (HEX 16) <DC1> ~ <DC4> are control characters (HEX 11 ~ 14)
Maximum length of the frame	247 characters	For one frame, maximum of 240 characters for text, plus 7 characters for frame control characters. Messages equal to or less than 240 characters are transmitted as one final frame. Messages greater than 240 characters are split into frames that have character lengths that fall within the 240-character limit. The only or final remaining frame becomes the last frame and is indicated by <ETX>. All others are intermediate (middle) frames and are indicated by <ETB>.

■ ASTM (LIS2-A2) message framing

About ASTM syntax

The structure of the sentences to be transferred, according to ASTM Communication Regulation, is explained in this section. Between the system and the host, various data such as Test Requests and Results are transferred back and forth. All of these data conform to this syntax.

Message A message is constructed with an arrangement of several records (refer to the next item). It is the smallest unit of information transferred between a host and an analyzer. Messages begin with a 'Message Header Record' that indicates the beginning of a message and end with a 'Message Termination Record' that indicates the end of a message.

Record A record is constructed from several fields and expresses a single purpose (such as to specify result reports or test requests). A record may be repeated or used singularly in a message. Code that indicates the purpose of a record is noted in the first character of that record.

Field A field is the ASTM protocol's smallest element to construct information. Attributes for a field (name, format, and meanings) are defined in units in a record.

Coding rules for the message

The ASCII CR character (HEX 0D) is always used to indicate the end of a record.

The following delimiters are supported.

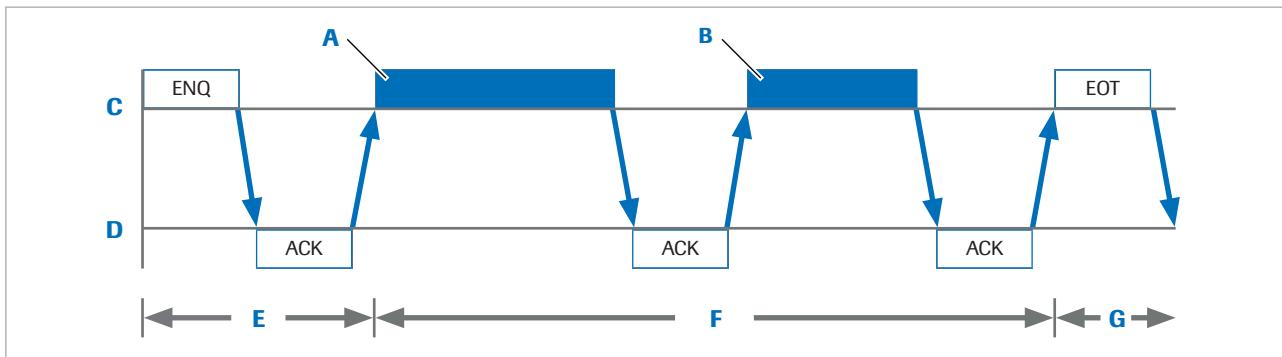
Field delimiters	Repeat delimiters	Component delimiters	Escape delimiters
	\	^	&

■ Supported delimiters

Message transmission phases

To establish which system sends and which system receives information and to assure the actions of sender and receiver are well coordinated, there are three distinct phases in transferring information.

- Establishment phase
- Transfer phase
- Termination phase



A Intermediate frame

B End frame

C Sender

D Receiver

E Establishment phase (ACK must be sent within 10 ms.)

F Transfer phase

G Termination phase

Within the transfer phase, all records of the corresponding message are grouped into longer frames to increase speed. The records are separated through a [CR] character. Therefore, to obtain pure ASTM records again, the receiver must concatenate all the frames and wait for a [EOT] character. Then, the receiver can process the frame and split it into different records using the [CR] as the separator.

Checksum calculation / message frame

Message frames

[STX]	FN	Text first char ... Text last char	ETB	CH	CL	[CR]	[LF]
-------	----	------------------------------------	-----	----	----	------	------

✉ Intermediate frame

[STX]	FN	Text first char ... Text last char	ETX	CH	CL	[CR]	[LF]
-------	----	------------------------------------	-----	----	----	------	------

✉ End frame

[STX] The ASCII code 2, indicating the beginning of a frame transmission.

FN The frame number modulus 8. Frames of a single Transmission Phase are consecutively numbered beginning with 1. So FN runs from 1 to 7, continues with 0, 1, and so on. Use ASCII codes for the digits '0' to '7' (48-55).

Text The data content of a frame (max. 240 characters). Records are sub-divided into intermediate frames with 240 characters. Maximum is indicated by [ETB]. The only or last remaining frame is indicated by [ETX]. Different records must be sent in different frames.

[ETB] The ASCII code 23 (17hex), indicating the end of the text block of an intermediate frame.

[ETX] The ASCII code 3, indicating the end of the text block of an end frame.

CH, CL Represents the high nibble (= most significant 4 bit) and the low nibble (=least significant 4 bit) of the 8-bit checksum respectively. CH and CL are represented as two digits of hex numbers. The checksum is the modulus 8 of the sum of ASCII values of the frame characters starting with and including 'FN' and completing with [ETX] respectively [ETB].

Checksum calculation

[STX] 1 Test [ETX]

Character	Value (hex)	Sum
[STX]	02h	00h
'1'	31h	31h
'T'	+54h	85h
'e'	+65h	EAh

■ Checksum calculation

Character	Value (hex)	Sum
's'	+73h	15Dh
't'	+74h	1D1h
[ETX]	+03h = 1D4h Mod 100h = D4h	1D4h

■ Checksum calculation

Thus the message to be sent is:

[STX]1Test[ETX]D4[CR][LF]

ASTM (LIS2-A2) record definition

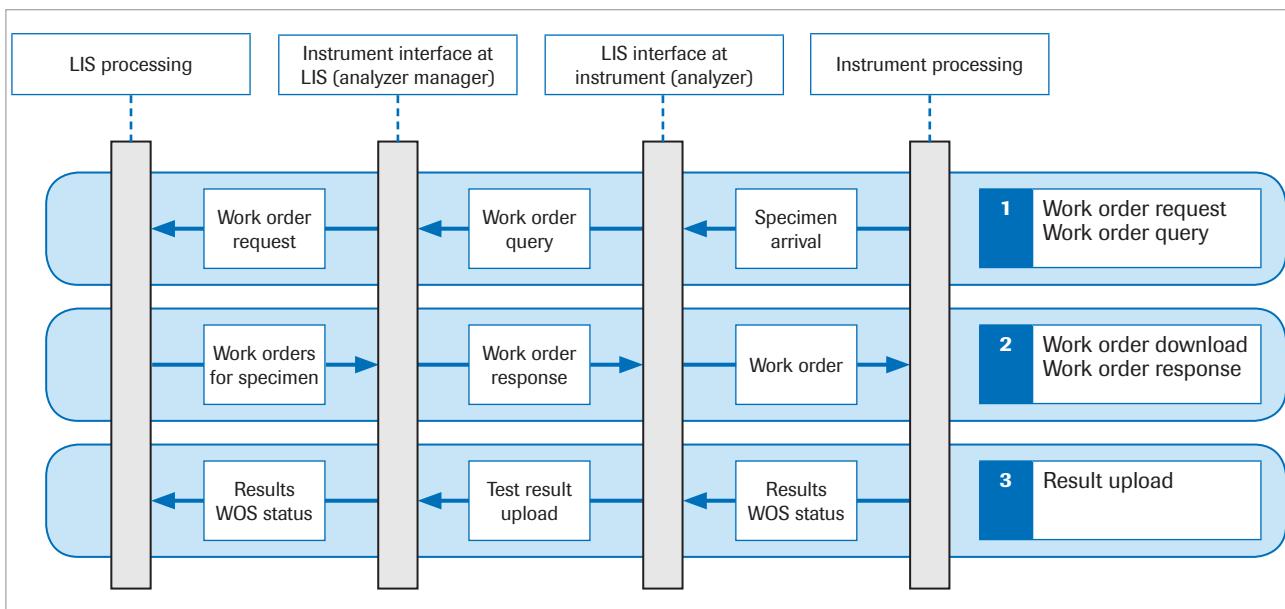
This chapter describes all the ASTM (LIS2-A2) fields used in messages sent to or from the **cobas®** 4800 software, as well as the structure of the messages.

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Overview of ASTM information flow



Message structure

Work order query message structure

Record code	Record name
H	Message header record (ASTM: 7/NCCLS: 6)
L Q	Request information record (ASTM: 12/NCCLS: 11)
L J	Terminator record (ASTM: 13/NCCLS: 12)
■	ASTM work order query

 There will always be only ONE Q-record for each specimen ID. Every specimen ID is queried separately.

Work order download (response) message structure

Record code	Record name
H	Message header record (ASTM: 7/NCCLS: 6)
L P	Patient information record (ASTM:8/NCCLS: 7) Only generic Patient (P 1) is sent, no detailed Patient information
L O	Order record (ASTM: 9/NCCLS: 8)
L O	Order record (ASTM: 9/NCCLS: 8)
L J	Terminator record (ASTM: 13/NCCLS: 12)
■	ASTM work order response

 The LIS can send multiple test orders for one specimen by using separate patient information (P) and order (O) records. Only the first acceptable order is accepted by the **cobas®** 4800 software, and any others are ignored.

Work order denial message structure

Record code	Record name
H	Message header record (ASTM: 7/NCCLS: 6)
L P	Patient information record (ASTM:8/NCCLS: 7) Only generic Patient (P 1) is sent, no detailed Patient information
L O	Order record (ASTM: 9/NCCLS: 8)
L O	Order record (ASTM: 9/NCCLS: 8)
L J	Terminator record (ASTM: 13/NCCLS: 12)
■	ASTM denial from cobas® 4800 to LIS

 The LIS can send multiple test orders for one specimen by using separate patient information (P) and order (O) records. Only the first acceptable order is accepted by the **cobas®** 4800 software, and any others are ignored.

Test result upload

Record code	Record name
H	Message header record (ASTM: 7/NCCLS: 6)
_ P	Patient information record (ASTM:8/NCCLS: 7) Only generic Patient (PI1) is sent, no detailed Patient information
_ O	Order record (ASTM: 9/NCCLS: 8)
_ C	Comment record (ASTM: 11/NCCLS: 10) Specimen comment
_ R	Result Record (ASTM: 10/NCCLS: 9)
_ C	Comment Record (ASTM: 11/NCCLS: 10) Result comment: Flags
_ C	Comment Record (ASTM: 11/NCCLS: 10) Result comment: Control data (only controls)
_ R	Result Record (ASTM: 10/NCCLS: 9)
_ C	Comment Record (ASTM: 11/NCCLS: 10) Result comment: Flags
_ C	Comment Record (ASTM: 11/NCCLS: 10) Result comment: Control data (only controls)
_]	Terminator record (ASTM: 13/NCCLS: 12)

█ Test result upload

Work order query

Query from **cobas® 4800** ↗ LIS

H record Message header record

Field	Type	Description	Format
H-1	String	Record Type ID: The character H identifies the record as a message header record	H
H-2		Delimiter Definition: Field, Repetition, Component and Escape delimiter – exactly in this order	\ ^ &
H-5-1	String	Sender Name or ID: Name of the sending application	cobas 4800 software ^00000000-0000-0000-0000-00000001111^ UserID ^ SWVersion ^1394.LIS2
H-5-2	GUID	Sender Name or ID: GUID A unique identifier for this message given by the cobas® 4800 software.	cobas 4800 software ^00000000-0000-0000-0000-00000001111^ UserID ^ SWVersion ^1394.LIS2
H-5-3	String	Sender Name or ID: The name or shortcut of the user who created the message	cobas 4800 software ^00000000-0000-0000-0000-00000001111^ UserID ^ SWVersion ^1394.LIS2
H-5-4	String	Sender Name or ID - SWVersion The version of the sending software (e.g. 2.1.0.0000)	cobas 4800 software ^00000000-0000-0000-0000-00000001111^ UserID ^ SWVersion ^1394.LIS2
H-5-5	Number	Sender Name or ID: Protocol version – used as a version check to make sure that this message is interpreted correctly	cobas 4800 software ^00000000-0000-0000-0000-00000001111^ UserID ^ SWVersion ^1394.LIS2
H-10	String	Receiver ID: Name of the application receiving the message	LIS
H-11-1	String	Message type: Used to delegate tasks to the analyzer	TSREQ ^REAL
H-11-2	String	Event trigger: Used to delegate tasks to the analyzer	TSREQ ^REAL
H-12	String	Processing mode (processing priority) P = Production	P
H-13	Number	Version number (fixed value: 1)	1
H-14	DateTime	Date/Time of the message. Generated by the source system on creation of this message.	YYYYMMDDhhmmss

■ H record - work order query

Q record Query record (request information record)

Field	Type	Description	Format
Q-1	String	Record Type ID	Q
Q-2	Number	Sequence Number Will always be 1, since there will be always only one query record per message	1
Q-3-2	String	Specimen ID	^BarcodeID

■ Q record - work order query

L record Message termination record

Field	Type	Description	Format
L-1	String	Record Type ID	L
L-2	Number	Sequence Number	1
L-3	Char	Termination Code (N = normal termination)	N

■ L record - work order query

Pseudocode example: work order query (from cobas® 4800 to LIS)

Order query for one specimen. (All segments are sent for each barcode ID).

```
H|^&|||cobas 4800 software^00000000-0000-0000-000000001111^UserID^SWVersion^1394.LIS2|||||LIS|
TSREQ^REAL|P|1|YYYYMMDDhhmmss
Q|1|^BarcodeID
L|1|N
```

Work order response

Order download from LIS  cobas® 4800

H record Message header record

Field	Type	Description	Format
H-1	String	Record Type ID. The character H identifies the record as a message header record.	H
H-2	String	Delimiter Definition. Field, Repetition, Component and Escape delimiter – exactly in this order.	\ ^ &
H-5-1	String	Sender Name or ID: Name of the sending application	LIS^00000000-0000-0000-0000-00000001114^UserID^SWVersion^13 94.LIS2
H-5-2	GUID	Sender Name or ID: GUID A unique identifier for this message given by the cobas® 4800 software.	LIS^00000000-0000-0000-0000-00000001114^UserID^SWVersion^13 94.LIS2
H-5-3	String	Sender Name or ID: The name or shortcut of the user who created the message	LIS^00000000-0000-0000-0000-00000001114^UserID^SWVersion^13 94.LIS2
H-5-4	String	Sender Name or ID: The version of the sending software	LIS^00000000-0000-0000-0000-00000001114^UserID^SWVersion^13 94.LIS2
H-5-5	Number	Sender Name or ID: Protocol version Used as a version check to make sure that this message is interpreted correctly	LIS^00000000-0000-0000-0000-00000001114^UserID^SWVersion^13 94.LIS2
H-10	String	Receiver ID. Name of the application receiving the message	cobas 4800
H-11-1	String	Message type. Used to delegate the tasks to the analyzer	TSDWN^REAL
H-11-2	String	Event trigger. Used to delegate tasks to the analyzer	TSDWN^REAL
H-12	String	Processing mode (processing priority) P = Production	P
H-13	Number	Version number (fixed value: 1)	1
H-14	DateTime	DateTime of the message. Generated by the source system on creation of the message.	YYYYMMDDhhmmss

■ H record - work order response

P record Patient information record

Field	Type	Description	Format
P-1	String	Record Type	P
P-2	Number	Sequence Number	1

■ P record - work order response

 The cobas® 4800 software does not support detailed patient information, but it appears in communication logs if sent from the LIS. Therefore a generic patient record has to be sent.

⚠ WARNING**Disclosure of confidential data due to entry in the comment field**

If you enter confidential data (such as patient data, test results interpretation, service account credentials) into the comment field, it can be viewed by unauthorized users.

- ▶ Do not enter any confidential patient-relevant information into the comment field (work order file, result). There is the risk of unauthorized access to patient data.

⚠ WARNING**Disclosure of confidential data due to patient information being returned by the LIS**

Any data not requested in the order query can be recorded in a communication log file.

- ▶ Set up the LIS system so that it does not return patient information in addition to the data requested by the system.

O record Test order record

Field	Type	Description	Format
O-1	String	Record Type ID	○
O-2	Number	Sequence Number. Note: LIS might send multiple test orders for one specimen by using separate Order Records (e.g. O 1, O 2, ...). Only the first acceptable order is accepted by the cobas® 4800 .	1
O-3	String	Specimen ID: Barcode ID assigned to the specimen	BarcodeID
O-5-4	String	Universal Test ID (LIS Order Code). The exact test that the LIS must place in the order. For a complete list of supported LIS order codes, see Test specific mapping tables (115)	^^^LISOrderCode^^Full
O-5-6	String	Run Type. Identifies the run type of the specimen. Permitted value is: Full = Full run of all system components (cobas x 480 and cobas z 480)	^^^LISOrderCode^^Full
O-8	DateTime	Specimen Collection Date and Time. The date/time when the order was created.	YYYYMMDDhhmmss
O-12	String	Action Code N = New order	ActionCode
O-15	DateTime	Date/time when the order was received	YYYYMMDDhhmmss
O-16-1	String	Media Source: Specimen Type. Note: For PCR only tests this field is empty. For a complete list of Specimen Types, see Test specific mapping tables (115)	SpecimenType^P

■ O record - work order response

Field	Type	Description	Format
O-16-2	String	Media Source: P = Patient	SpecimenType^P
O-17	String	Ordering Physician. The user who created the order. (e.g. Admin, LabOperator, etc.)	UserID
O-26	String	Report types • O = Order Record; user asking that analysis be performed • Y = no Order on Record for this test	O Y

■ O record - work order response

 For missing orders, the host must send at least the O-3 component with the specimen ID, and the O-26 field with Y (as well as fields O-1 and O-2).

L record Message termination record

Field	Type	Description	Format
L-1	String	Record Type ID	L
L-2	int	Sequence Number	1
L-3	Char	Termination Code (N = normal termination)	N

■ L record - work order response

Pseudocode examples: Work Order Response (Order download from LIS to cobas® 4800)

Example 1: Response for a specimen with one order available.

```
H|^&||LIS^0000000-0000-0000-000000001114^UserID^SWVersion^1394.LIS2|||||cobas4800|TSDWN^REAL
|P|1|YYYYMMDDhhmmss|
P|1
O|1|BarcodeID1||^^^LISOrderCode^^RunType|||YYYYMMDDhhmmss||||ActionCode|||YYYYMMDDhhmmss|SpecimenTyp
e^P|UserID|||||||ReportType
L|1|N
```

Example 2: Response for a specimen with multiple orders available. In this case, the order with the LISOrderCode corresponding to the test previously selected in the **cobas® 4800** software is accepted and the other orders are ignored.

```
H|^&||LIS^0000000-0000-0000-000000001114^UserID^0.0.0.0^1394.LIS2|||||cobas4800|TSDWN^REAL|P
|1|YYYYMMDDhhmmss
P|1
O|1|BarcodeID1||^^^LISOrderCode1^^RunType|||YYYYMMDDhhmmss||||ActionCode|||YYYYMMDDhhmmss|SpecimenTy
pe^P|UserID|||||||ReportType
P|2
O|1|BarcodeID1||^^^LISOrderCode2^^RunType|||YYYYMMDDhhmmss||||ActionCode|||YYYYMMDDhhmmss|SpecimenTy
pe^P|UserID|||||||ReportType
L|1|N
```

Example 3: Missing order

```
H|^&||LIS^0000000-0000-0000-000000001116^UserID^0.0.0.1^1394.LIS2|||||cobas
4800|TSDWN^REAL|P|1|YYYYMMDDhhmmss
```

```
P|1  
O|1|BarcodeID1||^^^^^RunType|||YYYYMMDDhhmmss||||N|||||||Y  
L|1|N
```

Work order denial

Denial from **cobas® 4800** ↗ LIS

H record Message header record

Field	Type	Description	Format
H-1	String	Record Type ID. The character H identifies the record as a message header record.	H
H-2		Delimiter Definition. Field, Repetition, Component and Escape delimiter – exactly in this order.	\ ^ &
H-5-1	String	Sender Name or ID: Name of the sending application.	cobas 4800 software ^00000000-0000-0000-0000-00000001111^UserID^SWVersion^1394.LIS2
H-5-2	GUID	Sender Name or ID: GUID A unique identifier for this message given by the cobas® 4800 software.	cobas 4800 software ^00000000-0000-0000-0000-00000001111^UserID^SWVersion^1394.LIS2
H-5-3	String	Sender Name or ID: The name or shortcut of the user who created the message.	cobas 4800 software ^00000000-0000-0000-0000-00000001111^UserID^SWVersion^1394.LIS2
H-5-4	String	Sender Name or ID: The version of the sending software. (e.g. 2.1.0.0000)	cobas 4800 software ^00000000-0000-0000-0000-00000001111^UserID^SWVersion^1394.LIS2
H-5-5	Number	Sender Name or ID: Protocol version Used as a version check to make sure that this message is interpreted correctly.	cobas 4800 software ^00000000-0000-0000-0000-00000001111^UserID^SWVersion^1394.LIS2
H-10	String	Receiver ID Name of the application receiving the message	LIS
H-11-1	String	Message type: Used to delegate the tasks to the analyzer	RSUPL ^REAL
H-11-2	String	Event trigger: Used to delegate tasks to the analyzer	RSUPL ^REAL
H-12	String	Processing mode (processing priority) P = Production	P
H-13	Number	Version number (fixed value: 1)	1
H-14	DateTime	DateTime of the message. Generated by the source system on creation of the message.	YYYYMMDDhhmmss

■ H record - work order denial

P record Patient information record

Field	Type	Description	Format
P-1	String	Record Type	P
P-2	Number	Sequence Number	1

■ P record - work order denial

 The **cobas®** 4800 software does not support detailed patient information, but it appears in communication logs if sent from the LIS. Therefore a generic patient record has to be sent.

O record Test order record

Field	Type	Description	Format
O-1	String	Record Type ID	O
O-2	Number	Sequence Number. Note: The LIS can send multiple test orders for one specimen by using separate Order Records (e.g. O 1, O 2,...). Only the first acceptable order is accepted by the cobas® 4800, others are refused.	1
O-3	String	Specimen ID: Barcode ID assigned to the specimen	BarcodeID
O-5-4	String	Universal Test ID (LIS Order Code).  For a complete list of supported LIS order codes, see Test specific mapping tables (115)	^^^LISOrderCode^^Full
O-5-6	String	Run Type: Identifies the run type of the specimen. Permitted value is: <ul style="list-style-type: none">• Full = Full run of all system components (cobas x 480 and cobas z 480)	^^^LISOrderCode^^Full
O-8	DateTime	Specimen Collection Date and Time: Contains the date/time when the order was created.	YYYYMMDDhhmmss
O-12	String	Action Code N = New order	ActionCode
O-16-1	String	Media Source: Specimen Type. Note: For PCR only tests this field is empty.  For a complete list of Specimen Types, see Test specific mapping tables (115)	SpecimenType^P
O-16-2	String	Media Source: P = Patient	SpecimenType^P
O-17	String	Ordering Physician. The user who created the order. (e.g. Admin, LabOperator, etc.)	UserID
O-26	String	Report Type X = Order cannot be processed	ReportType

 O record - work order denial

L record Message termination record

Field	Type	Description	Format
L-1	String	Record Type ID	L
L-2	int	Sequence Number	1
L-3	Char	Termination Code	N

 L record - work order response

**Pseudocode example: work order denial
(denial from cobas® 4800 to LIS)**Order query denied by **cobas® 4800**

```
H|^&||cobas 4800 software^0000000-0000-0000-0000-000000001114^UserID^0.0.0.0^1394.LIS2||||LIS|RS
UPL^REAL|P|1|YYYYMMDDhhmmss
P|1
O|1|BarcodeID1||^^^LISOrderCode^^RunType|||YYYYMMDDhhmmss||||ActionCode||||SpecimenType^P|UserID|||||
|||||X
L|1|N
```

Result upload

Result upload from **cobas® 4800** ↳ LIS

H record Message header record

Field	Type	Description	Format
H-1	String	Record Type ID: The character H identifies the record as a message header record	H
H-2	String	Delimiter Definition: Field, Repetition, Component and Escape delimiter – exactly in this order	\ ^ &
H-5-1	String	Sender Name or ID: Name of the sending application	cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^SWVersion^1394.LIS2
H-5-2	GUID	Sender Name or ID: GUID A unique identifier for this message given by the cobas® 4800 software.	cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^SWVersion^1394.LIS2
H-5-3	String	Sender Name or ID: The user who initiated the export. (e.g. Admin, LabOperator, etc.)	cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^SWVersion^1394.LIS2
H-5-4	String	Sender Name or ID: Version of the sending software (e.g. 2.1.0.0000)	cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^SWVersion^1394.LIS2
H-5-5	Number	Sender Name or ID: Protocol version – used as a version check to make sure that this message is interpreted correctly	cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^SWVersion^1394.LIS2
H-10	String	Receiver ID: Name of the application receiving the message	LIS
H-11-1	String	Message type used to delegate the tasks to the analyzer	RSUPL^REAL
H-11-2	String	Event trigger used to delegate the tasks to the analyzer	RSUPL^REAL
H-12	String	Processing mode (processing priority) P = Production	P
H-13	Number	Version number (fixed value: 1)	1
H-14	DateTime	DateTime of the message. Generated by the source system on creation of the message.	YYYYMMDDhhmmss

■ H record - result output

P record Patient information record

Field	Type	Description	Format
P-1	String	Record Type	P
P-2	Number	Sequence Number (Max for one run = 96)	1

■ P record - result output

 The **cobas®** 4800 software does not support detailed patient information, but it appears in communication logs if sent from the LIS. Therefore a generic patient record has to be sent.

O record Test order record

Field	Type	Description	Format
O-1	String	Record Type ID	O
O-2	Number	Sequence Number	1
O-3-1	String	Specimen ID: Unique identifier of the sample (Barcode assigned to the sample: Specimen ID or Control ID)	BarcodeID ^MWPBarcode ID ^ MWPPos ^^^ DWPBarcodeID
O-3-2	String	Specimen ID: MWP-Plate ID	BarcodeID ^ MWPBarcodeID ^ MWPPos ^^^ DWPBarcodeID
O-3-3	String	Specimen ID: MWP Position. Note: For multiwell tests, this component may be separated by colons (:). (e.g. A06:A07:A08)	BarcodeID ^ MWPBarcode ID ^ MWPPos ^^^ DWPBarcodeID
O-3-6	String	Specimen ID: DWP Plate ID	BarcodeID ^ MWPBarcode ID ^ MWPPos ^^^ DWPBarcodeID
O-5-4	String	Universal Test ID: LIS Order Code The exact test that the LIS must place in the order. For a complete list of supported LIS order codes, see Test specific mapping tables (115)	^^^ LISOrderCode ^^RunType
O-5-6	String	Universal Test ID: Run Type Identifies the run type of the specimen Permitted values are: <ul style="list-style-type: none">Full = Full run of all system components (cobas x 480 and cobas z 480)AnD = Amplification and Detection only (cobas z 480)	^^^LISOrderCode^^ RunType
O-8	DateTime	Specimen Collection Date and Time: Contains the date/time when the order was created.	YYYYMMDDhhmmss
O-12	String	Action Code <ul style="list-style-type: none">N = New orderQ = Control	ActionCode
O-15	DateTime	Date/time when order was received	YYYYMMDDhhmmss
O-16-1	String	Media Source: Specimen Type For a complete list of Specimen Types, see Test specific mapping tables (115) Note: for control and PCR only tests, this component is empty	Specimen: SpecimenType ^SpecimenRole Control: <Empty>^SpecimenRole

 O record - result output

Field	Type	Description	Format
O-16-2	String	Media Source: Specimen Role Specimen: P (fixed value) ↳ Controls: For a complete list of Specimen Roles, see Test specific mapping tables (115)	Specimen: SpecimenType ^ SpecimenRole Control: <Empty> ^ SpecimenRole
O-17	String	User ID: The user who created the order. (e.g. Admin, LabOperator, etc.)	UserID
O-26	String	Report Types • P = preliminary results • F = final results	ReportType

■ O record - result output

C record (order)

Optional: the C Record is not sent if there is no comment for the specimen.

Field	Type	Description	Format
C-1	String	Record Type ID	C
C-2	Number	Sequence Number (cobas® 4800 software supports only one comment for the specimen)	1
C-3	String	Comment Source	I
C-4	String	Comment Text: Sample Comment, entered by the user during Full workflow or in Result View	CommentText
C-5	String	Comment Type: G = Generic	G

■ C record - result output

R record

Result record

Field	Type	Description	Format
R-1	String	Record Type ID	R
R-2	Number	Sequence Number For each order which is transmitted a number is set starting from 1 to n (depending on the total number of results for the respective test) Note: G&O tests provide only test result (as1) and the detected mutations (as 2, 3, ..., n) for a sample	1, 2, ...n
R-3-4	String	Universal Test ID: Result Code Contains the name of a result. ↳ For a complete list of result codes, see Test specific mapping tables (115)	^^^ ResultCode
R-4	String	Data or Measurement Value: Result value. ↳ For a complete list of result texts, see Test specific mapping tables (115)	ResultText
R-5	String	Units Used for quantitative tests only, otherwise empty.	UnitValue

■ R record - result output

Field	Type	Description	Format
R-9	String	Result Status: • F: Final, result was accepted • P: Preliminary, result was not accepted • C: Corrected, Recovery Workflow In recovery run results, the result status C is sent in this field for each R-record.  For more information, see Recovery run (18)	ResultStatus
R-11	String	Operator Identification User who initiated the run (e.g. Admin, LabOperator, etc.)	UserID
R-12	DateTime	Date/Time Test Started Time when the test was started on the instrument	YYYYMMDDhhmmss
R-13	DateTime	Date/Time Test Completed Time when the test was finished on the instrument	YYYYMMDDhhmmss
R-14	String	Instrument Identification	z480SN_BlockSN

 R record - result output

C record (result) Flags (for specimens)

Field	Type	Description	Format
C-1	String	Record Type ID	C
C-2	Number	Sequence Number: Always 1	1
C-3	String	Comment Source	I
C-4	String	Comment Text F for Flags Always F followed by comma-separated list of flags or NONE if no flags present	F;NONE or F;Flag1 , Flag2
C-5	String	Comment Type: G: Generic comment	G

 C record - result output - flags (for specimens)

Cycle threshold values (for controls only)

Field	Type	Description	Format
C-1	String	Record Type ID	C
C-2	Number	Sequence Number: Always 2	2

 C record - result output - cycle threshold values (for controls only)

Field	Type	Description	Format
C-3	String	Comment Source	I
C-4	String	Comment Text: Semicolon-separated list of pairs: CtKey:Channel_ID (MasterMix_ID),CtValue;CtKey:Channel_ID (MasterMix_ID),CtValue; Example 1: Ct:0 (MMx 1),39.3;Ct:1 (MMx 1),39.3;Ct:3 (MMx 1),39.3;Ct:5 (MMx 1),39.3 Example 2: MMx1Ct:0 (MMx 1),39.3;MMx2Ct:1 (MMx 2),39.3; MMx3Ct:3 (MMx 3),39.3; MMx2Ct:5 (MMx 4),39.3 Example 3: Ct:1 (MMx 1),31.28 Example 4: '	CtKey:Channel_ID1 (MasterMix_ID1),CtValue;CtKey:Channel_ID2 (MasterMix_ID2),CtValue; CtKey:Channel_ID3 (MasterMix_ID3),CtValue;CtKey:Channel_ID4 (MasterMix_ID4),CtValue
C-5	String	Comment Type: G: Generic comment	G

█ C record - result output - cycle threshold values (for controls only)

 The C record for control values is test specific. For this reason, in some cases no C record is sent.

L record Message termination record

Field	Type	Description	Format
L-1	String	Record Type ID	L
L-2	int	Sequence Number	1
L-3	Char	Termination Code	N

█ L record - result output

Pseudocode example: result upload (result upload from cobas® 4800 to LIS)

Example 1: control and specimens

```
H|^&|||cobas 4800 software^00000000-0000-0000-0000-000000001120^UserID^0.0.0.0000^1394.LIS2|||||LIS
|RSUPL^REAL|P|1|YYYYMMDDhhmmss
P|1|CtrlBarcodeID1^MWPBarcodeID^MWPPos^^^DWPBarcodeID|| ^^^LISOrderCode^^RunType|||20120427123100|||||
ActionCode|||YYYYMMDDhhmmss|^ControlName1|UserID|||||||ReportType
C|1|I|F;Flag1|G
R|1|^ResultCode1|Valid|Unit||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_BlockSN
C|1|I|F;Flag1|G
C|2|I|Ct:ChID1 (MMx 1),XX.X;Ct:ChID2 (MMx 1),XX.X;Ct:ChID3 (MMx 1),XX.X|G
R|2|^ResultCode2|Valid|Unit||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_BlockSN
C|1|I|F;Flag1|G
```

```
C|2|I|Ct:ChID1 (MMx 1),XX.X;Ct:ChID2 (MMx 1),XX.X;Ct:ChID3 (MMx 1),XX.X|G
P|2
O|1|CtrlBarcodeID2^MWPBarcodeID^MWPPos^^^DWPBarcodeID||^^^LISOrderCode^^RunType|||20120427123100|||||
ActionCode|||YYYYMMDDhhmmss|^ControlName2|UserID|||||||ReportType
C|1|I||G
R|1|^^^resultCode1|Valid|Unit|||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_BlockSN
C|1|I|F;Flag1|G
C|2|I|Ct:0 (MMx 1),XX.X;Ct:1 (MMx 1),XX.X;Ct:5 (MMx 1),XX.X|G
R|2|^^^resultCode2|Valid|Unit|||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_BlockSN
C|1|I|F;Flag1|G
C|2|I|Ct:0 (MMx 1),XX.X;Ct:1 (MMx 1),XX.X;Ct:5 (MMx 1),XX.X|G
P|3
O|1|BarcodeID1^MWPBarcodeID^MWPPos^^^DWPBarcodeID||^^^TestCode^^RunType|||YYYYMMDDhhmmss||||ActionCo
de|||YYYYMMDDhhmmss|MediaType^P|UserID|||||||ReportType
C|1|I|CommentSample1|G
R|1|^^^resultCode1|ResultText|Unit|||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_Bloc
kSN
C|1|I|F;Flag1|G
R|2|^^^resultCode2|ResultText|Unit|||||ResultStatus||UserID|YYYYMMDDhhmmss|YYYYMMDDhhmmss|z480SN_Bloc
kSN
C|1|I|F;Flag1|G
```

 If multiple sub-tests are ordered, an R record is generated for each sub-test.

HL7 reference

HL7 protocol

This chapter presents the lower layers of the HL7 protocol, as used by the **cobas®** 4800 software.

4

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Overview of HL7

HL7 or “Health Level 7” is one of the most comprehensive and widely-used protocols in the healthcare environment. Nevertheless, the standard is so wide and complex that **cobas®** 4800 software uses only a subset.

The HL7 Standard currently addresses the interfaces among various systems that send or receive patient admissions/registration, discharge or transfer (ADT) data, queries, resource and patient scheduling, orders, results, clinical observations, billing, master file update information, medical records, scheduling, patient referral, and patient care. It does not try to assume a particular architecture with respect to the placement of data within applications but is designed to support a central patient care system as well as a more distributed environment where data resides in departmental systems.

The **cobas®** 4800 software implementation of HL7 is based on v2.5.1.

Physical communication

The standard HL7 refers to the highest level of the Open System Interconnection (OSI) model of the International Standards Organization (ISO). The HL7 Standard is primarily focused on the issues that occur within the seventh, or application, level. These are the definitions of the data to be exchanged, the timing of the exchanges, and the communication of certain application-specific errors between the applications. This chapter gives some recommendations for how to use HL7 with cobas® 4800 software.

Minimal layer protocol

Data framing is done using the Minimal Layer Protocol (MLP) defined in the HL7 standard, (sometimes referred to as MLLP, Minimal Lower Layer Protocol).

HL7 messages are enclosed by special characters to form a block. The format is as follows:

```
<start_block>data<end_block><CR>
```

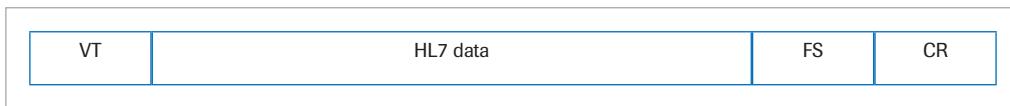
<start_block> Start Block character (1 byte)
ASCII <VT>, in other words, <0x0B>. This should not be confused with the ASCII characters SOH or STX.

data Data (variable number of bytes)
This is the HL7 data content of the block.
The data can contain any displayable ASCII characters and the carriage return character, <CR>.

<end_block> End Block character (1 byte)
ASCII <FS>, in other words, <0x1C>. This should not be confused with the ASCII characters ETX or EOT.

<CR> Carriage Return (1 byte)
The ASCII carriage return character, in other words, <0x0D>.

The values used are <VT> for the start block and <FS> for the end block.



☞ The HL7 data framed according to the HL7 standard

HL7 message definition

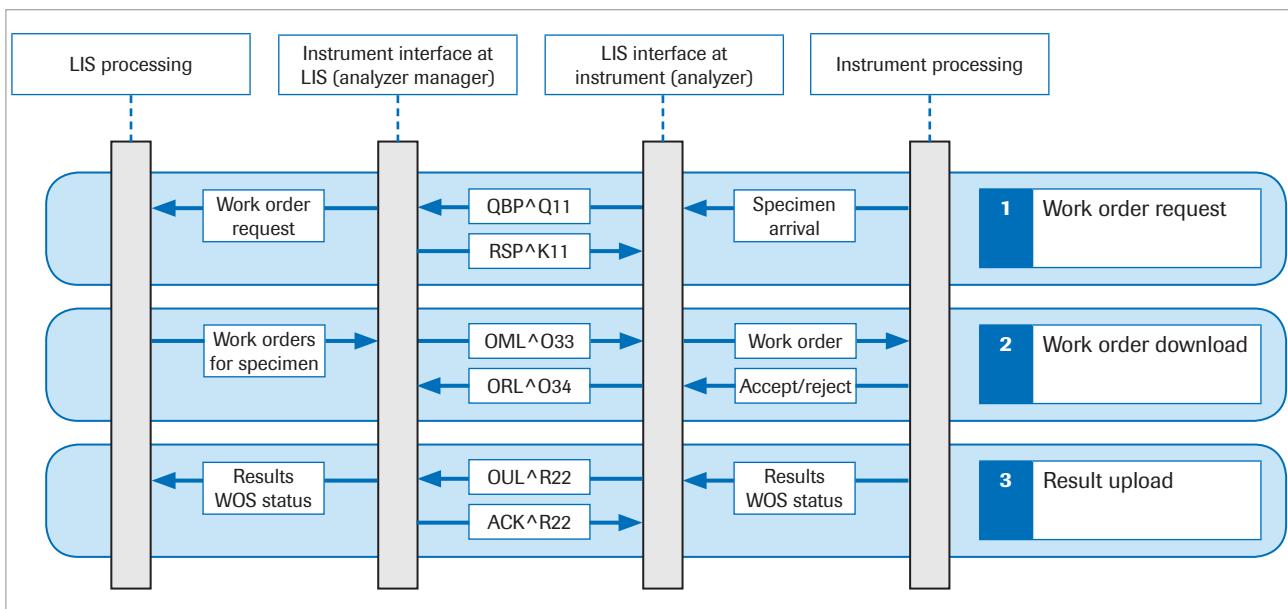
This section describes all of the HL7 fields used in messages sent to or from the **cobas®** 4800 software.

5

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Overview of HL7 information flow



HL7 message structure

This section describes the types of HL7 message transferred by the LIS or **cobas® 4800**.

The following charts use these symbols:

- [] Square brackets indicate an optional segment. (0 - 1 times.)
- { } Curly brackets indicate a segment or group of segments that may be optionally repeated. (1 - n times.)

The **cobas® 4800** message structure is based on version 2.5.1 of the HL7 specification and adapted to the requirements of the **cobas® 4800**. The message structure cannot be changed.

Work order query

QBP^Q11 message (query from **cobas® 4800 ↗ LIS**):

Segment name	Segment description
MSH	Message Header Segment, HL7 CH02
QPD	Query Parameter Segment, HL7 CH05
RCP	Response Control Parameter, HL7 CH05
■ QBP^Q11 message	

 There will always be only one QBP^Q11 message for each specimen ID.

RSP^K11 message (acknowledgment from LIS ↗ **cobas® 4800**):

Segment name	Segment description
MSH	Message Header Segment, HL7 CH02
MSA	Message Acknowledge Segment, HL7 CH02
[ERR]	Message Error Segment, HL7 CH02
QAK	Query Acknowledge Segment, HL7 CH05
QPD	Query Parameter Segment, HL7 CH05
■ RSP^K11 message	

Work order download

OML^O33 message (order download from LIS ↗ **cobas® 4800**):

Segment name	Segment description
MSH	Message Header Segment, HL7 CH02
{ SPM	Specimen Segment, HL7 CH07
■ OML^O33 message	

Segment name	Segment description
SAC	Specimen Container Detail Segment, HL7 CH13
{ ORC	Common Order Segment, HL7 CH04
[OBR]	Observation Request Segment, HL7 CH04
}	
}	
	■ OML^O33 message

Work order download response

ORL^O34 message (acknowledgment from **cobas® 4800 LIS**):

Segment name	Segment description
MSH	Message Header Segment, HL7 CH02
MSA	Message Acknowledge Segment, HL7 CH02
[ERR]	Message Error Segment, HL7 CH02
[{ SPM	Specimen Segment, HL7 CH07
SAC	Specimen Container Detail Segment, HL7 CH13
ORC	Common Order Segment, HL7 CH04
}]	
	■ ORL^O34 message

Result upload

OUL^R22 message (result upload from **cobas® 4800 LIS**):

Segment name	Segment description	Additional description
MSH	Message Header Segment, HL7 CH02	
{ SPM	Specimen Segment, HL7 CH07	
SAC	Specimen Container Detail Segment, HL7 CH13	
[INV]	Inventory Detail Segment, HL7 CH13	This INV segment is only needed for controls, e.g. positive control.
OBR	Observation Request Segment, HL7 CH04	
ORC	Common Order Segment, HL7 CH04	
OBX	Observation/Result Segment, HL7 CH07	The first OBX segment represents the start and end time of a test.
{ OBX }	Observation/Result Segment, HL7 CH07	The second and the following OBX segments represent the results for the current specimen.
INV	Inventory Detail Segment, HL7 CH13	The first INV segment represents the Multi Well Plate (MWP).
		■ OUL^R22 message

Segment name	Segment description	Additional description
[INV]	Inventory Detail Segment, HL7 CH13	The second INV segment represents the Deep Well Plate (DWP), if available.
NTE	Notes and Comments Segment, HL7 CH02	The first NTE segment contains information about flags.
NTE	Notes and Comments Segment, HL7 CH02	The second NTE segment contains information about CT values for controls only.
{ NTE }	Notes and Comments Segment, HL7 CH02	The third NTE segment contains specimen comments.

■ OUL^R22 message

ACK^R22 message (acknowledgment from LIS  cobas® 4800)

Segment name	Segment description
MSH	Message Header Segment, HL7 CH02
MSA	Message Acknowledge Segment, HL7 CH02
[ERR]	Message Error Segment, HL7 CH02

■ ACK^R22 message

Work order query

HL7 QBP^Q11 messages

Query from **cobas® 4800** ↳ LIS

Segment name
MSH
QPD
RCP
■ QBP^Q11 message

Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3	ST	Sending Application (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version
MSH-4	HD	Sending Facility (fixed value if empty: two quotation marks)	""
MSH-5	HD	Receiving Application (fixed value: LIS)	LIS
MSH-6	HD	Receiving Facility (fixed value: LIS Facility)	LIS Facility
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100	YYYYMMDDhhmmss+-hhmm
MSH-9-1	ID	Message Code (fixed value: QBP)	QBP^Q11^QBP_Q11
MSH-9-2	ID	Trigger Event (fixed value: Q11)	QBP^Q11^QBP_Q11
MSH-9-3	ID	Message Structure (fixed value: QBP_Q11)	QBP^Q11^QBP_Q11
MSH-10	ST	Message ID. GUID generated by the instrument (cobas® 4800 software). 128-bit integer. <ul style="list-style-type: none"> • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFFFFFF 	e.g. 00000000-0000-0000-0000-000000001111
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P =Production	P
MSH-12	VID	HL7 Version ID. Used as a version check to make sure that this message is interpreted correctly (fixed value: 2.5.1)	2.5.1
MSH-15	ID	Accept Acknowledgment Type (fixed value: ER)	ER

■ Message header segment - MSH

Field	Type	Description	Format
MSH-16	ID	Application Acknowledgment Type (fixed value: AL)	AL
MSH-18	ID	Character Set (fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for QBP^Q11 messages: LAB-27^IHE)	LAB-27^IHE

■ Message header segment - MSH

Query parameter segment - QPD

Field	Type	Description	Format
QPD-1-1	CE	Message Query Name (fixed value: WOS)	WOS^Work Order Step^IHELAW
QPD-1-2	CE	Message Query Description (fixed value: Work Order Step)	WOS^Work Order Step^IHELAW
QPD-1-3	CE	Message Query Coding System (fixed value: IHELAW) In some cases, coding system values are not sent if the preceding sub-component is empty.	WOS^Work Order Step^IHELAW
QPD-2	ST	Query Tag (contains a cobas® 4800-generated GUID). This query tag is reflected in the RSP^K11 message in both segments QAK-1 and QPD-2.	e.g. 00000000-0000-0000-0000-000000009991
QPD-3	ST	Container Identifier (contains the specimen barcode)	BarcodeID

■ Query parameter segment - QPD

Response control parameter segment - RCP

Field	Type	Description	Format
RCP-1	ID	Query Priority (fixed value: I) I =immediate	I
RCP-3-1	ST	Response Modality (fixed value: R) R =realtime	R^^HL70394
RCP-3-3	ID	Response Modality Coding System (fixed value: HL70394) In some cases, coding system values are not sent if the preceding sub-component is empty.	R^^HL70394

■ Response control parameter segment - RCP

Pseudocode example: work order query

Request specimen (query from cobas® 4800 ➔ LIS)

```
MSH|^~\&|cobas 4800 software version|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm| |QBP^Q11^QBP_Q11
|00000000-0000-0000-0000-000000001111|P|2.5.1|||ER|AL||UNICODE UTF-8|||LAB-27^IHE

QPD|WOS^Work Order Step^IHELAW|00000000-0000-0000-0000-000000009991|BarcodeID

RCP|I||R^^HL70394
```

Specimen work order - accept query

HL7 RSP^K11 messages

Acknowledgment from LIS  cobas® 4800

Segment name
MSH
MSA
[ERR]
QAK
QPD
■ RSP^K11 message

Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3	ST	Sending Application	LIS
MSH-4	HD	Sending Facility	LIS Facility
MSH-5	HD	Receiving Application (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version
MSH-6	HD	Receiving Facility (fixed value if empty: two quotation marks)	"" LabName
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100 	YYYYMMDDhhmmss+-hhmm
MSH-9-1	ID	Message Code (fixed value: RSP)	RSP^K11^RSP_K11
MSH-9-2	ID	Trigger Event (fixed value: K11)	RSP^K11^RSP_K11
MSH-9-3	ID	Message Structure (fixed value: RSP_K11)	RSP^K11^RSP_K11
MSH-10	ST	Message ID. GUID generated by the LIS. 128-bit integer. <ul style="list-style-type: none"> • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFFFFFFFF 	e.g. 00000000-0000-0000-0000-000000001111
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P=Production	P
MSH-12	VID	HL7 Version ID. Used as a version check to make sure that this message is interpreted correctly (fixed value: 2.5.1)	2.5.1

■ Message header segment - MSH

Field	Type	Description	Format
MSH-15	ID	Accept Acknowledgment Type (empty in acknowledgment messages)	
MSH-16	ID	Application Acknowledgment Type (empty in acknowledgment messages)	
MSH-18	ID	Character Set (fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for RSP^K11 messages: LAB-27^IHE)	LAB-27^IHE

■ Message header segment - MSH

Message acknowledgment segment - MSA

Field	Type	Description	Format
MSA-1	ID	Acknowledgment Code <ul style="list-style-type: none"> • AA = Application Accept • AE = Application Error • AR = Application Reject 	AA AE AR
MSA-2	ST	Message ID (reflects segment MSH-10 from QBP^Q11 message)	e.g. 00000000-0000-0000-0000-000000001111

■ Message acknowledgment segment - MSA

Error segment - ERR

Field	Type	Description	Format
ERR-2-1	ST	Error Location: Segment ID	SegmentID ^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-2	NM	Error Location: Segment Sequence	SegmentID^ SegmentSequence ^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-3	NM	Error Location: Field Position	SegmentID^SegmentSequence^ FieldPosition ^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-4	NM	Error Location: Field Repetition	SegmentID^SegmentSequence^FieldPosition^ FieldRepetition ^ComponentNumber^SubcomponentNumber
ERR-2-5	NM	Error Location: Component Number	SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ ComponentNumber ^SubcomponentNumber
ERR-2-6	NM	Error Location: Subcomponent Number	SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^ SubcomponentNumber
ERR-3-1	ST	HL7 Error Code	HL7ErrorCode ^^HL70357
		► For a list of codes and their meanings, see Error codes for field ERR-3.	
ERR-3-3	ID	HL7 Error Code: Coding System (fixed value: HL70357) In some cases, coding system values are not sent if the preceding sub-component is empty.	HL7ErrorCode^^ HL70357
ERR-4	ID	Severity <ul style="list-style-type: none"> • W = Warning • I = Information • E = Error 	W I E
ERR-7	TX	Diagnostic Information	Message

■ Error segment - ERR

Query acknowledgment segment - QAK

Field	Type	Description	Format
QAK-1	ST	Query Tag - cobas® 4800-generated GUID (reflects segment QPD-2 from QBP^Q11 message)	e.g. 00000000-0000-0000-0000-000000009991
QAK-2	ID	Query Response • OK (No errors) • AE (Application Error) • AR (Application Reject)	OK AE AR
QAK-3-1	ST	Message Query Name (reflects segment QPD-1 from QBP^Q11 message) (fixed value: WOS)	WOS^Work Order Step^IHELAW
QAK-3-2	ST	Message Query Name Description (fixed value: Work Order Step)	WOS^Work Order Step^IHELAW
QAK-3-3	ID	Coding System (fixed value: IHELAW) In some cases, coding system values are not sent if the preceding sub-component is empty.	WOS^Work Order Step^IHELAW

■ Query acknowledgment segment - QAK

Query parameter segment - QPD

Field	Type	Description	Format
QPD-1-1	ST	Message Query Name (reflects segment QPD-1 from QBP^Q11 message) (fixed value: WOS)	WOS^Work Order Step^IHELAW
QPD-1-2	ST	Message Query Name Description (fixed value: Work Order Step)	WOS^Work Order Step^IHELAW
QPD-1-3	ID	Coding System (fixed value: IHELAW) In some cases, coding system values are not sent if the preceding sub-component is empty.	WOS^Work Order Step^IHELAW
QPD-2	ST	Query Tag (reflects segment QPD-2 from QBP^Q11 message)	e.g. 00000000-0000-0000-0000-000000009991
QPD-3	ST	Container Identifier (reflects segment QPD-3 from QBP^Q11 message)	BarcodeID

■ Query parameter segment - QPD

Error codes for field ERR-3-1

The following error codes are passed in field ERR-3-1.

Value	Description	Comment
0	Message accepted	Success. Optional, as the AA conveys success. Used for systems that must always return a status code.
100	Segment sequence error	Error: The message segments were not in the proper order, or required segments are missing.
101	Required field missing	Error: A required field is missing from a segment.
102	Data type error	Error: The field contained data of the wrong data type, e.g., an NM field contained "FOO".
103	Table value not found	Error: A field of data type ID or IS was compared against the corresponding table, and no match was found.
200	Unsupported message type	Rejection: The Message Type is not supported.
201	Unsupported event code	Rejection: The Event Code is not supported.
202	Unsupported processing ID	Rejection: The Processing ID is not supported.
203	Unsupported version ID	Rejection: The Version ID is not supported.
204	Unknown key identifier	Rejection: The ID of the patient, order, etc., was not found. Used for transactions other than additions, e.g., transfer of a non-existent patient.

■ Error codes for field ERR-3-1

Value	Description	Comment
205	Duplicate key identifier	Rejection: The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.).
206	Application record locked	Rejection: The transaction could not be performed at the application storage level, e.g., database locked.
207	Application internal error	Rejection: A catchall for internal errors not explicitly covered by other codes.
■	Error codes for field ERR-3-1	

Pseudocode examples: work order accept query for specimen (acknowledgment from LIS to cobas® 4800)

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm||RSP^K11^RSP_K11|
00000000-0000-0000-0000-000000001114|P|2.5.1|||||UNICODE UTF-8|||LAB-27^IHE

MSA|AA|00000000-0000-0000-0000-000000001111

QAK|00000000-0000-0000-0000-000000009991|OK|WOS^Work Order Step^IHELAW

QPD|WOS^Work Order Step^IHELAW|00000000-0000-0000-000-000000009991|BarcodeID
```

Example 1: Accept query for specimen

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm||RSP^K11^RSP_K11|
00000000-0000-0000-0000-000000001114|P|2.5.1|||||UNICODE UTF-8|||LAB-27^IHE

MSA|AR|00000000-0000-0000-0000-000000001111

ERR||SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber|HL7Error
rrorCode^^HL70357|E|||Message

QAK|00000000-0000-0000-0000-000000009991|AR|WOS^Work Order Step^IHELAW

QPD|WOS^Work Order Step^IHELAW|00000000-0000-0000-000-000000009991|BarcodeID
```

Example 2: Received message is not correct (rejection)

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm||RSP^K11^RSP_K11|
00000000-0000-0000-0000-000000001114|P|2.5.1|||||UNICODE UTF-8|||LAB-27^IHE

MSA|AE|00000000-0000-0000-0000-000000001111

ERR||SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber|HL7Error
rrorCode^^HL70357|E|||Message

QAK|00000000-0000-0000-0000-000000009991|AE|WOS^Work Order Step^IHELAW

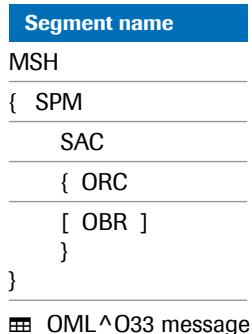
QPD|WOS^Work Order Step^IHELAW|00000000-0000-0000-000-000000009991|BarcodeID
```

Example 3: Exception was thrown (error)

Work order download

HL7 OML^O33 messages

Order download from LIS  cobas® 4800



Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3	ST	Sending Application	LIS
MSH-4	HD	Sending Facility	LIS Facility
MSH-5	HD	Receiving Application (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version
MSH-6	HD	Receiving Facility (fixed value if empty: two quotation marks)	"" LabName
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100	YYYYMMDDhhmmss+-hhmm
MSH-9-1	ID	Message Code (fixed value: OML)	OML^O33^OML_O33
MSH-9-2	ID	Trigger Event (fixed value: O33)	OML^O33^OML_O33
MSH-9-3	ID	Message Structure (fixed value: OML_O33)	OML^O33^OML_O33
MSH-10	ST	Message ID. GUID generated by the LIS. 128-bit integer. <ul style="list-style-type: none"> • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFF 	e.g. 00000000-0000-0000-0000-000000001111
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P=Production	P

■ Message header segment - MSH

Field	Type	Description	Format
MSH-12	VID	HL7 Version ID. Used as a version check to make sure that this message is interpreted correctly (fixed value: 2.5.1)	2.5.1
MSH-15	ID	Accept Acknowledgment Type (fixed value: ER)	ER
MSH-16	ID	Application Acknowledgment Type (fixed value: AL)	AL
MSH-18	ID	Character Set (fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for OML^O33 messages: LAB-28^IHE)	LAB-28^IHE

■ Message header segment - MSH

Specimen segment - SPM

Field	Type	Description	Format
SPM-1	SI	Set ID - continuous ID, starting from 1 and incrementing continuously for each repeated segment	ContinuousID
SPM-2-1-1	EIP	Specimen ID: Specimen Barcode ID	BarcodeID&ROCHE
SPM-2-1-2	EIP	Specimen ID: Namespace (fixed value: ROCHE)	BarcodeID &ROCHE
SPM-4-1	CWE	Specimen Type For a complete list of supported Specimen Type values, see Test specific mapping tables (115)	SpecimenType^^99ROC
SPM-4-3	CWE	Specimen Type Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	SpecimenType^^99ROC
SPM-11-1	CWE	Specimen Role (fixed value: P) P=Patient Sample	P^^HL70369
SPM-11-3	CWE	Specimen Role Coding System (fixed value: HL70369) In some cases, coding system values are not sent if the preceding sub-component is empty.	P^^HL70369

■ Specimen segment - SPM

Specimen container detail segment - SAC

Field	Type	Description	Format
SAC-3	EI	Container Identifier (specimen barcode)	BarcodeID

■ Specimen container detail segment - SAC

Common order segment - ORC

Field	Type	Description	Format
ORC-1	ID	Order control NW = New Order DC = Discontinued	NW DC
ORC-9	TS	Order Date/Time. Date/time at which the order was created. e.g. 20120427123100	YYYYMMDDhhmmss

■ Common order segment - ORC

Observation request segment - OBR

Field	Type	Description	Format
OBR-2	EI	Placer Order Number - UniqueOrderId. Contains the LIS placer order number.	UniqueOrderId
OBR-4-1	CE	Universal Service Identifier - LISOrderCode For a complete list of supported LIS order codes, see Test specific mapping tables (115)	LISOrderCode [^] LISOrderCode [^] 99ROC
OBR-4-2	CE	Universal Service Identifier - LISOrderCode Contains a repetition of OBR-4-1.	LISOrderCode [^] LISOrderCode [^] 99ROC
OBR-4-3	CE	Universal Service Identifier - Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	LISOrderCode [^] LISOrderCode [^] 99ROC

■ Observation request segment - OBR

Pseudocode examples (order download from LIS to cobas® 4800)

Example 1: specimen with one order

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm| |OML^O33^OML_O33|
00000000-0000-0000-0000-000000001121
|P|2.5.1|||ER|AL||UNICODE UTF-8|||LAB-28^IHE

SPM|1|BarcodeID&ROCHE||SpecimenType^^99ROC||||||P^^HL70369

SAC|||BarcodeID

ORC|NW|||||||YYYYMMDDhhmmss

OBR||UniqueOrderId||LISOrderCode^LISOrderCode^99ROC
```

Example 2: specimen with two orders

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm| |OML^O33^OML_O33|
00000000-0000-0000-0000-000000001121|P|2.5.1|||ER|AL||UNICODE UTF-8|||LAB-28^IHE

SPM|1|BarcodeID&ROCHE||SpecimenType^^99ROC||||||P^^HL70369

SAC|||BarcodeID

ORC|NW|||||||YYYYMMDDhhmmss

OBR||UniqueOrderId||LISOrderCode1^LISOrderCode1^99ROC

SPM|2|BarcodeID&ROCHE||SpecimenType^^99ROC||||||P^^HL70369

SAC|||BarcodeID

ORC|NW|||||||YYYYMMDDhhmmss

OBR||UniqueOrderId||LISOrderCode2^LISOrderCode2^99ROC
```

Example 3: LIS has no information with which to answer a request (discontinued)

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version|LabName|YYYYMMDDhhmmss+-hhmm| |OML^O33^OML_O33|
00000000-0000-0000-0000-000000001121|P|2.5.1|||ER|AL||UNICODE UTF-8|||LAB-28^IHE
```

SPM|1|**BarcodeID**&ROCHE||**SpecimenType**^^99ROC|||||P^^HL70369

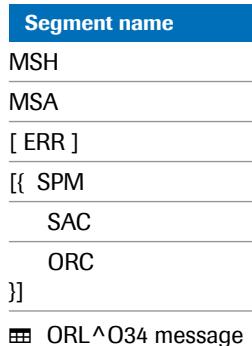
SAC|||**BarcodeID**

ORC|DC|||||||YYYYMMDDhhmmss

Work order download response

HL7 ORL^O34 messages

Acknowledgment from **cobas® 4800** ↗ LIS



Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3	ST	Sending Application (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version
MSH-4	HD	Sending Facility (fixed value if empty: two quotation marks)	""
MSH-5	HD	Receiving Application (fixed value: LIS)	LIS
MSH-6	HD	Receiving Facility (fixed value: LIS Facility)	LIS Facility
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100	YYYYMMDDhhmmss+-hhmm
MSH-9-1	ID	Message Code (fixed value: ORL)	ORL^O34^ORL_O34
MSH-9-2	ID	Trigger Event (fixed value: O34)	ORL^O34^ORL_O34
MSH-9-3	ID	Message Structure (fixed value: ORL_O34)	ORL^O34^ORL_O34
MSH-10	ST	Message ID. GUID generated by the instrument (cobas® 4800 software). 128-bit integer. <ul style="list-style-type: none"> • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFFFFFF 	e.g. 00000000-0000-0000-0000-000000001131
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P=Production	P

■ Message header segment - MSH

Field	Type	Description	Format
MSH-12	VID	HL7 Version ID. Used as a version check to make sure that this message is interpreted correctly (fixed value: 2.5.1)	2.5.1
MSH-15	ID	Accept Acknowledgment Type (empty for acknowledgment)	
MSH-16	ID	Application Acknowledgment Type (empty for acknowledgment)	
MSH-18	ID	Character set used for the whole message (Fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for ORL^O34 messages: LAB-28^IHE)	LAB-28^IHE

■ Message header segment - MSH

Message acknowledgment segment - MSA

Field	Type	Description	Format
MSA-1	ID	Acknowledgment Code <ul style="list-style-type: none"> • AA = Application Accept • AE = Application Error • AR = Application Reject 	AA AE AR
MSA-2	ST	Message ID (reflects segment MSH-10 from OML^O33 message)	e.g. 00000000-0000-0000-0000-00000000112

■ Message acknowledgment segment - MSA

Error segment - ERR

This segment is only sent if the order downloaded from the LIS contains errors.

Field	Type	Description	Format
ERR-3-1	CWE	HL7 Error Code (fixed value: 207) Generic error code 207 is used for every error.	207^^HL70357
ERR-3-3	CWE	HL7 Error Code (fixed value: HL70357)	207^^HL70357
ERR-4	ID	Severity (fixed value: E)	E

■ ERR segment - ERR

Specimen segment - SPM

This segment is only sent if the order downloaded from the LIS does not contain any errors.

Field	Type	Description	Format
SPM-1	SI	Set ID - continuous ID, starting from 1 and incrementing continuously for each repeated segment. (Reflected from segment SPM-1 in OML^O33 message)	ContinuousID
SPM-2-1-1	EIP	Specimen ID - specimen barcode ID	BarcodeID&ROCHE
SPM-2-1-2	EIP	Specimen ID - Namespace (fixed value: ROCHE)	BarcodeID &ROCHE
SPM-4-1	CWE	Specimen Type <ul style="list-style-type: none"> ↳ For a complete list of supported Specimen Type values, see Test specific mapping tables (115) 	Specimen Type^^99ROC

■ Specimen segment - SPM

Field	Type	Description	Format
SPM-4-3	CWE	Specimen Type Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	Specimen Type^^99ROC
SPM-11-1	CWE	Specimen Role (fixed value: P) P = Patient Sample	P^^HL70369
SPM-11-3	CWE	Specimen Role Coding System (fixed value: HL70369) In some cases, coding system values are not sent if the preceding sub-component is empty.	P^^HL70369

■ Specimen - SPM

Specimen container detail segment - SAC

This segment is only sent if the order downloaded from the LIS does not contain any errors.

Field	Type	Description	Format
SAC-3	EI	Container Identifier. Contains the specimen barcode. (Reflected from SAC-3 from OML^O33 message)	BarcodeID

■ Specimen container detail segment - SAC

Common order segment - ORC

This segment is only sent if the order downloaded from the LIS does not contain any errors.

Field	Type	Description	Format
ORC-1	ID	Order Control • OK = Request Accepted • UA = Unable To Accept Query	OK UA
ORC-2-1	EI	Placer Order Number - UniqueOrderId. Contains the LIS placer order number. (Reflects O33 segment OBR-2)	UniqueId
ORC-5	ID	Order Status Mapping: • ORC-1 = OK -> ORC-5 = SC (Accept) • ORC-1 = UA -> ORC-5 = CA (Reject)	SC CA

■ Common order segment - ORC

Psuedocode examples (acknowledgment from cobas® 4800 to LIS)

Example 1: specimen with one order

```
MSH|^~\&|cobas 4800 software version|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm|ORL^O34^ORL_O34
|00000000-0000-0000-0000-000000001131|P|2.5.1|||||UNICODE UTF-8|||LAB-28^IHE
```

```
MSA|AA|00000000-0000-0000-0000-000000001121
```

```
SPM|1|BarcodeID&ROCHE||SpecimenType^^99ROC|||||P^^HL70369
```

```
SAC|||BarcodeID
```

```
ORC|OK|UniqueId|||SC
```

Example 2: specimen with two orders

```
MSH|^~\&|cobas 4800 software version|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm|ORL^O34^ORL_O34
|00000000-0000-0000-0000-000000001131|P|2.5.1|||||UNICODE UTF-8|||LAB-28^IHE
```

MSA|AA|00000000-0000-0000-0000-000000001121

SPM|1|BarcodeID&ROCHE||SpecimenType^^99ROC|||||P^^HL70369

SAC|||BarcodeID

ORC|OK|UniqueOrderId1|||SC

SPM|2|BarcodeID&ROCHE||SpecimenType^^99ROC|||||P^^HL70369

SAC|||BarcodeID

ORC|UA|UniqueOrderId2|||CA

Example 3: error

MSH|^~\&|cobas 4800 software version|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm|ORL^O34^ORL_O34|00000000-0000-0000-000000001131|P|2.5.1|||||UNICODE UTF-8|||LAB-28^IHE

MSA|AE|00000000-0000-0000-0000-000000001121

ERR|||207^^HL70357|E

Example 4: LIS has no information with which to answer a request (discontinued)

Precondition: segment ORC-1 of OML^O33 message contains value DC

MSH|^~\&|cobas 4800 software version|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm|ORL^O34^ORL_O34|00000000-0000-0000-000000001131|P|2.5.1|||||UNICODE UTF-8|||LAB-28^IHE

MSA|AA|00000000-0000-0000-0000-000000001121

Result upload

HL7 OUL^R22 messages

Result upload from **cobas® 4800** ↗ LIS

Segment name
MSH
{ SPM
SAC
[INV]
OBR
ORC
OBX
{ OBX }
INV
[INV]
NTE
NTE
NTE
}

■ OUL^R22 message

Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3-1	ST	Sending Application - Instrument Type (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version^z480SN_BlockSN^M
MSH-3-2	ST	Sending Application - Serial Number of Instrument	cobas 4800 software version^z480SN_BlockSN^M
MSH-3-3	ST	Sending Application - Universal ID Type (fixed value: M)	cobas 4800 software version^z480SN_BlockSN^M
MSH-4	HD	Sending Facility (fixed value if empty: two quotation marks)	"" LabName
MSH-5	HD	Receiving Application (fixed value: LIS)	LIS
MSH-6	HD	Receiving Facility (fixed value: LIS Facility)	LIS Facility
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100	YYYYMMDDhhmmss+-hhmm

■ Message header segment - MSH

Field	Type	Description	Format
MSH-9-1	ID	Message Code (fixed value: OUL)	OUL^R22^OUL_R22
MSH-9-2	ID	Trigger Event (fixed value: R22)	OUL^R22^OUL_R22
MSH-9-3	ID	Message Structure (fixed value: OUL_R22)	OUL^R22^OUL_R22
MSH-10	ST	Message ID. GUID generated by the instrument (cobas® 4800 software). 128-bit integer. • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFFFFFFFF	e.g 00000000-0000-0000-0000-0000000001141
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P =Production	P
MSH-12	VID	HL7 Version ID (fixed value: 2.5.1)	2.5.1
MSH-15	ID	Accept Acknowledgment Type (fixed value: ER)	ER
MSH-16	ID	Application Acknowledgment Type (fixed value: AL AL)	AL
MSH-18	ID	Character Set (fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for OUL^R22 messages: LAB-29^IHE)	LAB-29^IHE

■ Message header segment - MSH

Specimen segment - SPM

Field	Type	Description	Format
SPM-1	SI	Set ID	Generated segment sequence number.
SPM-2-1-1	EIP	Specimen ID - specimen barcode ID	BarcodeID&ROCHE
SPM-2-1-2	EIP	Specimen ID - Namespace (fixed value: ROCHE)	BarcodeID &ROCHE
SPM-4-1	ST	Specimen Type (fixed value if specimen type is empty: two quotation marks) For a complete list of supported Specimen Type values, see Test specific mapping tables (115)	"" SpecimenType^^99ROC
SPM-4-3	ID	Specimen Type - Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	SpecimenType ^^ 99ROC
SPM-11-1	ST	Specimen Role P =Patient Sample Q=Control	SpecimenRole^^HL70369
SPM-11-3	ID	Specimen Role - Coding System (fixed value: HL70369) In some cases, coding system values are not sent if the preceding sub-component is empty.	SpecimenRole ^^ HL70369

■ Specimen segment - SPM

Specimen container detail segment - SAC

Field	Type	Description	Format
SAC-3	EI	Container Identifier	BarcodeID

■ Specimen container detail segment - SAC

Inventory detail segment - INV

Needed only for controls

Field	Type	Description	Format
INV-1-1	CE	Substance Identifier (the name of the control.) ☞ For a complete list of supported control names, see Test specific mapping tables (115)	ControlName ^^99ROC
INV-1-3	CE	Substance Identifier Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	ControlName^^99ROC
INV-2-1	CE	Substance Status (fixed value: OK)	OK^^HL70383
INV-2-3	CE	Substance Status Coding System (fixed value: HL70383) In some cases, coding system values are not sent if the preceding sub-component is empty.	OK^^HL70383
INV-3-1	CE	Substance Type (fixed value: CO) CO=Control	CO^^HL70384
INV-3-3	CE	Substance Type Coding System (fixed value: HL70384) In some cases, coding system values are not sent if the preceding sub-component is empty.	CO^^HL70384

■ Inventory detail segment - INV

Observation request segment - OBR

The usage of OBR-6 is a Roche extension to the IHE-LAW standard.

Field	Type	Description	Format
OBR-2-1	EI	Placer Order Number - UniqueOrderId • With host query mode: UniqueOrderId (reflected from OBR-2-1 from OML^O33) • Without host query mode: (Fixed value: "")	"" UniqueOrderId
OBR-4-1	CE	Universal Service Identifier - LISOrderCode ☞ For a complete list of supported LIS Order Codes, see Test specific mapping tables (115)	LISOrderCode^LISOrderCode^99ROC
OBR-4-2	CE	Universal Service Identifier - LISOrderCode Repetition of OBR-4-1 is required.	LISOrderCode^LISOrderCode^99ROC
OBR-4-3	CE	Universal Service Identifier - Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	LISOrderCode^LISOrderCode^99ROC
OBR-6	TS	Order Date/Time: the date and time when the order was created e.g. 20120427123100	YYMMDDhhmmss

■ Observation request segment - OBR

Common order segment - ORC

Field	Type	Description	Format
ORC-1	ID	Order Control (fixed value: SC)	SC
ORC-5	ID	Order Status (fixed value: CM) CM=Order is completed	CM

■ Common order segment - ORC

Observation result segment - OBX For date/time ranges (start and end times of a test)

Field	Type	Description	Format
OBX-1	SI	Set ID (fixed value: 1)	1
OBX-2	ID	Value Type (fixed value: DR) DR =date/time range	DR
OBX-3-1	CE (ST)	Identifier (fixed value: RunTimeRange)	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-3-2	CE (ST)	Text (fixed value: Run Execution Time Range)	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-3-3	CE (ID)	Name Of Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-3-4	CE (ST)	Alternate Identifier (fixed value: S_OTHER)	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-3-5	CE (ST)	Alternate Text (fixed value: Other_Supplemental)	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-3-6	CE (ID)	Name of Alternate Coding System (fixed value: IHELAW)	RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW
OBX-4	ST	Observation Sub-ID (fixed value: 1.0)	1.0
OBX-5-1	TS	Date/Time Test Started - the date and time when the test was started on the instrument	YYMMDDhhmmss^YYMMDDhhmmss
OBX-5-2	TS	Date/Time Test Completed - the date and time when the test was finished on the instrument	YYMMDDhhmmss^YYMMDDhhmmss
OBX-6	ST	Units (always empty for date/time range)	
OBX-7	ST	Reference ranges (always empty for date/time range)	
OBX-8	IS	RunType: Identifies the run type of the specimen (always contains "" for date/time ranges)	""
OBX-11	ID	Observation Result Status (always contains F for date/time ranges) Accepted values depend on the accepted flags from the cobas 4800 result export file. F=Final result	F
OBX-16	XCN	The user who started the run - UserID (e.g. Admin, LabOperator)	UserID
OBX-18		Equipment Identifier. This field is repeatable. There are two separate pieces of equipment: the system and the analyzer.	C4800^Roche~z480SN^Roche
OBX-18-1	EI	Equipment Instance Identifier	C4800^Roche~z480SN^Roche
OBX-18-2	EI	Equipment Instance Namespace	C4800^Roche~z480SN^Roche
OBX-19	TS	Date/Time Test Completed - the date and time when the test was finished on the instrument	YYMMDDhhmmss

■ Observation result segment - OBX (for date/time ranges)

Observation result segment - OBX

For test results

Field	Type	Description	Format
OBX-1	SI	Set ID - continuous ID, starting from 2 and incrementing continuously for each order.	Continuous ID starting from 2 (2, 3, ...n)
OBX-2	ID	Value Type (fixed value: ST)	ST
OBX-3-1	CE	Observation Identifier - Result Code ↳ For a complete list of supported Result Codes, see Test specific mapping tables (115)	ResultCode [^] ResultCode ^{^99ROC}
OBX-3-2	CE	Text - contains a repetition of OBX-3-1	ResultCode [^] ResultCode ^{^99ROC}
OBX-3-3	CE	Name Of Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	ResultCode [^] ResultCode ^{^99ROC}
OBX-4	ST	Observation Sub-ID(In case of multiple results (subtests/mutations), contains an increasing value (1.1, 1.2...))	e.g. 1.1, 1.2...
OBX-5	ST	Observation Value ↳ For a complete list of supported Result Texts, see Test specific mapping tables (115) Note: If the Observation Value is N/A, ignore OBX-11 for LIS mapping	ResultText
OBX-6-1	ST	Units (for quantitative tests only, else empty) • IU/mL -> U/ml • cp/mL -> 1/mL This is empty for invalid/failed/undetermined tests, or when the target is not detected, etc.	UnitValue ^{^^UCUM}
OBX-6-3	ID	Coding System (fixed value: UCUM) This is empty if OBX-6-1 is empty.	UnitValue ^{^^UCUM}
OBX-7	ST	Reference ranges (only for quantitative tests which deliver control limits; otherwise empty) • Lower Limit - Upper Limit (if both are present) • > Lower Limit (if no upper limit) • < Upper Limit (if no lower limit)	Lower Limit - Upper Limit > Lower Limit < Upper Limit
OBX-8-1	ST	Run Type: Identifies the run type of the specimen. Permitted values are: • Full = Full run of all system components (cobas x 480 and cobas z 480) • AnD = Amplification and detection only (cobas z 480 PCR only)	RunType ^{^^99ROC}
OBX-8-3	ID	Run Type - Coding System (fixed value: 99ROC) This is empty if OBX-8-1 is empty.	RunType ^{^^99ROC}
OBX-11	ID	Observation Result Status Possible accepted flag values depend on the accepted flags from the cobas [®] 4800 result export file. • C = Corrected, Recovery Workflow • F = Final result (result was accepted) • P = Preliminary result (result was not accepted) • X = Failed result (result cannot be obtained) (overrules C, F, and P) Note: if N/A is sent in OBX-5: • this field will contain C, P, or F • ignore this value for LIS mapping	C F P X
OBX-16	XCN	User who initiated the export - UserID (e.g. Admin, UserID LabOperator)	

■ Observation result segment - OBX (for test results)

Field	Type	Description	Format
OBX-18		Equipment Identifier. This field is repeatable. There are two separate pieces of equipment: the system and the analyzer.	C4800^Roche~z480SN^Roche
OBX-18-1	EI	Equipment Instance Identifier	C4800^Roche~ z480SN ^Roche
OBX-18-2	EI	Equipment Instance Namespace	C4800^ Roche ~z480SN^ Roche
OBX-19	TS	Date/Time Test Completed - the date and time when the test was finished on the instrument	YYYYMMDDhhmmss

■ Observation result segment - OBX (for test results)

Inventory detail segment 1 - INV

The usage of INV-5 and INV-6 is a Roche extension to the IHE-LAW standard.

Field	Type	Description	Format
INV-1	CE	Substance ID	" "
INV-2-1	CE	Substance Status (fixed value: OK)	OK^^HL70383
INV-2-3	CE	Substance Status Coding System (fixed value: HL70383) In some cases, coding system values are not sent if the preceding sub-component is empty.	OK^^ HL70383
INV-3-1	CE	Substance Type (fixed value: OT)	OT^^HL70384
INV-3-3	CE	Substance Type Coding System (fixed value: HL70384) In some cases, coding system values are not sent if the preceding sub-component is empty.	OT^^ HL70384
INV-4-1	CE	Container Type (fixed value: MwpID)	MwpID ^^99ROC
INV-4-3	CE	Container Type Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	MwpID^^ 99ROC
INV-5-1	CE	Container Carrier Identifier (contains the barcode of the MWP)	MWPBarcodeID ^^99ROC
INV-5-3	CE	Container Carrier Identifier Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	MWPBarcodeID^^ 99ROC
INV-6-1	CE	Position on Carrier (contains the position of the MWP)	MWPPos ^^99ROC
INV-6-3	CE	Position on Carrier Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	MWPPos^^ 99ROC

■ Inventory detail segment 1 - INV

Inventory detail segment 2- INV

- INV segment 2 is only sent if a DWP was used in the run.
- The usage of INV-5 is a Roche extension to the IHE-LAW standard.

Field	Type	Description	Format
INV-1	CE	Substance ID	" "
INV-2-1	CE	Substance Status (fixed value: OK)	OK^^HL70383
INV-2-3	CE	Substance Status Coding System (fixed value: HL70383) In some cases, coding system values are not sent if the preceding sub-component is empty.	OK^^ HL70383
INV-3-1	CE	Substance Type (fixed value: OT)	OT^^HL70384
INV-3-3	CE	Substance Type Coding System (fixed value: HL70384) In some cases, coding system values are not sent if the preceding sub-component is empty.	OT^^HL70384

■ Inventory detail segment 2 - INV

Field	Type	Description	Format
INV-4-1	CE	Container Type (fixed value: DwpID)	DwpID^^99ROC
INV-4-3	CE	Container Type Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	DwpID^^99ROC
INV-5-1	CE	Container Carrier Identifier (contains the barcode of the DWP)	DWPBarcodeID^^99ROC
INV-5-3	CE	Container Carrier Identifier Coding System (fixed value: 99ROC) In some cases, coding system values are not sent if the preceding sub-component is empty.	DWPBarcodeID^^99ROC

■ Inventory detail segment 2 - INV

Notes and comments segment - NTE For flags

Field	Type	Description	Format
NTE-1	SI	Set ID (fixed value: 1)	1
NTE-3	FT	Flag info. <ul style="list-style-type: none">• With flags: F;Flag1,Flag2,... (Fixed value: F; followed by Flag1,Flag2,...)• Without flags: F;NONE (fixed value)	F;NONE or F;Flag1,Flag2,...

■ Notes and comments segment - NTE (for flags)

Notes and comments segment - NTE Cycle threshold values (for controls only)

Field	Type	Description	Format
NTE-1	SI	Set ID (fixed value: 2)	2
NTE-3	FT	Cycle threshold (Ct) values. Semicolon-separated list of pairs: CtKey:Channel_ID (MasterMix_ID1), CtValue; CtKey:Channel_ID (MasterMix_ID2), CtValue; CtKey:Channel_ID (MasterMix_ID3), CtValue; CtKey:Channel_ID (MasterMix_ID4), CtValue Example 1: Ct:0 (MMx 1),39.3;Ct:1 (MMx 1),39.3;Ct:5 (MMx 1),39.3 Example 2: MMx1Ct:0 (MMx 1),39.3;MMx2Ct:1 (MMx 2),39.3; MMx3Ct:3 (MMx 3),39.3; MMx2Ct:5 (MMx 4),39.3 Example 3: Ct:1 · (MMx ·1),31.28 Example 4: ' Up to 4 channels can be displayed. For a complete list of expected channels, see Test specific mapping tables (115) <ul style="list-style-type: none">• For controls: this field shows the Ct values of each control. Whether or not these values are sent depends also on the analysis package. For analysis packages that do not send Ct values, one comma (",") is sent in this field.• For specimens: this field is empty	CtKey:Channel_ID1 (MasterMix_ID1),CtValue;CtKey:Cha nnel_ID2 (MasterMix_ID2),CtValue; CtKey:Channel_ID3 (MasterMix_ID3),CtValue;CtKey: Cha nnel_ID4 (MasterMix_ID4),CtValue

■ Notes and comments segment - NTE (for controls)

Notes and comments segment - NTE For specimens

Field	Type	Description	Format
NTE-1	SI	Set ID (fixed value: 3)	3
NTE-3	FT	Comment text. Sample Comment, entered by the user during Full workflow or in Result View	CommentText

■ Notes and comments segment - NTE (for specimens)

Pseudocode example: result upload

Control and specimen (result upload from **cobas® 4800**
↗ LIS)

```

MSH|^~\&|cobas 4800 software version^SerialNumber^M|LabName1|LIS|LIS Facility|YYYYMMDDhhmmss+-hhmm|||
OUL^R22^OUL_R22|00000000-0000-0000-0000-000000001141|P|2.5.1||ER|AL||UNICODE UTF-8|||LAB-29^IHE

SPM|1|BarcodeID&ROCHE|""|||||Q^^HL70369
SAC|||BarcodeID
INV|ControlName^^99ROC|OK^^HL70383|CO^^HL70384
OBR||UniqueOrderId||LISOrderCode^LISOrderCode^99ROC||YYYYMMDDhhmmss
ORC|SC||||CM
OBX|1|DR|RunTimeRange^Run Execution TimeRange^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|YYYYMMDDhh
mmss^YYYYMMDDhhmmss||||"|||P|||||UserID||C4800^Roche~z480SN_BlockSN^Roche|YYYYMMDDhhmmss
OBX|2|ST|ResultCode^ResultCode^99ROC|1.1|ResultText|||RunType^^99ROC|||P|||||UserID||C4800^Roche~z48
0SN_BlockSN^Roche|YYYYMMDDhhmmss
INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|MWPBarcodeID^^99ROC|MWPPos^^ROC
INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|DWPBarcodeID^^99ROC
NTE|1||F;NONE
NTE|2||Ct:0 (MMx 1),39.3;Ct:1 (MMx 1),39.3;Ct:3 (MMx 1),39.3;Ct:5 (MMx 1),39.3
NTE|3
...
SPM|3|BarcodeID&ROCHE||SpecimenType^^99ROC|||||P^^HL70369
OBR||UniqueOrderId||LISOrderCode^LISOrderCode^99ROC||YYYYMMDDhhmmss
ORC|SC||||CM
OBX|1|DR|RunTimeRange^Run Execution Time Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|YYYYMMDDh
mmss^YYYYMMDDhhmmss||||"|||P|||||UserID||C4800^Roche~z480SN_BlockSN^Roche|YYYYMMDDhhmmss
OBX|2|ST|ResultCode^ResultCode^99ROC|1.1|ResultText|||RunType^^99ROC|||P|||||UserID||C4800^Roche~z48
0SN_BlockSN^Roche|YYYYMMDDhhmmss
INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|MWPBarcodeID^^99ROC|MWPPos^^ROC
INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|DWPBarcodeID^^99ROC
NTE|1||F;NONE
NTE|2
NTE|3||SpecimenComment

```

Message acknowledgment

HL7 ACK^R22 messages

Acknowledgment from LIS  cobas® 4800

Segment name
MSH
MSA
[ERR]
■ ACK^R22 message

Message header segment - MSH

Field	Type	Description	Format
MSH-1	ST	Field delimiter	
MSH-2	ST	Component, Repetition, Escape and Subcomponent delimiter (exactly in this order) (fixed value: ^~\&)	^~\&
MSH-3	ST	Sending Application	LIS
MSH-4	HD	Sending Facility	LIS Facility
MSH-5-1	HD	Receiving Application (fixed value: cobas 4800 software followed by version number, e.g. 2.2.0.1437)	cobas 4800 software version^z480SN_BlockSN^M
MSH-5-2	HD	Receiving Application - Serial Number of Instrument	cobas 4800 software version^z 480SN_BlockSN ^M
MSH-5-3	HD	Receiving Application - Universal ID Type (fixed value: M)	cobas 4800 software version^z480SN_BlockSN^M
MSH-6	HD	Receiving Facility	LabName
MSH-7	TS	Datetime of the message <ul style="list-style-type: none"> • YYYY = year (four digits) • MM = month (two digits) • DD = day (two digits) • hh = hour (two digits) • mm = minute (two digits) • ss = second (two digits) • +-hhmm = time zone offset (indicates that the date/time uses a local time zone which is ahead (+) or behind (-) UTC) e.g. 20120427123100+0100	YYYYMMDDhhmmss+-hhmm
MSH-9-1	ID	Message Code (fixed value: ACK)	ACK^R22^ACK
MSH-9-2	ID	Trigger Event (fixed value: R22)	ACK^R22^ACK
MSH-9-3	ID	Message Structure (fixed value: ACK)	ACK^R22^ACK
MSH-10	ST	Message ID. GUID generated by the LIS. 128-bit integer. <ul style="list-style-type: none"> • Min. Value = 0 • Max. Value = FFFFFFFF-FFFF-FFFF-FFFF-FFFF-FFFFFFFF 	e.g. 00000000-0000-0000-0000-000000001151
MSH-11	PT	Processing mode (processing priority) (Fixed value: P) P=Production	P
MSH-12	VID	HL7 Version ID (fixed value: 2.5.1)	2.5.1
MSH-15	-	Accept Acknowledgment Type	Empty in acknowledgments

■ Message header segment - MSH

Field	Type	Description	Format
MSH-16	-	Application Acknowledgment Type	Empty in acknowledgments
MSH-18	ID	Character Set (fixed value: UNICODE UTF-8)	UNICODE UTF-8
MSH-21	EI	Message Profile Identifier (fixed value for ACK^R22 messages: LAB-29^IHE)	LAB-29^IHE

■ Message header segment - MSH

Message acknowledgment segment - MSA

Field	Type	Description	Format
MSA-1	ID	Acknowledgment Code <ul style="list-style-type: none"> • AA = Application Accept • AE = Application Error • AR = Application Reject 	AA AE AR
MSA-2	ST	Message ID (reflects segment MSH-10 from OUL^R22)	e.g. 00000000-0000-0000-0000-000000001141

■ Message acknowledgment segment - MSA

Error segment - ERR

Field	Type	Description	Format
ERR-2-1	ST	Error Location - Segment ID	SegmentID ^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-2	NM	Error Location - Segment Sequence	SegmentID^ SegmentSequence ^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-3	NM	Error Location - Field Position	SegmentID^SegmentSequence^ FieldPosition ^FieldRepetition^ComponentNumber^SubcomponentNumber
ERR-2-4	NM	Error Location - Field Repetition	SegmentID^SegmentSequence^FieldPosition^ FieldRepetition ^ComponentNumber^SubcomponentNumber
ERR-2-5	NM	Error Location - Component Number	SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ ComponentNumber ^SubcomponentNumber
ERR-2-6	NM	Error Location - Subcomponent Number	SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^ SubcomponentNumber
ERR-3-1	ST	HL7 Error Code	HL7ErrorCode ^^HL70357
		↳ For a list of codes and their meanings, see Error codes for field ERR-3.	
ERR-3-3	ID	HL7 Error Code - Coding System (fixed value: HL70357) In some cases, coding system values are not sent if the preceding sub-component is empty.	HL7ErrorCode^^ HL70357
ERR-4	ID	Severity <ul style="list-style-type: none"> • W=Warning • I=Information • E=Error 	W I E
ERR-7	TX	Diagnostic Information	Message

■ Error segment - ERR

Pseudocode examples (acknowledgment from LIS to cobas® 4800)

Example 1: accept result upload

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version^z480SN_BlockSN^M|LabName1|YYYYMMDDhhmmss--hhmm
||ACK^R22^ACK|00000000-0000-0000-000000001151|P|2.5.1|||||UNICODE UTF-8|||LAB-29^IHE
```

MSA | **AA** | 00000000-0000-0000-0000-000000001141

Example 2: received message is not correct (rejection)

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version^z480SN_BlockSN^M|LabName1|YYYYMMDDhhmmss+-hhmm
||ACK^R22^ACK|00000000-0000-0000-000000001151|P|2.5.1|||||UNICODE UTF-8|||LAB-29^IHE
```

MSA | **AR** | 00000000-0000-0000-0000-000000001141

```
ERR||SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber|HL7E
rrorCode^^HL70357|E|||Message
```

Example 3: exception was thrown (error)

```
MSH|^~\&|LIS|LIS Facility|cobas 4800 software version^z480SN_BlockSN^M|LabName1|YYYYMMDDhhmmss+-hhmm
||ACK^R22^ACK|00000000-0000-0000-000000001151|P|2.5.1|||||UNICODE UTF-8|||LAB-29^IHE
```

MSA | **AE** | 00000000-0000-0000-0000-000000001141

```
ERR||SegmentID^SegmentSequence^FieldPosition^FieldRepetition^ComponentNumber^SubcomponentNumber|HL7E
rrorCode^^HL70357|E|||Message
```

Software configuration

System settings

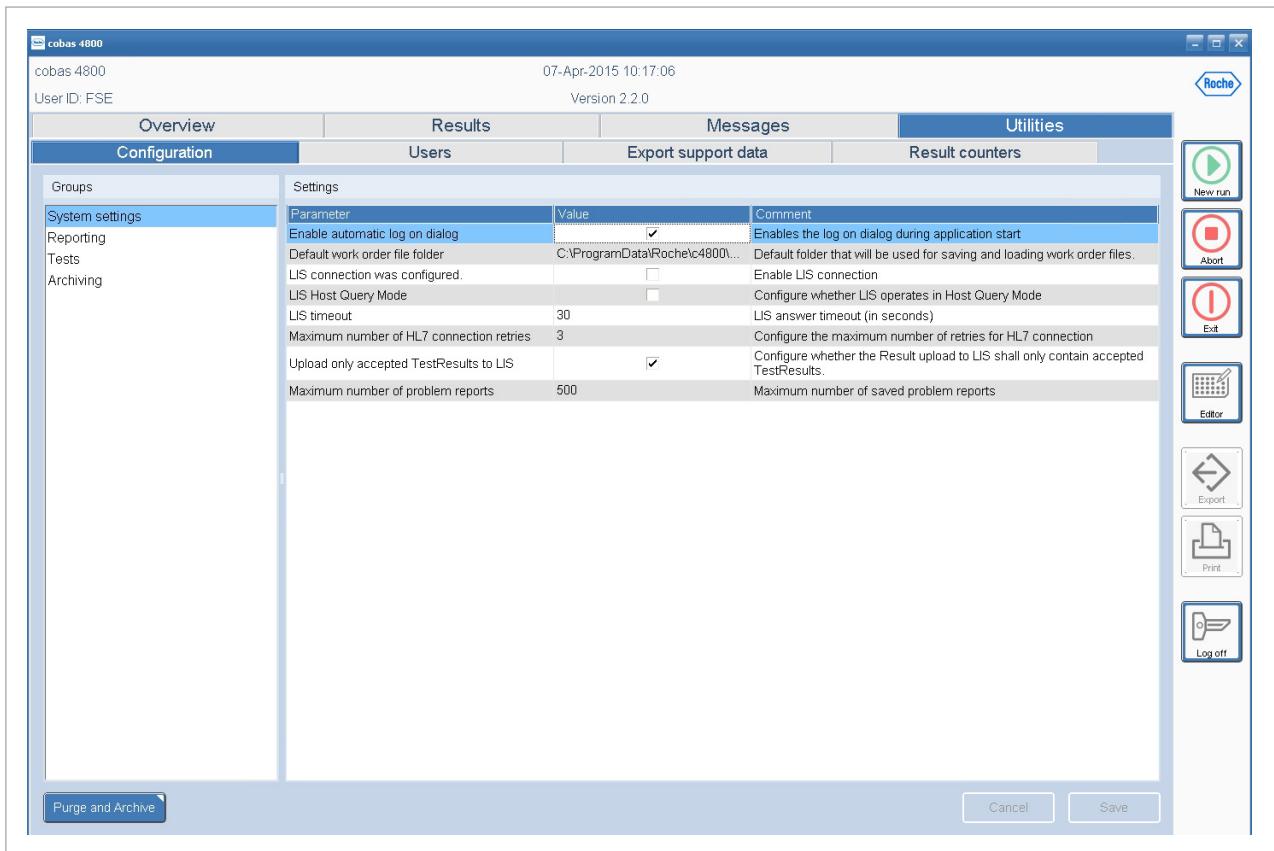
6

In this chapter

System settings	93
ASTM timeout and retry	95
HL7 timeout and retry	98

System settings

To configure the LIS communications settings, navigate to **Utilities > Configuration > System settings**.



cobas® 4800 system settings

Parameters	Comment/Description
Enable automatic log on dialog	Defines whether the log on dialog is displayed when the application starts.
Default work order file folder	Specifies the default folder for saving and loading work order files
LIS connection was configured.	Activates/deactivates the LIS communication. (Default: cleared)
LIS Host Query Mode	Defines whether the LIS operates in Host Query Mode (Default: cleared) <ul style="list-style-type: none"> If selected, the software will query the LIS for specimen information after the loading process. If cleared, the software will require specimen information to be entered manually after the loading process.
LIS timeout	Specifies the maximum time (in seconds) the software allows for a response from the LIS server before it initiates a timeout error. (Default: 30 sec) <p>Note: The configurable LIS timeout settings are for each individual sample query message. The total timeout may not exceed 60 seconds (configured LIS timeouts * number of samples).</p> <ul style="list-style-type: none"> For more information on this parameter, see ASTM timeout and retry (95) and HL7 timeout and retry (98)
LIS configuration	

Parameters	Comment/Description
Maximum number of HL7 connection retries	Specifies the maximum number of reconnection attempts the software makes if the connection with the LIS server is lost. (Default: 3) ► For more information on this parameter, see HL7 timeout and retry (98)
Upload only accepted TestResults to LIS	Defines whether all results or only results that were marked as accepted are sent to the LIS server. (Default: selected) Note: Results for controls are always sent, even if not accepted.
Maximum number of problem reports	Defines the maximum number of saved problem reports.

■ LIS configuration

ASTM timeout and retry

The **LIS timeout** parameter affects both the ASTM and HL7 protocols.

ASTM timeout and retry configuration

Timeout and retry settings are configured in **Utilities > Configuration > System settings**.

Parameter	Value	Comment
Enable automatic log on dialog	<input checked="" type="checkbox"/>	Enables the log on dialog during application start
Default work order file folder	C:\ProgramData\R...	Default folder that will be used for saving and loading work order files.
LIS connection was configured.	<input type="checkbox"/>	Enable LIS connection
LIS Host Query Mode	<input checked="" type="checkbox"/>	Configure whether LIS operates in Host Query Mode
LIS timeout	5	LIS answer timeout (in seconds)
Maximum number of HL7 connection retries	3	Configure the maximum number of retries for HL7 connection
Upload only accepted TestResults to LIS	<input type="checkbox"/>	Configure whether the Result upload to LIS shall only contain accepted TestResults.
Maximum number of problem reports	500	Maximum number of saved problem reports

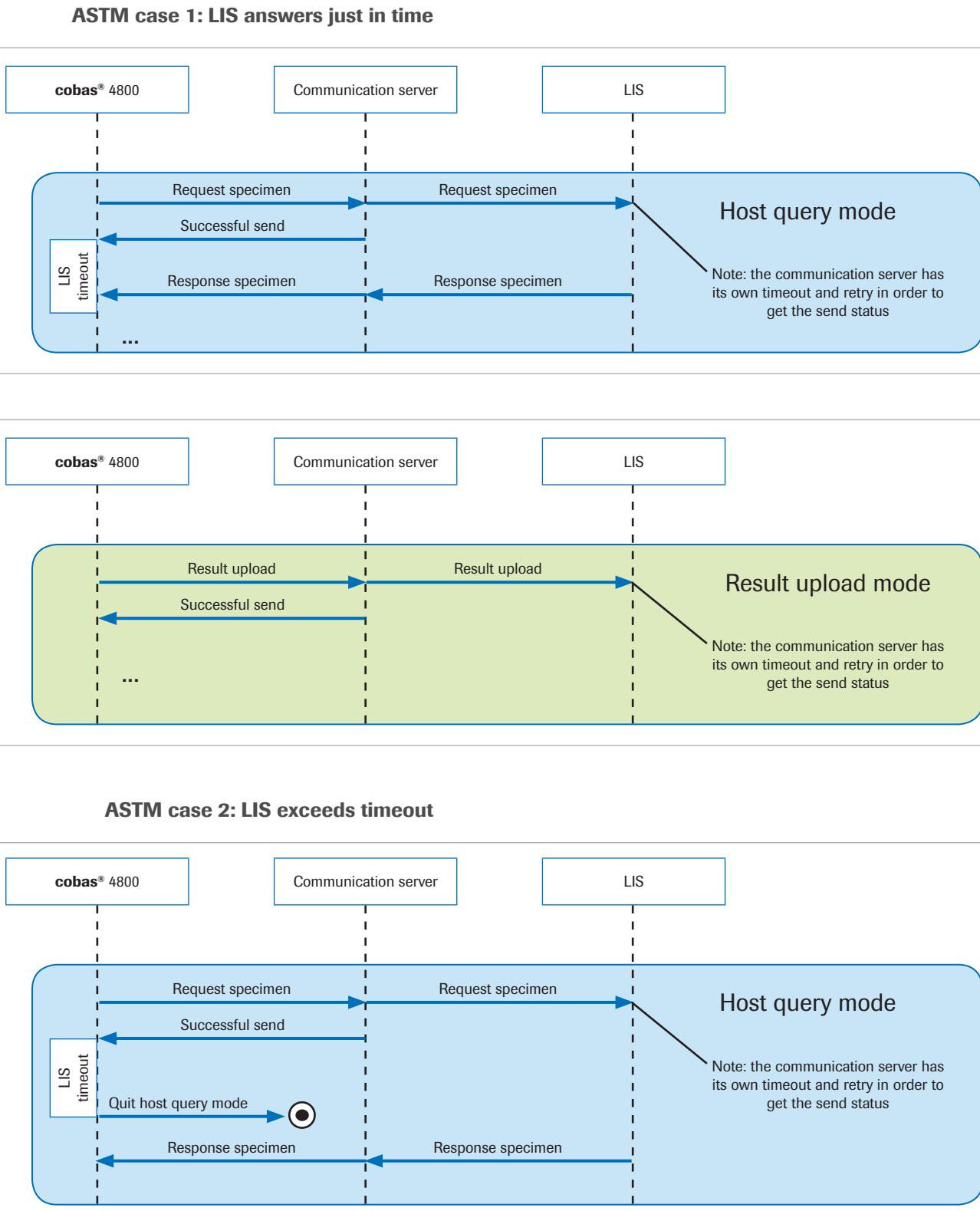
The **LIS timeout** parameter allows you to define the maximum time limit for an answer from the LIS.

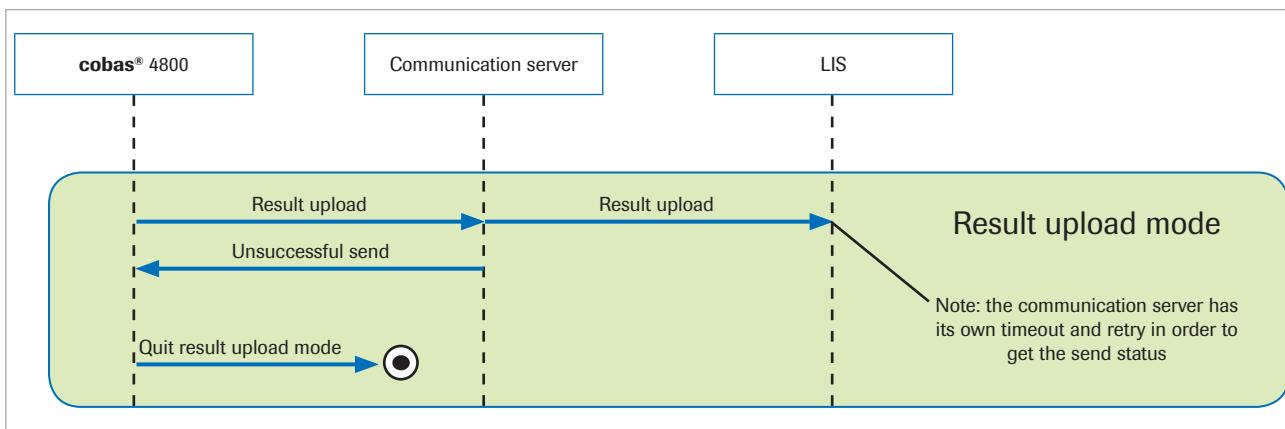
ASTM retries are defined by a component called CommServer Service, which is used by the **cobas® 4800** software.

ASTM timeout only applies to Host Query Mode. If the answer takes longer than the defined time limit, communication between the **cobas® 4800** software, the CommServer component and the LIS stops.

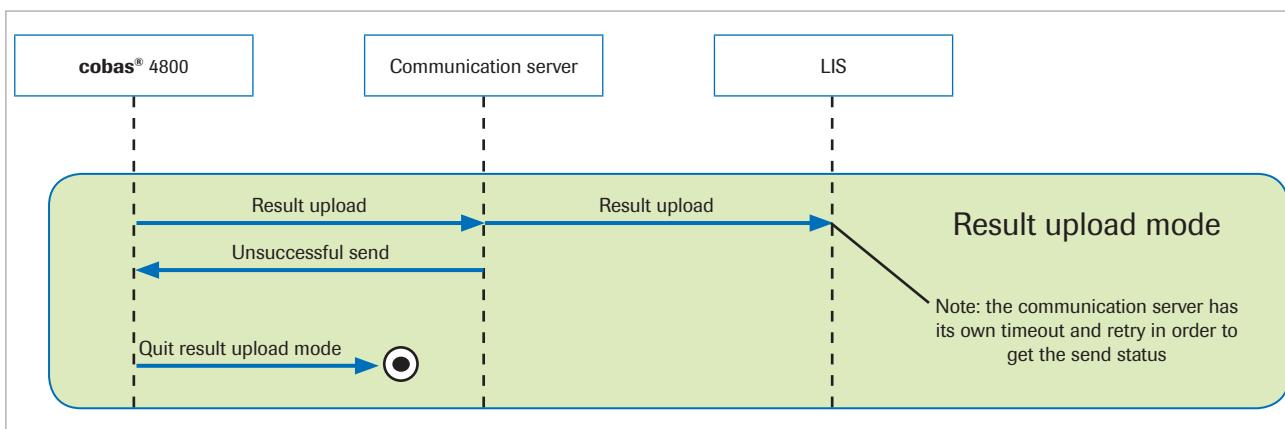
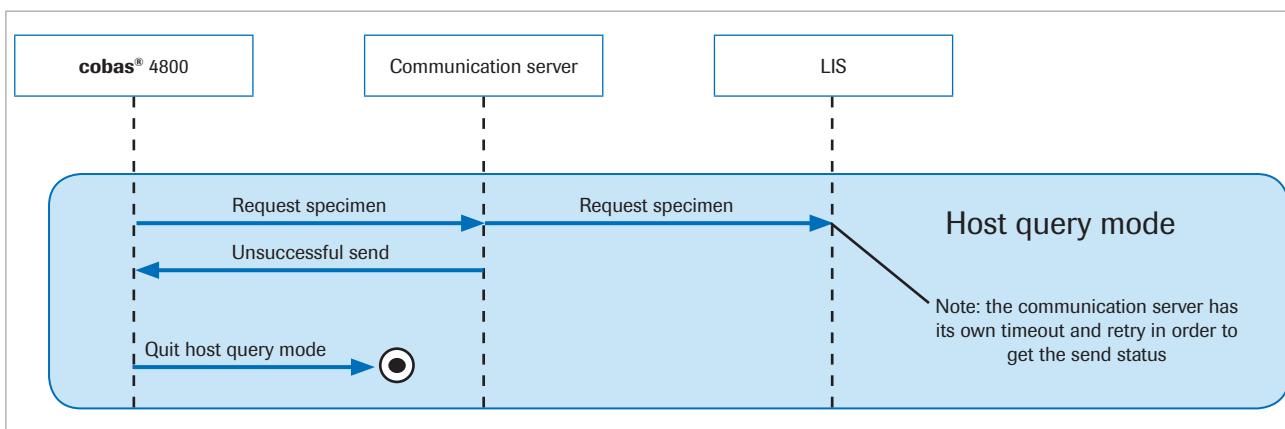
ASTM timeout and retry behavior

The following diagrams describe the ASTM timeout and retry behavior between the **cobas® 4800** software, the CommServer Service component, and the LIS, with the configuration defined in the LIS setting above.





ASTM case 3: LIS is disconnected



HL7 timeout and retry

The maximum number of retries can only be configured for HL7.

HL7 timeout and retry configuration

Timeout and retry settings are configured in **Utilities > Configuration > System settings**.

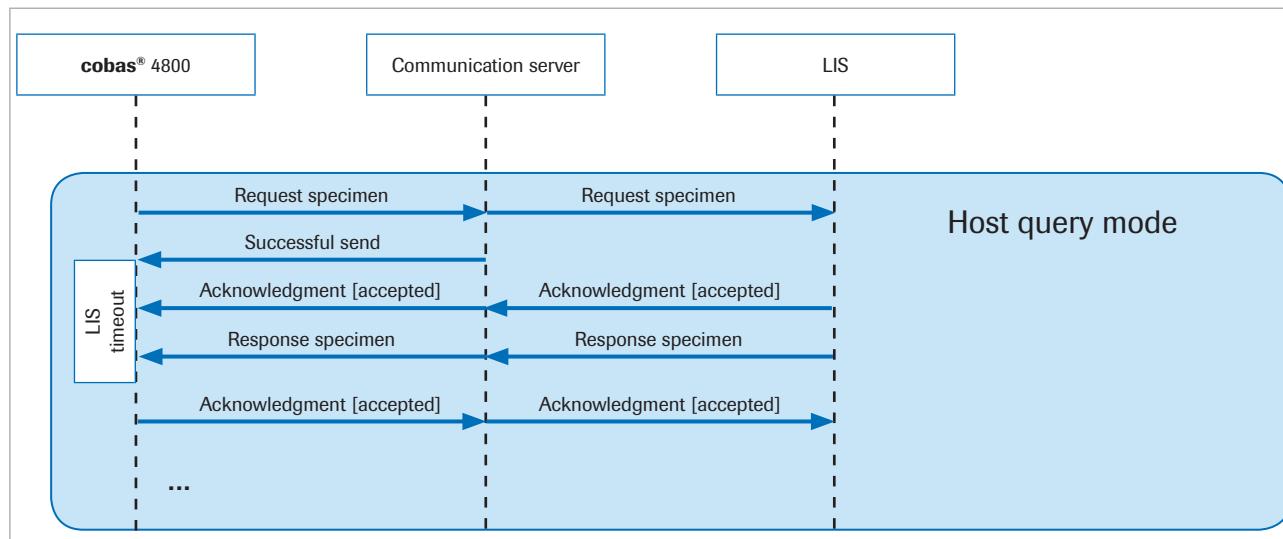
Parameter	Value	Comment
Enable automatic log on dialog	<input checked="" type="checkbox"/>	Enables the log on dialog during application start
Default work order file folder	C:\ProgramData\Ro...	Default folder that will be used for saving and loading work order files.
LIS connection was configured.	<input type="checkbox"/>	Enable LIS connection
LIS Host Query Mode	<input type="checkbox"/>	Configure whether LIS operates in Host Query Mode
LIS timeout	30	LIS answer timeout (in seconds)
Maximum number of HL7 connection retries	3	Configure the maximum number of retries for HL7 connection
Upload only accepted TestResults to LIS	<input checked="" type="checkbox"/>	Configure whether the Result upload to LIS shall only contain accepted TestResults.
Maximum number of problem reports	500	Maximum number of saved problem reports

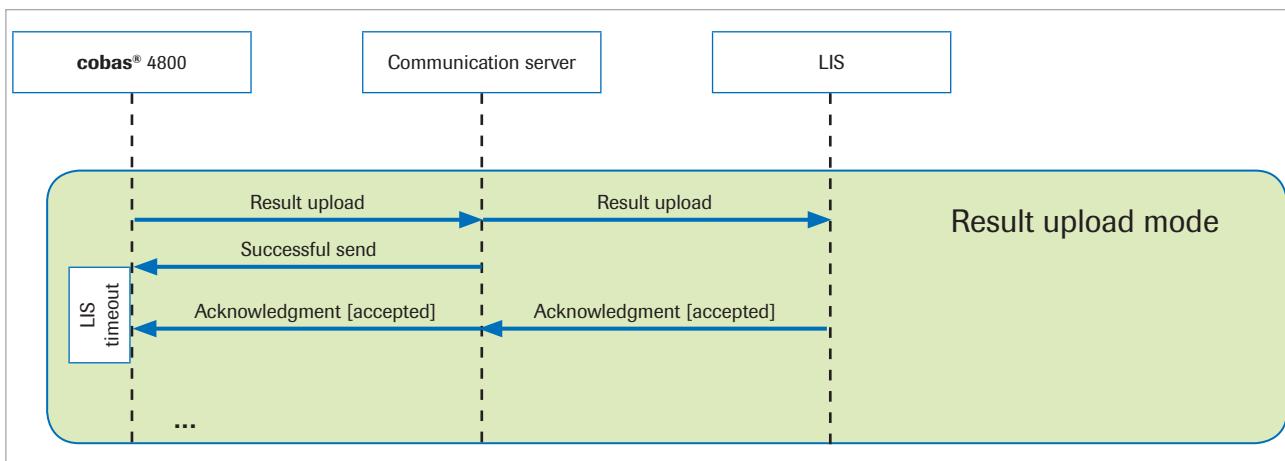
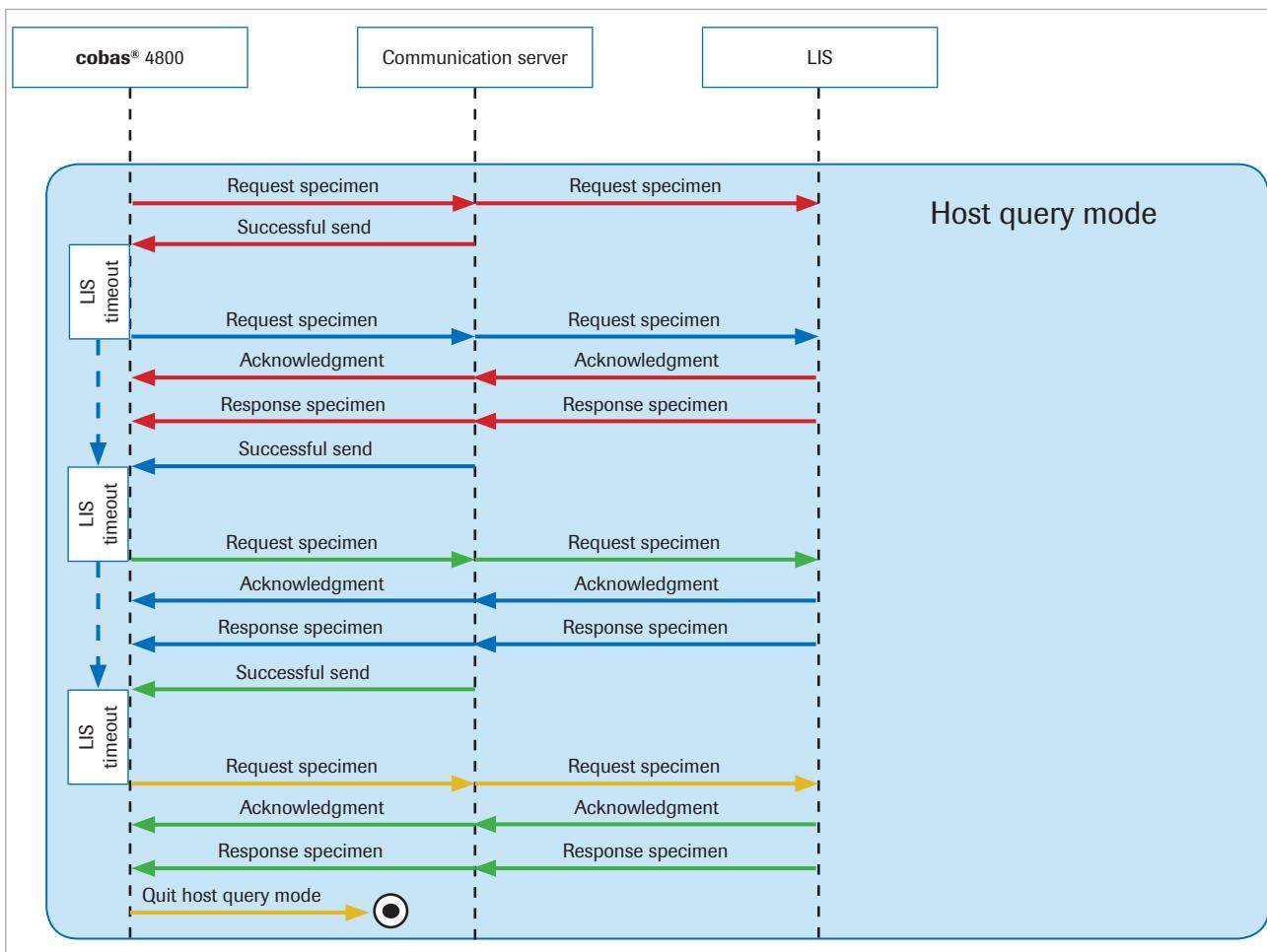
The **LIS timeout** parameter allows you to configure the amount of time in which the LIS has to answer. The **Maximum number of HL7 connection retries** parameter allows you to define the maximum number of times the **cobas® 4800** software will try to reconnect to the LIS system whenever a timeout occurs.

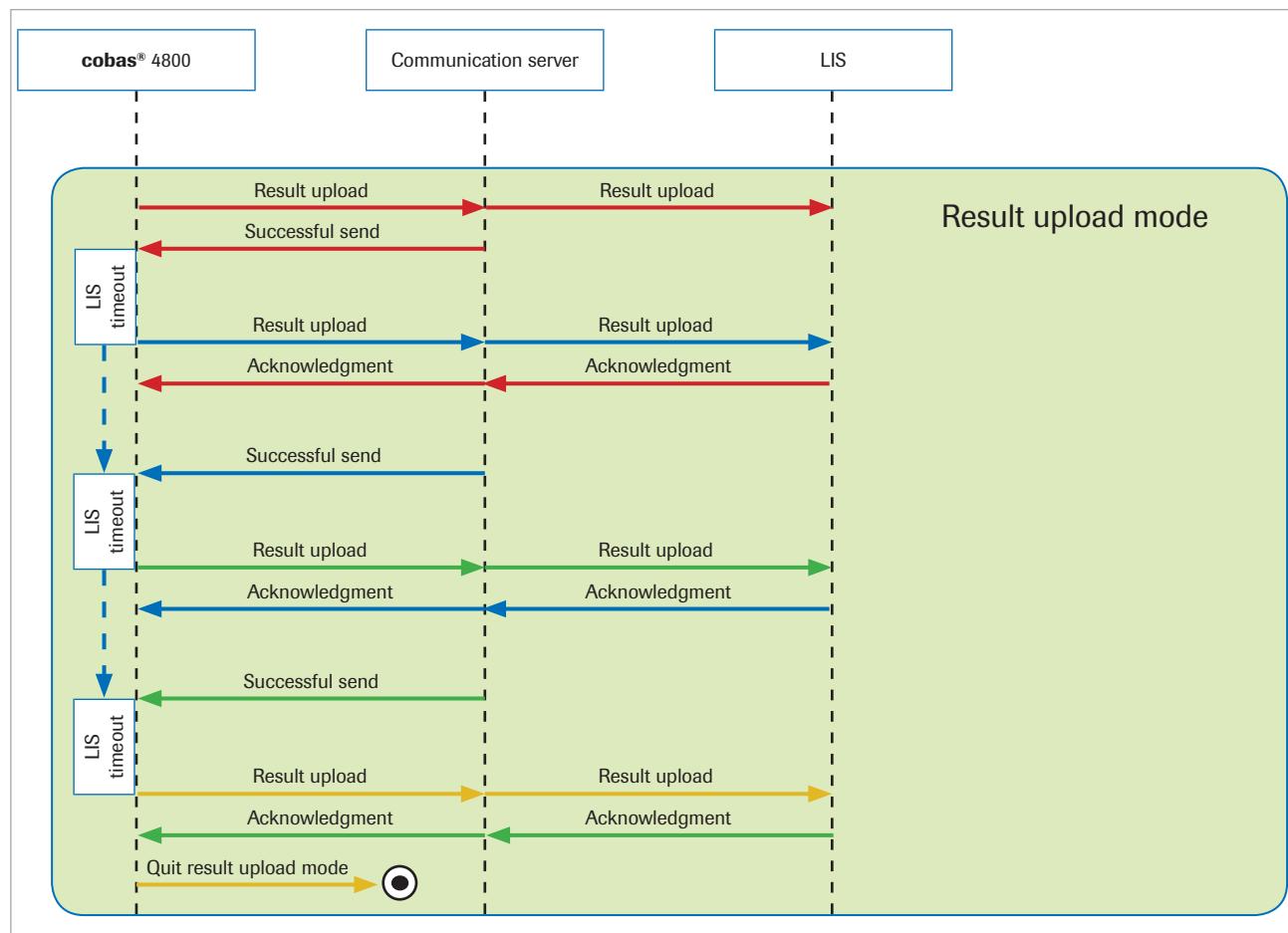
HL7 timeout and retry behavior

The following diagrams describe the HL7 timeout and retry behavior between the **cobas® 4800** software, the CommServer Service component, and the LIS, with the configuration defined in the LIS setting above.

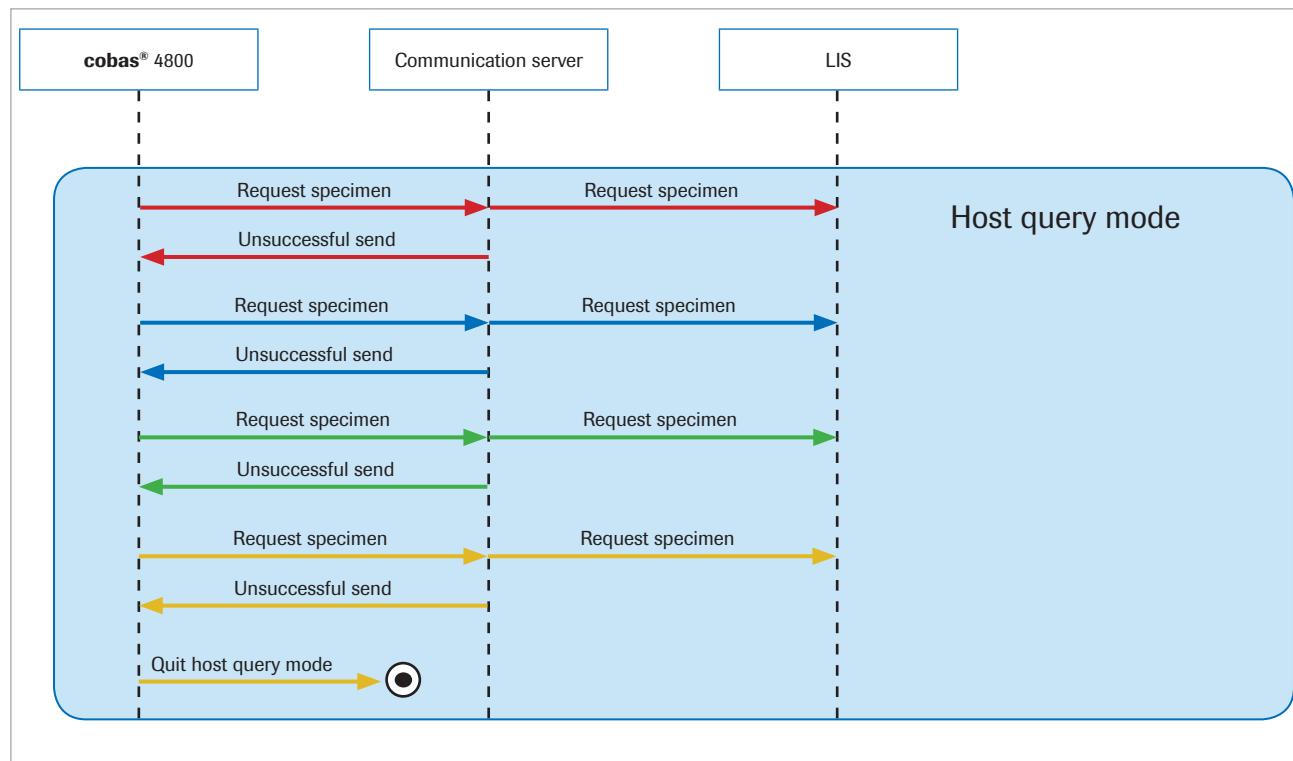
HL7 case 1: LIS answers just in time

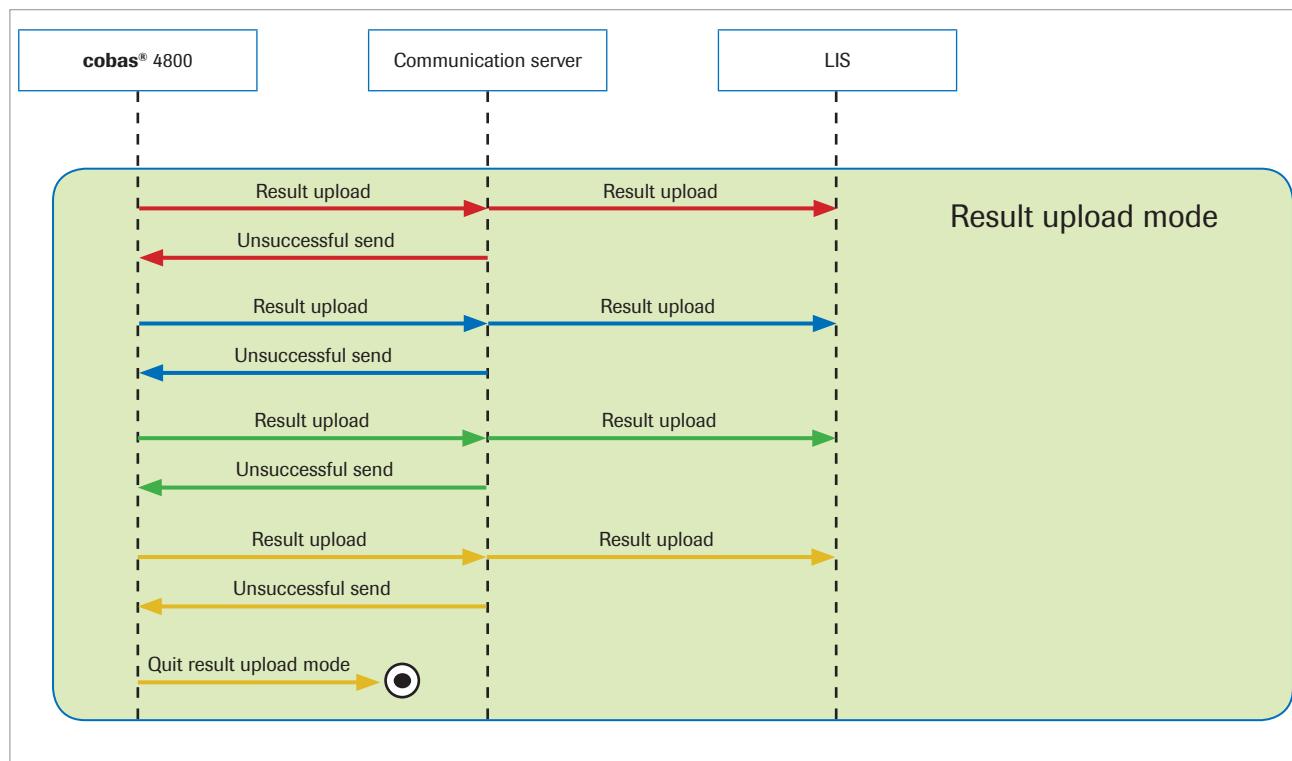


**HL7 case 2: LIS exceeds timeout**



HL7 case 3: LIS is disconnected





Troubleshooting

Logfiles

These logfiles are used when troubleshooting issues.

7

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cobas® 4800 software session log.....	108

Communication server log

This file captures the specific information communicated between the **cobas®** 4800 software <> communication server <> LIS.

Directory	C:\ProgramData\Roche\CommunicationServer\Log
Filename	CommunicationServer-cobas4800.log

cobas® 4800 software session log

This file captures all the **cobas®** 4800 software actions/events.

Directory C:\ProgramData\Roche\c4800\Log

Filename cobas-4800-session-trace-file.log

To find information regarding an error, open the file with Windows Notepad and search for |ERROR|. You may find some limited indications about protocol errors (e.g, an incorrect type or missing mandatory parameter).

Troubleshooting

8

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Missing order for all specimens.....	112

Missing order for a single specimen

The following error is displayed when a specimen is loaded in the **cobas** x 480 instrument but there is no corresponding order in the LIS:

The screenshot shows the cobas 4800 software interface. At the top, it displays "cobas 4800" and the date "05-Apr-2013 15:13:11". The user ID is listed as "User ID: Laboperator". A blue header bar indicates the current workflow: "05-APR-2013 14:56 Cdiff-HSV 1 and 2-MRSA/SA". Below this, a table lists specimen details:

Track Positi..	Tube	Scanned ID	Received ID	Specimen type	Requested result	Comment
20	1	A01	A01	Stool	Cdiff	
20	2	A02	A02	Stool	Cdiff	
20	3	A03	A03	Stool	Cdiff	
20	4	A04	A04	Stool	Cdiff	
20	5	A05	A05	Stool	Cdiff	
21	1	A06	A06	Anogenital Swab	HSV 1 and 2	
21	2	A07	A07	Anogenital Swab	HSV 1 and 2	
21	3	A08	A08	Anogenital Swab	HSV 1 and 2	
21	4	A09	A09	Anogenital Swab	HSV 1 and 2	
21	8	A10	A10	Nasal Swab	SA	
21	9	A11	A11	Nasal Swab	MRSA	
21	10	A12	A12	Nasal Swab	MRSA/SA	
21	11	A13	A13	Nasal Swab	SA	
21	12	A14	A14	Nasal Swab	MRSA	
21	13	A15				

A red error message at the bottom left states: "Error Please make sure the LIS connection is available and all necessary information is sent by LIS." To the right of the table is a vertical toolbar with icons for New run, Abort, Exit, Editor, Export, Print, Log off, and Information.

At the bottom, a workflow diagram shows the following steps: Start, Load the specimen, Define work order, Load the consumables, Load the reagents, Start the sample preparation, Seal the microwell plate, Load microwell plate into cobas z 480, and End. Buttons for Abort, Delete specimen, Unload carriers, and Next are also present.

- Missing order for a single specimen

Missing order for all specimens

The following error is displayed when there are no orders in the LIS for any specimens loaded:

The screenshot shows the cobas 4800 software interface. The top bar displays "cobas 4800", the date "22-Mar-2013 08:52:09", and the user "User ID: Laboperator". The "Workplace" tab is selected. A message bar at the top states "22-MAR-2013 08:51 In LIS input ASWAB for a Cdif test order". Below this, a "Test information" section shows "Cdif" and "Full". A timestamp "22-MAR-2013 08:51:08" is also present. A red error bar at the bottom displays the message "Error No specimens have been selected for the following tests: Cdif". The main workspace shows a table with one row of data:

Track	Tube	Scanned ID	Received ID	Specimen type	Requested result	Comment
20	1	A01				

At the bottom, a workflow diagram shows the following steps: Start → Load Samples → Define Work Order → Load Consumables → Load Reagents → Start the sample preparation → Seal MWP → Load microwell plate into cobas z 480. Buttons for Abort, Delete sample, Unload carriers, and Next are available.

- ☒ Missing order for all specimens

Appendices

Test specific mapping tables

This chapter lists the specific order, specimen, and result codes used for each test, together with communication examples.

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CT/NG & CT/NG v2.0 - LIS mapping	122
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BRAF - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
09BRAF	[blank]	P	09BRAF	Mutation Detected No Mutation Detected Invalid Failed

■ BRAF specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
09BRAF	[blank]	MUTCONTROL	09BRAF	Valid Invalid Failed
		WTCONTROL	09BRAF	Valid Invalid Failed

■ BRAF controls

Example ASTM messages

Result upload (example 1)

```
H|^&|||cobas 4800 software^2f6105d5-9100-4f3b-9490-
d97ea3dda4ee^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114119
P|1
O|1|9A1123456BZ1234^AD0000013^A01^^| |^^^09BRAF^^AnD|||20130328130736||||Q||||^MUTCONTROL|Admin|||||
|||P
R|1|^09BRAF|Valid||||P||Admin|20130625150757|20130625150824|50977_31089
C|1|I|F;NONE|G
C|2|I|,|G
P|2
O|1|9A1123456BZ1234^AD0000013^B01^^| |^^^09BRAF^^AnD|||20130328130736||||Q||||^WTCONTROL|Admin|||||
|||P
R|1|^09BRAF|Valid||||P||Admin|20130625150757|20130625150824|50977_31089
C|1|I|F;NONE|G
C|2|I|,|G
P|3
O|1|s1^AD0000013^C01^^| |^^^09BRAF^^AnD|||20130328130736||||N||||^P|Admin|||||||||P
R|1|^09BRAF|Mutation Detected||||P||Admin|20130625150757|20130625150824|50977_31089
C|1|I|F;NONE|G
P|4
O|1|s444^AD0000013^C07^^| |^^^09BRAF^^AnD|||20130328130736||||N||||^P|Admin|||||||||P
R|1|^09BRAF|Invalid||||P||Admin|20130625150757|20130625150824|50977_31089
C|1|I|F;NONE|G
```

Result upload (example 2)

```

H|^&|||cobas 4800 software^dda20937-a0fc-4c9f-9d85-
177b36ad1d6d^Laboperator^2.1.0.1314^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130515152708
P|1
O|1|9A1P182776D0001^ED0901464^A01^^^||^^^09BRAF^^AnD|||20130522141418||||Q||||^MUTCONTROL|FSE|||||||
||P
C|1|I|WT|G
R|1|^**09BRAF|Invalid||||P||FSE|20130522150121|20130522163553|50977_31089
C|1|I|F;R200|G
P|2
O|1|9A1P182776D0001^ED0901464^B01^^^||^^^09BRAF^^AnD|||20130522141418||||Q||||^WTCONTROL|FSE|||||||
|P
C|1|I|WT|G
R|1|^**09BRAF|Valid||||P||FSE|20130522150121|20130522163553|50977_31089
C|1|I|F;NONE|G
P|3
O|1|MUT^ED0901464^C01^^^||^^^09BRAF^^AnD|||20130522141418||||N||||^P|FSE|||||||P
R|1|^**09BRAF|Invalid||||P||FSE|20130522150121|20130522163553|50977_31089
C|1|I|F;R200|G
P|4
O|1|WT^ED0901464^D01^^^||^^^09BRAF^^AnD|||20130522141418||||N||||^P|FSE|||||||P
R|1|^**09BRAF|Invalid||||P||FSE|20130522150121|20130522163553|50977_31089
C|1|I|F;R200|G

```

Result upload (example 3)

```

H|^&|||cobas 4800 software^137017e4-9654-44aa-841c-
d0851a018335^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114128
P|1
O|1|9A1123456BZ1234^AD0000015^A01^^^||^^^09BRAF^^AnD|||20130328130736||||Q||||^MUTCONTROL|Admin|||||
|||P
R|1|^**09BRAF|Failed||||P||Admin|20130625175245|20130625175252|50977_31089
C|1|I|F;M2|G
C|2|I|,|G
P|2
O|1|9A1123456BZ1234^AD0000015^B01^^^||^^^09BRAF^^AnD|||20130328130736||||Q||||^WTCONTROL|Admin|||||
|||P
R|1|^**09BRAF|Failed||||P||Admin|20130625175245|20130625175252|50977_31089
C|1|I|F;M2|G
C|2|I|,|G
P|3
O|1|s1^AD0000015^C01^^^||^^^09BRAF^^AnD|||20130328130736||||N||||^P|Admin|||||||P
R|1|^**09BRAF|Failed||||P||Admin|20130625175245|20130625175252|50977_31089
C|1|I|F;M2|G

```

- For further ASTM and HL7 examples, see BRAF ASTM communication traces (160) and BRAF HL7 communication traces (163).

Cdiff - LIS mapping

Specimens These values are sent in an order download and a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
04CDIFF	STL ¹	P	04CDIFF	POS Cdiff NEG Cdiff Invalid Cdiff Failed

■ Cdiff specimens

-- ¹STL = Stool

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
04CDIFF	Positive Control	POSCONTROL	04CDIFF	Valid
	Negative Control	NEGCONTROL		Invalid Failed

■ Cdiff controls

Example ASTM messages Order query

```
H|^&|||cobas 4800 software^ 1d022c60-60ea-4d04-b023-
4d0b539d6871^Laboperator^2.1.0.1324^1394.LIS2|||||LIS|TSREQ^REAL|P|1|20130317115122
Q|1|^A3059230
L|1|N
```

Order response

```
H|^&|||ASTM32^ 1d022c60-60ea-4d04-b023-
4d0b539d6871^ MTSINSTALL^7.6.5^1394.LIS2|||||cobas 4800|TSDWN^REAL|P|1|20130317115122|
P|1
O|1|^A3059230||^^^04CDIFF^^Full|||20130317115122|||N|||20121116113305|STL^P|UserID|||||||O
L|1|N
```

Result output (POS, NEG and specimen)

```
H|^&|||cobas 4800 software^14cc06c5-8ba7-44b5-b0ef-
e8cef626d17e^UserID^2.1.0.1324^1394.LIS2|||||LIS|RSUPL^REAL|P|1|20130317115122\
P|1
O|1|^4PC000SYS0Z0131^ED0206944^C08^^BA0803892||^^^04CDIFF^^Full|||20130317115122|||Q|||^POSCONTROL
|UserID|||||||P
R|1|^04CDIFF|Valid||||F||UserID|20131116110709|20131116160310|518_25295
```

```
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),36.7;Ct:1 (MMx 1),41.2;Ct:5 (MMx 1),38.7|G
P|20|1|0NCP122453D0TD1^ED0206944^D08^^BA0803892||^^^04CDIFF^^Full|||20130317115122||||Q||||^NEGCONT
ROL|UserID|||||||P
R|1|^**04CDIFF|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),39.2|G
```

Specimen with single result output

```
P|3
O|1|A3059230^ED0206944^E08^^BA0803892||^^^04CDIFF^^Full|||20130317115122||||N||||STL^P|UserID|||||
|||P
R|1|^**04CDIFF|POS Cdiff||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
P|4
O|1|A3060042^ED0206944^F08^^BA0803892||^^^04CDIFF^^Full|||20130317115122||||N||||STL^P|UserID|||||
|||P
R|1|^**04CDIFF|NEG Cdiff||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
```

Failed specimen with single result output

```
P|5
O|1|A2192909^ED0802831^C01^^BA0803621||^^^04CDIFF^^Full|||20130211120256||||N||||STL^P|Laboperator|
|||||||P
C|1|I|Empty Tube|G
R|1|^**04CDIFF|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
L|1|N
```

► For further ASTM and HL7 examples, see Cdiff ASTM communication traces (165) and Cdiff HL7 communication traces (169).

CMV - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0OCMV	PLAS	P	0OCMV	Titer > Titer max < Titer min Target Not Detected Invalid Failed

■ CMV specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0OCMV	[blank]	NEGCONTROL		Target Not Detected Invalid Failed
		HPosCtrl	0OCMV	Titer Invalid Failed
		LPosCtrl		Titer Invalid Failed

■ CMV controls

Example messages

- For ASTM and HL7 examples, see CMV ASTM communication traces (174) and CMV HL7 communication traces (179).

CT/NG & CT/NG v2.0 - LIS mapping

Specimens These values are sent in an order download and a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
01CTNG	SWAB URINE PCYT ¹	P	01CT	POS CT NEG CT Invalid CT Failed
			01NG	POS NG NEG NG Invalid NG Failed
01CT	SWAB URINE PCYT ¹	P	01CT	POS CT NEG CT Invalid CT Failed
01NG	SWAB URINE PCYT ¹	P	01NG	POS NG NEG NG Invalid NG Failed

■ CT/NG specimens

-💡- ¹PCYT = PreservCyt® cytology media

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
01CTNG	Positive Control	POSCONTROL	01CT	
	Negative Control	NEGCONTROL	01NG	Valid

■ CT/NG controls

CT/NG ASTM example messages Order query

```
H|^&|||cobas 4800^c1876daf-af05-4bb8-bc92-
8edba42475c1^RocheNoCheck^^1394.LIS2||||LIS|TSREQ^REAL|P|1|20130402170751
Q|1|^BC000005
L|1|N
```

Order response

```
H|^\&|||ASTM32^b422404e-7269-4ca1-9f13-
ccale04abaf2^MTSINSTALL^7.6.5^1394.LIS2||||cobas 4800|TSDWN^REAL|P|1|20130623141557|
P|1
O|1|BC000005||^^^01CTNG^^Full|||20130401124500||||N|||20130401105500|SWAB^P|UserID|||||||O
L|1|N
```

Result output (POS, NEG and specimen)

```
H|^\&|||cobas 4800 software^dcaf4724-e7c8-4976-9d4e-
2e15beb9f4f9^Laboperator^2.1.0.1314^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130405174405
P|1
O|1|1C1R108089E0FTT^ED0906895^A01^^BA0803617|||^01CTNG^^Full|||20130214114700||||Q|||^POSCONTROL|
Laboperator|||||||P
R|1|^**01CT|Valid||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
C|2|I|Ct:0 (MMx 1),37.5;Ct:1 (MMx 1),37.7;Ct:5 (MMx 1),37.5|G
R|2|^**01NG|Valid||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
C|2|I|Ct:0 (MMx 1),37.5;Ct:1 (MMx 1),37.7;Ct:5 (MMx 1),37.5|G
P|2
O|1|0NCR100197E0J80^ED0906895^B01^^BA0803617|||^01CTNG^^Full|||20130214114700||||Q|||^NEGCONTROL|
Laboperator|||||||P
R|1|^**01CT|Valid||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),37.5|G
R|2|^**01NG|Valid||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),37.5|G
```

Specimen with single result output

```
P|3
O|1|A2194474^ED0906895^C01^^BA0803617|||^01CT^^Full|||20130214114700||||N|||PCYT^P|Laboperator|||
||||||P
C|1|I|Media|G
R|1|^**01CT|NEG CT||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G

P|4
O|1|A2194475^ED0906895^D01^^BA0803617|||^01NG^^Full|||20130214114700||||N|||PCYT^P|Laboperator|||
||||||P
R|1|^**01NG|NEG NG||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
```

Specimen with multiple result outputs

```
P|4
O|1|A2194761^ED0906895^A02^^BA0803617|||^01CTNG^^Full|||20130214114700||||N|||PCYT^P|Laboperator|
||||||P
C|1|I|Media|G
R|1|^**01CT|NEG CT||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
R|2|^**01NG|NEG NG||||P||Laboperator|20130214115242|20130214153414|51049_31253
C|1|I|F;M7,M8|G
```

Failed specimen with multiple result outputs

```
P|5
```

```
O|1|A2192909^ED0802831^C01^^^BA0803621|||^01CTNG^^Full|||20130211120256||||N|||PCYT^P|Laboperator|
|||||||P
C|1|I|Empty Tube|G
R|1|^01CT|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
R|2|^01NG|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
```

Failed specimen with single result output

```
P|6
O|1|A2192909^ED0802831^C01^^^BA0803621|||^01NG^^Full|||20130211120256||||N|||PCYT^P|Laboperator|||
|||||P
C|1|I|Empty Tube|G
R|1|^01NG|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
```

- For further ASTM and HL7 examples, see:
 - [CT/NG ASTM communication traces \(181\)](#)
 - [CT/NG HL7 communication traces \(187\)](#)
 - [CT/NG V2.0 ASTM communication traces \(193\)](#)
 - [CT/NG V2.0 HL7 communication traces \(197\)](#)

EGFR P1 - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
08EGFR	[blank]	P	08EGFR	Mutation Detected No Mutation Detected Invalid Failed
			08EGFR01	Exon 19 Deletion
			08EGFR02	Exon 20 S768I
			08EGFR03	Exon 21 L858R
			08EGFR04	Exon 20 T790M
			08EGFR05	Exon 21 L861Q
			08EGFR06	Exon 18 G719X
			08EGFR07	Exon 20 Insertion
			08EGFR08	N/A ¹

■ EGFR P1 specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
08EGFR	[blank]	MUTCONTROL	08EGFR	Valid Invalid Failed
			08EGFR08	N/A ¹
		NEGCONTROL	08EGFR	Valid Invalid Failed
			08EGFR08	N/A ¹

■ EGFR P1 controls

-💡- ¹No mutation to report

Example ASTM messages

EGFR P1 result upload (example 1)

```
H|^&|||cobas 4800 software^9e5add38-8340-4734-a62f-
20908871db51^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114509
P|1
O|1|8A1123456BZ1234^AD0000124^A01:A02:A03^^| |^^^08EGFR^^AnD|||20130318165129||||Q|||`^MUTCONTROL|Ad
min|||||||P
R|1|^**08EGFR|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^**08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
```

C|1|I|F;NONE|G
 C|2|I|,|G
 P|2
 O|1|8A1123456BZ1234^AD0000124^**B01:B02:B03**^^| |^^^08EGFR^^AnD|||20130318165129||||Q||||^NEGCONTROL|Ad
 min||||||||P
 R|1|^**08EGFR|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^**08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 P|3
 O|1|s2^AD0000124^**C01:C02:C03**^^| |^^^08EGFR^^AnD|||20130318165129||||N||||^P|Admin||||||||P
 R|1|^**08EGFR|No Mutation Detected||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|2|^**08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 P|4
 O|1|s3^AD0000124^**D01:D02:D03**^^| |^^^08EGFR^^AnD|||20130318165129||||N||||^P|Admin||||||||P
 R|1|^**08EGFR|Mutation Detected||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|2|^**08EGFR01|Exon 19 Deletion||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|3|^**08EGFR02|Exon 20 S768I||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|4|^**08EGFR03|Exon 21 L858R||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|5|^**08EGFR04|Exon 20 T790M||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|6|^**08EGFR06|Exon 18 G719X||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|7|^**08EGFR07|Exon 20 Insertion||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 P|5
 O|1|s4^AD0000124^**E01:E02:E03**^^| |^^^08EGFR^^AnD|||20130318165129||||N||||^P|Admin||||||||P
 R|1|^**08EGFR|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R417|G
 R|2|^**08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R417|G

EGFR P1 result upload (example 2)

H|^&|||cobas 4800 software^9e5add38-8340-4734-a62f-
 20908871db51^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114509
 P|1
 O|1|8A1123456BZ1234^AD0000124^**A01:A02:A03**^^| |^^^08EGFR^^AnD|||20130318165129||||Q||||^MUTCONTROL|Ad
 min||||||||P
 R|1|^**08EGFR|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^**08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 P|2
 O|1|8A1123456BZ1234^AD0000124^**B01:B02:B03**^^| |^^^08EGFR^^AnD|||20130318165129||||Q||||^NEGCONTROL|Ad
 min||||||||P
 R|1|^**08EGFR|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R391|G
 C|2|I|,|G

```
R|2|^__08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
C|1|I|F;R391|G
C|2|I|,|G
P|3
O|1|s2^AD0000124^C01:C02:C03^^^| | ^__08EGFR^^AnD|||20130318165129||||N||||^P|Admin|||||||||P
R|1|^__08EGFR|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
C|1|I|F;R391|G
R|2|^__08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
C|1|I|F;R391|G
```

EGFR P1 result upload (example 3)

```
H|\^&|||cobas 4800 software^0efffb3d8-31a8-4796-ae0e-
3d4c06f338fa^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114516
P|1
O|1|8A1123456BZ1234^AD0000122^A01:A02:A03^^^| | ^__08EGFR^^AnD|||20130318165129||||Q||||^MUTCONTROL|Ad
min|||||||P
R|1|^__08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^__08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|2
O|1|8A1123456BZ1234^AD0000122^B01:B02:B03^^^| | ^__08EGFR^^AnD|||20130318165129||||Q||||^NEGCONTROL|Ad
min|||||||P
R|1|^__08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^__08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|3
O|1|s2^AD0000122^C01:C02:C03^^^| | ^__08EGFR^^AnD|||20130318165129||||N||||^P|Admin|||||||||P
R|1|^__08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
R|2|^__08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
```

- For further ASTM and HL7 examples, see EGFR P1 ASTM communication traces (201) and EGFR P1 HL7 communication traces (203).

EGFR P2 - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
08EGFR	[blank]	P	08EGFR	Mutation Detected No Mutation Detected Invalid Failed
			08EGFR01	Exon 19 Deletion
			08EGFR02	Exon 20 S768I
			08EGFR03	Exon 21 L858R
			08EGFR04	Exon 20 T790M
			08EGFR05	Exon 21 L861Q
			08EGFR06	Exon 18 G719X
			08EGFR07	Exon 20 Insertion
			08EGFR08	N/A ¹

■ EGFR P2 specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
08EGFR	[blank]	MUTCONTROL	08EGFR	Valid Invalid Failed
			08EGFR08	N/A ¹
		NEGCONTROL	08EGFR	Valid Invalid Failed
			08EGFR08	N/A ¹

■ EGFR P2 controls

-💡- ¹No mutation to report

Example ASTM messages

Result upload (example 1)

```
H|^&|||cobas 4800 software^9e5add38-8340-4734-a62f-
20908871db51^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114509
P|1
O|1|8A1123456BZ1234^AD0000124^A01:A02:A03^^| | ^^^08EGFR^^AnD|||20130318165129|||Q||| ^MUTCONTROL|Ad
min|||||||||P
R|1|^^^08EGFR|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^^^08EGFR08|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
```

C|1|I|F;NONE|G
 C|2|I|,|G
 P|2
 O|1|8A1123456BZ1234^AD0000124^B01:B02:B03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||Q||||^NEGCONTROL|Ad
 min||||||||P
 R|1|^ ^^**08EGFR**|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 P|3
 O|1|s2^AD0000124^C01:C02:C03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||N||||^P|Admin||||||||P
 R|1|^ ^^**08EGFR**|No Mutation Detected||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 P|4
 O|1|s3^AD0000124^D01:D02:D03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||N||||^P|Admin||||||||P
 R|1|^ ^^**08EGFR**|Mutation Detected||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|2|^ ^^**08EGFR01**|Exon 19 Deletion||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 R|3|^ ^^**08EGFR03**|Exon 21 L858R||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 P|5
 O|1|s4^AD0000124^E01:E02:E03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||N||||^P|Admin||||||||P
 R|1|^ ^^**08EGFR**|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R417|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R417|G

Result upload (example 2)

H|\^&| | cobas 4800 software^9e5add38-8340-4734-a62f-
 20908871db51^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114509
 P|1
 O|1|8A1123456BZ1234^AD0000124^A01:A02:A03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||Q||||^MUTCONTROL|Ad
 min||||||||P
 R|1|^ ^^**08EGFR**|Valid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;NONE|G
 C|2|I|,|G
 P|2
 O|1|8A1123456BZ1234^AD0000124^B01:B02:B03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||Q||||^NEGCONTROL|Ad
 min||||||||P
 R|1|^ ^^**08EGFR**|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R391|G
 C|2|I|,|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R391|G
 C|2|I|,|G
 P|3
 O|1|s2^AD0000124^C01:C02:C03^^^| | ^^^**08EGFR**^^AnD ||| 20130318165129||||N||||^P|Admin||||||||P
 R|1|^ ^^**08EGFR**|Invalid||||P||Admin|20130626112819|20130626112848|51004_31170
 C|1|I|F;R391|G
 R|2|^ ^^**08EGFR08**|N/A||||P||Admin|20130626112819|20130626112848|51004_31170

C|1|I|F;R391|G

Result upload (example 3)

```

H|^&||cotas 4800 software^0effb3d8-31a8-4796-ae0e-
3d4c06f338fa^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114516
P|1
O|1|8A1123456BZ1234^AD0000122^A01:A02:A03^^^| |^^^08EGFR^^AnD|||20130318165129|||Q|||^MUTCONTROL|Ad
min|||||||P
R|1|^**08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|2
O|1|8A1123456BZ1234^AD0000122^B01:B02:B03^^^| |^^^08EGFR^^AnD|||20130318165129|||Q|||^NEGCONTROL|Ad
min|||||||P
R|1|^**08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|3
O|1|s2^AD0000122^C01:C02:C03^^^| |^^^08EGFR^^AnD|||20130318165129|||N|||^P|Admin|||||||P
R|1|^**08EGFR|Failed||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G
R|2|^**08EGFR08|N/A||||P||Admin|20130626112111|20130626112119|51004_31170
C|1|I|F;M2|G

```

- For further ASTM and HL7 examples, see EGFR P2 ASTM communication traces (205) and EGFR P2 HL7 communication traces (207).

EGFR Plasma P1 - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRP1	[blank]	P		Mutation Detected No Mutation Detected Invalid Failed
			IEGFRP1	
			IEGFRP101	Ex19Del
			IEGFRP102	S768I
			IEGFRP103	L858R
			IEGFRP104	T790M
			IEGFRP105	L861Q
			IEGFRP106	G719X
			IEGFRP107	Ex20Ins
			IEGFRP108	N/A ¹
			IEGFRP109	Ex19Del : [unit]
			IEGFRP110	S768I : [unit]
			IEGFRP111	L858R : [unit]
			IEGFRP112	T790M : [unit]
			IEGFRP113	L861Q : [unit]
			IEGFRP114	G719X : [unit]
			IEGFRP115	Ex20Ins : [unit]

■ EGFR Plasma P1 specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRP1	[blank]	MUTCONTROL	IEGFRP1	Valid Invalid Failed
			IEGFRP108	N/A ¹
		NEGCONTROL	IEGFRP1	Valid Invalid Failed
			IEGFRP108	N/A ¹

■ EGFR Plasma P1 controls

-💡- ¹No mutation to report

Example messages

- For ASTM and HL7 examples, see EGFR Plasma P1 ASTM communication traces (209) and EGFR Plasma P1 HL7 communication traces (215).

EGFR Plasma P2 - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRP2	[blank]	P	IEGFRP2	Mutation Detected No Mutation Detected Invalid Failed
			IEGFRP201	Ex19Del
			IEGFRP202	S768I
			IEGFRP203	L858R
			IEGFRP204	T790M
			IEGFRP205	L861Q
			IEGFRP206	G719X
			IEGFRP207	Ex20Ins
			IEGFRP208	N/A ¹

■ EGFR Plasma P2 specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRP2	[blank]	MUTCONTROL	IEGFRP2	Valid Invalid Failed
			IEGFRP208	N/A ¹
		NEGCONTROL	IEGFRP2	Valid Invalid Failed
			IEGFRP208	N/A ¹

■ EGFR Plasma P2 controls

-💡- ¹No mutation to report

Example messages

- For ASTM and HL7 examples, see EGFR Plasma P2 ASTM communication traces (217) and EGFR Plasma P2 HL7 communication traces (221).

EGFR Plasma RUO - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
LEGFR	[blank]	P		Mutation Detected No Mutation Detected Invalid Failed
			LEGFR01	Ex19Del
			LEGFR02	S768I
			LEGFR03	L858R
			LEGFR04	T790M
			LEGFR05	L861Q
			LEGFR06	G719X
			LEGFR07	Ex20Ins
			LEGFR08	N/A ¹
			LEGFR09	Ex19Del : [unit]
			LEGFR10	S768I : [unit]
			LEGFR11	L858R : [unit]
			LEGFR12	T790M : [unit]
			LEGFR13	L861Q : [unit]
			LEGFR14	G719X : [unit]
			LEGFR15	Ex20Ins : [unit]

■ EGFR Plasma RUO specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
LEGFR	[blank]	MUTCONTROL	LEGFR	Valid Invalid Failed
			LEGFR08	N/A ¹
		NEGCONTROL	LEGFR	Valid Invalid Failed
			LEGFR08	N/A ¹

■ EGFR Plasma RUO controls

-💡- ¹No mutation to report

Example messages

- For ASTM and HL7 examples, see EGFR Plasma RUO ASTM communication traces (225) and EGFR Plasma RUO HL7 communication traces (227).

EGFR Tissue P1 - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRT1	[blank]	P	IEGFRT1	Mutation Detected
				No Mutation Detected
				Invalid
				Failed
			IEGFRT101	Ex19Del
			IEGFRT102	S768I
			IEGFRT103	L858R
			IEGFRT104	T790M
			IEGFRT105	L861Q
			IEGFRT106	G719X
			IEGFRT107	Ex20Ins
			IEGFRT108	N/A ¹

■ EGFR Tissue specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
IEGFRT1	[blank]	MUTCONTROL	IEGFRT1	Valid
				Invalid
				Failed
			IEGFRT108	N/A ¹
		NEGCONTROL	IEGFRT1	Valid
				Invalid
				Failed
			IEGFRT108	N/A ¹

■ EGFR Tissue controls

-💡- ¹No mutation to report

Example messages

- For ASTM and HL7 examples, see EGFR Tissue P1 ASTM communication traces (229) and EGFR Tissue P1 HL7 communication traces (232).

HBV - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0CHBV	SERPLAS DILSERPLAS	P	0CHBV	Titer > Titer max < Titer min Target Not Detected Invalid Failed

■ HBV specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0CHBV	[blank]	NEGCONTROL		Target Not Detected Invalid Failed
		HPosCtrl	0CHBV	Titer Invalid Failed
		LPosCtrl		Titer Invalid Failed

■ HBV controls

Example messages

- For ASTM and HL7 examples, see HBV ASTM communication traces (234) and HBV HL7 communication traces (239).

HCV - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0DHCV	SERPLAS DILSERPLAS	P	0DHCV	Titer > Titer max < Titer min Target Not Detected Invalid Failed

■ HCV specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0DHCV	[blank]	NEGCONTROL		Target Not Detected Invalid Failed
		HPosCtrl	0DHCV	Titer Invalid Failed
		LPosCtrl		Titer Invalid Failed

■ HCV controls

Example messages

For ASTM and HL7 examples, see HCV ASTM communication traces (242) and HCV HL7 communication traces (245).

HCV GT - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0EHCVGT	SERPLAS	P	0EHCVGT	Failed Invalid Indeterminate
			0EHCVGT1	1
			0EHCVGT1A	1a
			0EHCVGT1B	1b
			0EHCVGT2	2
			0EHCVGT3	3
			0EHCVGT4	4
			0EHCVGT5	5
			0EHCVGT6	6

■ HCV GT specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
0EHCVGT	[blank]	NEGCONTROL	0EHCVGT	Valid Invalid Failed
		POSCONTROL		Valid Invalid Failed

■ HCV GT controls

Example messages

► For ASTM and HL7 examples, see HCV GT ASTM communication traces (247) and HCV GT HL7 communication traces (250).

HIV-1 - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
OBHIV1	PLAS DILPLAS	P	OBHIV1	Titer > Titer max < Titer min Target Not Detected Invalid Failed

■ HIV-1 specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
OBHIV1	[blank]	NEGCONTROL		Target Not Detected Invalid Failed
		HPosCtrl	OBHIV1	Titer Invalid Failed
		LPosCtrl		Titer Invalid Failed

■ HIV-1 controls

Example messages

For ASTM and HL7 examples, see HIV-1 ASTM communication traces (253) and HIV-1 HL7 communication traces (258).

HPV - LIS mapping

Specimens

These values are sent in an order download and a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
			02HPVOHR	POS Other HR HPV NEG Other HR HPV Invalid Other HR HPV Failed
02HPVGEN	PCYT ¹ SPATH ²	P	02HPV16	POS HPV16 NEG HPV16 Invalid HPV16 Failed
			02HPV18	POS HPV18 NEG HPV18 Invalid HPV18 Failed
02HPVPAN	PCYT ¹ SPATH ²	P	02HPVHR	POS HR HPV NEG HR HPV Invalid HR HPV Failed

■ HPV specimens

-💡- ¹PCYT = PreservCyt® cytology media

²SPATH = SurePath™ cytology media

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
	Positive Control	POSCONTROL	02HPVOHR	
02HPV			02HPV16	
			02HPV18	Valid
	Negative Control	NEGCONTROL	02HPVOHR	Invalid
			02HPV16	Failed
			02HPV18	

■ HPV controls

Example ASTM messages

Order query

```
H|^\&|||cobas 4800^c1876daf-af05-4bb8-bc92-
8edba42475c1^UserID^^1394.LIS2||||LIS|TSREQ^REAL|P|1|20130402170751
Q|1|^BC000005
```

L|1|N

Order response

```
H|^&||ASTM32^0097c1b3-fd48-4595-8b6b-
0ad7012a01c9^MTSINSTALL^7.6.5^1394.LIS2||||cobas 4800|TSDWN^REAL|P|1|20130623143314|
P|1
O|1|BC000005||^^^O2HPVGEN^^Full|||20130401124500|||N|||20130401105500|SPTH^P|UserID|||||||O
L|1|N
```

- For further ASTM and HL7 examples, see HPV ASTM communication traces (261) and HPV HL7 communication traces (267).

HSV 1 and 2 - LIS mapping

Specimens

These values are sent in an order download and a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
05HSV12	ASWAB ¹	P	05HSV1	Failed POS HSV-1 NEG HSV-1 Invalid HSV-1
			05HSV2	Failed POS HSV-2 NEG HSV-2 Invalid HSV-2

■ HSV 1 and 2 specimens

 ¹ASWAB = Anogenital swab

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
05HSV12	Positive Control	POSCONTROL	05HSV1 05HSV2	Valid Invalid
	Negative Control	NEGCONTROL	05HSV1 05HSV2	Failed

■ HSV 1 and 2 controls

Example ASTM messages

Order query

```
H|^&|||cobas 4800 software^ 1d022c60-60ea-4d04-b023-
4d0b539d6871^Laboperator^2.1.0.1324^1394.LIS2||||LIS|TSREQ^REAL|P|1|20130317115122
Q|1|^A3059230
L|1|N
```

Order response

```
H|^&|||ASTM32^1d022c60-60ea-4d04-b023-
4d0b539d6871^ MTSINSTALL^7.6.5^1394.LIS2|||cobas 4800|TSDWN^REAL|P|1|20130317115122|
P|1
O|1|A3059230||^^05HSV12^^Full|||20130317115122|||N|||20121116113305|ASWAB^P|UserID|||||||O
L|1|N
```

Result output (POS, NEG, and specimen)

```

H|^\&|||cobas 4800 software^14cc06c5-8ba7-44b5-b0ef-
e8cef626d17e^UserID^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130317115122
P|1
O|1|5PC000SYS0Z0131^ED0206944^C08^^BA0803892||^^^05HSV12^^Full|||20130317115122||||Q||||^POSCONTROL
|UserID|||||||P
R|1|^**05HSV1|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),36.7;Ct:1 (MMx 1),41.2;Ct:5 (MMx 1),38.7|G
R|2|^**05HSV2|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),36.7;Ct:1 (MMx 1),41.2;Ct:5 (MMx 1),38.7|G
P|2
O|1|0NCP122453D0TD1^ED0206944^D08^^BA0803892||^^^05HSV12^^Full|||20130317115122||||Q||||^NEGCONTROL
|UserID|||||||P
R|1|^**05HSV1|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),39.2|G
R|2|^**05HSV2|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),39.2|G

```

Specimen with multiple result outputs

```

P|3
O|1|A3059230^ED0206944^E08^^BA0803892||^^^05HSV12^^Full|||20130317115122||||N||||ASWAB^P|UserID|||||P
R|1|^**05HSV1|POS HSV-1||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
R|2|^**05HSV2|POS HSV-2||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
P|4
O|1|A3060042^ED0206944^F08^^BA0803892||^^^05HSV12^^Full|||20130317115122||||N||||ASWAB^P|UserID|||||P
R|1|^**05HSV1|NEG HSV-1||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
R|2|^**05HSV2|NEG HSV-2||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
L|1|N

```

Failed specimen with multiple result outputs

```

P|5
O|1|A2192909^ED0802831^C01^^BA0803621||^^^05HSV12^^Full|||20130211120256||||N||||ASWAB^P|Laboperator
r|||||||P
C|1|I|Empty Tube|G
R|1|^**05HSV1|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
R|2|^**05HSV2|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G

```

- For further ASTM and HL7 examples, see HSV 1 and 2 ASTM communication traces (272) and HSV 1 and 2 HL7 communication traces (278).

KRAS P1 - LIS mapping

Specimens

These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
07KRAS	[blank]	P	07KRAS	Mutation Detected No Mutation Detected Invalid Failed
			07KRAS01	Codon 12/13
			07KRAS02	Codon 61
			07KRAS03	N/A ¹

█ KRAS P1 specimens

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
07KRAS	[blank]	MUTCONTROL	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹
		NEGCONTROL	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹
		CALIBRATOR	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹

█ KRAS P1 controls

-💡- ¹No mutation to report

Example ASTM messages

Result upload (example 1)

```
H|^\&|||cobas 4800 software^ca9fd475-15c8-4dd0-9fad-
88bda5ffeeda^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114323
P|1
O|1|7A1123456BZ1234^AD0000125^A01:A02^^^| | ^^^07KRAS^^AnD|||20130328135416||||Q||||^MUTCONTROL|Admin|
|||||||P
R|1|^**07KRAS|Valid||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
```

P|2
O|1|7A1123456BZ1234^AD0000125^**B01:B02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||Q||||^**NEGCONTROL**|Admin|
|||||||P
R|1|^ ^^**07KRAS**|Valid||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^ ^^**07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|3
O|1|7A1123456BZ1234^AD0000125^**C01:C02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||Q||||^**CALIBRATOR**|Admin|
|||||||P
R|1|^ ^^**07KRAS**|**Valid**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^ ^^**07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|4
O|1|s1^AD0000125^**D01:D02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||N||||^P|Admin|||||||P
R|1|^ ^^**07KRAS**|**Invalid**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;R313|G
R|2|^ ^^**07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;R313|G
P|5
O|1|s2^AD0000125^**E01:E02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||N||||^P|Admin|||||||P
R|1|^ ^^**07KRAS**|**Mutation Detected**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
R|2|^ ^^**07KRAS01**|**Codon 12/13**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
R|3|^ ^^**07KRAS02**|**Codon 61**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G

Result upload (example 2)

H|^&|||cobas 4800 software^5e0dfe8c-a8ba-4bb3-9e2a-
fba30348943a^Laboperator^2.1.0.1314^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130515154350
P|1
O|1|7A1KRASP10FU345^ED0901466^**A01:A02**^^| | ^^^**07KRAS**^^**AnD**|||20130514163144||||Q||||^**MUTCONTROL**|Labope
rator|||||||P
C|1|I|MC|G
R|1|^ ^^**07KRAS**|**Invalid**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R261|G
C|2|I|,|G
R|2|^ ^^**07KRAS03**|**N/A**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R261|G
C|2|I|,|G
P|2
O|1|7A1KRASP10FU345^ED0901466^**B01:B02**^^| | ^^^**07KRAS**^^**AnD**|||20130514163144||||Q||||^**NEGCONTROL**|Labope
rator|||||||P
C|1|I|NEG (SD)|G
C|2|I|,|G
R|1|^ ^^**07KRAS**|**Valid**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^ ^^**07KRAS03**|**N/A**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|3

```
O|1|7A1KRASP10FU345^ED0901466^C01:C02^^^| |^^^07KRAS^^AnD|||20130514163144||||Q||||^CALIBRATOR|Labope
rator|||||||P
C|1|I|Invalid Cal (SD)|G
R|1|^**07KRAS|Invalid||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R259,R269|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R259,R269|G
C|2|I|,|G
P|4
O|1|01234567890123456789^ED0901466^D01:D02^^^| |^^^07KRAS^^AnD|||20130514163144||||N||||^P|Laboperato
r|||||||P
C|1|I|MD (Codon 12/13 + Codon 61)|G
R|1|^**07KRAS|Invalid||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R259,R261,R269|G
R|2|^**07KRAS03|N/A||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R259,R261,R269|G
```

Result upload (example 3)

```
H|\^&|||cobas 4800 software^d579adab-9130-4922-863b-
73b8125fe71c^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114333
P|1
O|1|7A1123456BZ1234^AD0000123^A01:A02^^^| |^^^07KRAS^^AnD|||20130328135416||||Q||||^MUTCONTROL|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|2
O|1|7A1123456BZ1234^AD0000123^B01:B02^^^| |^^^07KRAS^^AnD|||20130328135416||||Q||||^NEGCONTROL|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|3
O|1|7A1123456BZ1234^AD0000123^C01:C02^^^| |^^^07KRAS^^AnD|||20130328135416||||Q||||^CALIBRATOR|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|4
O|1|s1^AD0000123^D01:D02^^^| |^^^07KRAS^^AnD|||20130328135416||||N||||^P|Admin|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
```

- For further ASTM and HL7 examples, see KRAS P1 ASTM communication traces (285) and KRAS P1 HL7 communication traces (287).

KRAS P2 - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
07KRAS	[blank]	P	07KRAS	Mutation Detected No Mutation Detected Invalid Failed
			07KRAS01	Codon 12/13
			07KRAS02	Codon 61
			07KRAS03	N/A ¹

█ KRAS P2 specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
07KRAS	[blank]	MUTCONTROL	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹
		NEGCONTROL	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹
		CALIBRATOR	07KRAS	Valid Invalid Failed
			07KRAS03	N/A ¹

█ KRAS P2 controls

-💡- ¹No mutation to report

Example ASTM messages Result upload (example 1)

```
H|^&|||cobas 4800 software^ca9fd475-15c8-4dd0-9fad-
88bda5ffeeda^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114323
P|1
O|1|7A1123456BZ1234^AD0000125^A01:A02^^^| | ^^^07KRAS^^AnD|||20130328135416||||Q||||^MUTCONTROL|Admin|
|||||||P
R|1|^^^07KRAS|Valid||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^^^07KRAS03|N/A||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
```

P|2
O|1|7A1123456BZ1234^AD0000125^**B01:B02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||Q||||^NEGCONTROL|Admin|
|||||||P
R|1|^****07KRAS**|**Valid**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^****07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|3
O|1|7A1123456BZ1234^AD0000125^**C01:C02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||Q||||^CALIBRATOR|Admin|
|||||||P
R|1|^****07KRAS**|**Valid**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^****07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|4
O|1|s1^AD0000125^**D01:D02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||N||||^P|Admin|||||||||P
R|1|^****07KRAS**|**Invalid**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;R313|G
R|2|^****07KRAS03**|**N/A**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;R313|G
P|5
O|1|s2^AD0000125^**E01:E02**^^| | ^^^**07KRAS**^^**AnD**|||20130328135416||||N||||^P|Admin|||||||||P
R|1|^****07KRAS**|**Mutation Detected**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G
R|2|^****07KRAS01**|**Codon 12/13**||||P||Admin|20130626113119|20130626113718|51004_31170
C|1|I|F;NONE|G

Result upload (example 2)

H|\^&|||cobas 4800 software^5e0dfe8c-a8ba-4bb3-9e2a-
fba30348943a^Laboperator^2.1.0.1314^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130515154350
P|1
O|1|7A1KRASP10FU345^ED0901466^**A01:A02**^^| | ^^^**07KRAS**^^**AnD**|||20130514163144||||Q||||^MUTCONTROL|Labope
rator|||||||P
C|1|I|MC|G
R|1|^****07KRAS**|**Invalid**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R261|G
C|2|I|,|G
R|2|^****07KRAS03**|**N/A**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R261|G
C|2|I|,|G
P|2
O|1|7A1KRASP10FU345^ED0901466^**B01:B02**^^| | ^^^**07KRAS**^^**AnD**|||20130514163144||||Q||||^NEGCONTROL|Labope
rator|||||||P
C|1|I|NEG (SD)|G
C|2|I|,|G
R|1|^****07KRAS**|**Valid**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
R|2|^****07KRAS03**|**N/A**||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;NONE|G
C|2|I|,|G
P|3
O|1|7A1KRASP10FU345^ED0901466^**C01:C02**^^| | ^^^**07KRAS**^^**AnD**|||20130514163144||||Q||||^CALIBRATOR|Labope
rator|||||||P

```
C|1|I|Invalid Cal (SD)|G
R|1|^**07KRAS|Invalid||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R259,R269|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R259,R269|G
C|2|I|,|G
P|4
O|1|01234567890123456789^ED0901466^D01:D02^^| |^**07KRAS^^AnD|||20130514163144||||N||||^P|Laboperato
r|||||||P
C|1|I|MD (Codon 12/13)|G
R|1|^**07KRAS|Invalid||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R259,R261,R269|G
R|2|^**07KRAS03|N/A||||P||Laboperator|20130514165921|20130514184825|51004_31170
C|1|I|F;R251,R259,R261,R269|G
```

Result upload (example 3)

```
H|^&|||cobas 4800 software^d579adab-9130-4922-863b-
73b8125fe71c^Admin^2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130626114333
P|1
O|1|7A1123456BZ1234^AD0000123^A01:A02^^| |^**07KRAS^^AnD|||20130328135416||||Q||||^MUTCONTROL|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|2
O|1|7A1123456BZ1234^AD0000123^B01:B02^^| |^**07KRAS^^AnD|||20130328135416||||Q||||^NEGCONTROL|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|3
O|1|7A1123456BZ1234^AD0000123^C01:C02^^| |^**07KRAS^^AnD|||20130328135416||||Q||||^CALIBRATOR|Admin|
|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
C|2|I|,|G
P|4
O|1|s1^AD0000123^D01:D02^^| |^**07KRAS^^AnD|||20130328135416||||N||||^P|Admin|||||||P
R|1|^**07KRAS|Failed||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
R|2|^**07KRAS03|N/A||||P||Admin|20130626112206|20130626112213|51004_31170
C|1|I|F;M2|G
```

For further ASTM and HL7 examples, see KRAS P2 ASTM communication traces (289) and KRAS P2 HL7 communication traces (291).

MRSA/SA - LIS mapping

Specimens

These values are sent in an order download and a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
03MRSASA	NSWAB ¹	P	03MRSA	Failed POS MRSA NEG MRSA Invalid MRSA
03MRSASA	NSWAB	P	03SA	Failed POS SA NEG SA Invalid SA
03MRSASA	NSWAB	P	03MRSA	Failed POS MRSA NEG MRSA Invalid MRSA
03SA	NSWAB	P	03SA	Failed POS SA NEG SA Invalid SA

■ MRSA/SA specimens

 ¹NSWAB = Nasal swab

Controls

These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code sent with order and result ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
03MRSASA	Positive Control	POSCONTROL	03MRSA	Valid
03MRSASA	Negative Control	NEGCONTROL	03SA	Invalid
			03MRSA	Failed
			03SA	

■ MRSA/SA controls

Example ASTM messages

Order query

```
H|^&|||cobas 4800 software^ 1d022c60-60ea-4d04-b023-
4d0b539d6871^Laboperator^2.1.0.1324^1394.LIS2||||LIS|TSREQ^REAL|P|1|20130317115122
Q|1|^A3059230
L|1|N
```

Order response

```
H|^\&|||ASTM32^1d022c60-60ea-4d04-b023-
4d0b539d6871^ MTSINSTALL^7.6.5^1394.LIS2||||cobas 4800|TSDWN^REAL|P|1|20130317115122|
P|1
O|1|A3059230|||^03MRSA^^Full|||20130317115122||||N|||20121116113305|NSWAB^P|UserID|||||||O
L|1|N
```

Result output (POS, NEG, and specimen)

```
H|^\&|||cobas 4800 software^14cc06c5-8ba7-44b5-b0ef-e8cef626d17e^UserID^
2.1.0.1324^1394.LIS2||||LIS|RSUPL^REAL|P|1|20130317115122
P|1
O|1|3PC000SYS0Z0131^ED0206944^C08^^BA0803892|||^03MRSASA^^Full|||20130317115122||||Q|||^POSCONTR
L|UserID|||||||P
R|1|^03MRSA|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),36.7;Ct:1 (MMx 1),41.2;Ct:5 (MMx 1),38.7|G
R|2|^03SA|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),36.7;Ct:1 (MMx 1),41.2;Ct:5 (MMx 1),38.7|G
P|2
O|1|0NCP122453D0TD1^ED0206944^D08^^BA0803892|||^03MRSASA^^Full|||20130317115122||||Q|||^NEGCONTR
L|UserID|||||||P
R|1|^03MRSA|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),39.2|G
R|2|^03SA|Valid||||F||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
C|2|I|Ct:0 (MMx 1),---;Ct:1 (MMx 1),---;Ct:5 (MMx 1),39.2|G
```

Specimen with single result output

```
P|3
O|1|A3059230^ED0206944^E08^^BA0803892|||^03SA^^Full|||20130317115122||||N|||NSWAB^P|UserID|||||||P
R|1|^03SA|POS SA||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
```

Specimen with multiple result outputs

```
P|4
O|1|A3060042^ED0206944^F08^^BA0803892|||^03MRSASA^^Full|||20130317115122||||N|||NSWAB^P|UserID|||||||P
R|1|^03MRSA|NEG MRSA||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
R|2|^03SA|POS SA||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
P|5
O|1|A3058754^ED0206944^G08^^BA0803892|||^03MRSASA^^Full|||20130317115122||||N|||20131116113305|NSW
AB^P|UserID|||||||F
R|1|^03MRSA|POS MRSA||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
R|2|^03SA|NEG SA||||P||UserID|20131116110709|20131116160310|518_25295
C|1|I|F;M7|G
L|1|N
```

Failed specimen with multiple result outputs

```
P|6
```

```
O|1|A2192909^ED0802831^C01^^^BA0803621|||^03MRSASA^^Full|||20130211120256||||N|||NSWAB^P|Laboperator
or|||||||P
C|1|I|Empty Tube|G
R|1|^03MRSA|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
R|2|^03SA|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
```

Failed specimen with single result output

```
P|7
O|1|A2192909^ED0802831^C01^^^BA0803621|||^03SA^^Full|||20130211120256||||N|||NSWAB^P|Laboperator|||P
C|1|I|Empty Tube|G
R|1|^03SA|Failed||||P||Laboperator|20130211122448|20130211151237|51049_31253
C|1|I|F;X4,M7|G
```

- For further ASTM and HL7 examples, see MRSA/SA
ASTM communication traces (293) and MRS/SA
HL7 communication traces (299).

PIK3CA RUO - LIS mapping

Specimens These values are sent in a result upload.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Specimen Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
06PIK3CA	[blank]	P	06PIK3CA	Mutation Detected
				No Mutation Detected
				Invalid
				Failed
			06PIK3CA01	E542K
			06PIK3CA02	E545K
			06PIK3CA03	Q546K
			06PIK3CA04	N345K
			06PIK3CA05	C420R
			06PIK3CA06	R88Q
			06PIK3CA07	H1047X
			06PIK3CA08	G1049R
			06PIK3CA09	M1043I
			06PIK3CA10	N/A ¹

■ PIK3CA RUO specimens

Controls These values are sent in a control message.

For controls, the LIS Order Code is only sent in result uploads, not in work order queries.

LIS Order Code ASTM: O-5.4 HL7: OBR-4.1	Control Type ASTM: O-16.1 HL7: SPM-4	Specimen Role ASTM: O-16.2 HL7: SPM-11	Result code ASTM: R-3.4 HL7: OBX-3.1	Result value ASTM: R-4 HL7: OBX-5
06PIK3CA	[blank]	MUTCONTROL	06PIK3CA	Valid
				Invalid
				Failed
			06PIK3CA10	N/A ¹
		NEGCONTROL	06PIK3CA	Valid
				Invalid
				Failed
			06PIK3CA10	N/A ¹

■ PIK3CA RUO controls

 ¹No mutation to report

Example ASTM messages

Result upload (example 1)

```
H|^&|||cobas·4800·software^0cca764d-17f3-42d3-901eaedf948be128^Laboperator^2.1.0.1324^1394.LIS2|||
|LIS|RSUPL^REAL|P|1|20140403110420
```

```
P|1
```

```
O|1|6A1L214791F0712^AD1200000^A01:A02:A03^^^| | ^^^06PIK3CA^^AnD|||20140403100130||||Q||||^MUTCONTROL|
Laboperator|||||||P
```

R|1|^**06PIK3CA|Valid||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^**06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G

P|2
 O|1|6A1L214791F0712^AD1200000^B01:B02:B03^^^| |^**06PIK3CA^^AnD|||20140403100130||||Q||||^NEGCONTROL|
 Laboperator|||||||P
 R|1|^**06PIK3CA|Valid||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^**06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G

P|3
 O|1|02^AD1200000^D01:D02:D03^^^| |^**06PIK3CA^^AnD|||20140403100130||||N||||^P|Laboperator|||||||F
 R|1|^**06PIK3CA|Mutation Detected||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 R|2|^**06PIK3CA01|E542K||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 R|3|^**06PIK3CA02|E545X||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 R|4|^**06PIK3CA03|Q546X||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G

P|4
 O|1|03^AD1200000^E01:E02:E03^^^| |^**06PIK3CA^^AnD|||20140403100130||||N||||^P|Laboperator|||||||F
 R|1|^**06PIK3CA|Invalid||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;R610|G
 R|2|^**06PIK3CA10|N/A||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;R610|G

P|5
 O|1|04^AD1200000^F01:F02:F03^^^| |^**06PIK3CA^^AnD|||20140403100130||||N||||^P|Laboperator|||||||F
 R|1|^**06PIK3CA|No Mutation Detected||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 R|2|^**06PIK3CA10|N/A||||F||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G

Result upload (example 2)

H|\^&|||cobas · 4800 · software^0cca764d-17f3-42d3-901eaedf948be128^Laboperator^2.1.0.1324^1394.LIS2|||
 |LIS|RSUPL^REAL|P|1|20140403110420

P|1
 O|1|6A1L214791F0712^AD1200000^A01:A02:A03^^^| |^**06PIK3CA^^AnD|||20140403100130||||Q||||^MUTCONTROL|
 Laboperator|||||||P
 R|1|^**06PIK3CA|Valid||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G
 R|2|^**06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
 C|1|I|F;NONE|G
 C|2|I|,|G

P|2

```

O|1|6A1L214791F0712^AD1200000^B01:B02:B03^^^| |^^^06PIK3CA^^AnD|||20140403100130|||Q|||^NEGCONTROL|
Laboperator|||||||P
R|1|^^^06PIK3CA|Invalid|||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;R563|G
C|2|I|,|G
R|2|^^^06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;R563|G
C|2|I|,|G

P|3
O|1|02^AD1200000^D01:D02:D03^^^| |^^^06PIK3CA^^AnD|||20140403100130|||N|||^P|Laboperator|||||||F
R|1|^^^06PIK3CA|Invalid|||||F||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;R563|G
R|2|^^^06PIK3CA10|N/A||||F||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;R563|G

```

Result upload (example 3)

```

H|^\&|||cobas ·4800 ·software^0cca764d-17f3-42d3-901eaedf948be128^Laboperator^2.1.0.1324^1394.LIS2|||
|LIS|RSUPL^REAL|P|1|20140403110420

P|1
O|1|6A1L214791F0712^AD1200000^A01:A02:A03^^^| |^^^06PIK3CA^^AnD|||20140403100130|||Q|||^MUTCONTROL|
Laboperator|||||||P
R|1|^^^06PIK3CA|Failed|||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G
C|2|I|,|G
R|2|^^^06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G
C|2|I|,|G

P|2
O|1|6A1L214791F0712^AD1200000^B01:B02:B03^^^| |^^^06PIK3CA^^AnD|||20140403100130|||Q|||^NEGCONTROL|
Laboperator|||||||P
R|1|^^^06PIK3CA|Failed|||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G
C|2|I|,|G
R|2|^^^06PIK3CA10|N/A||||P||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G
C|2|I|,|G

P|3
O|1|02^AD1200000^D01:D02:D03^^^| |^^^06PIK3CA^^AnD|||20140403100130|||N|||^P|Laboperator|||||||F
R|1|^^^06PIK3CA|Failed|||||F||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G
R|2|^^^06PIK3CA|Failed|||||F||Laboperator|20140403102459|20140403102925|123456_12345
C|1|I|F;M2|G

```

For further ASTM and HL7 examples, see PIK3CA RUO ASTM communication traces (304) and PIK3CA RUO HL7 communication traces (309).

Communication traces

This chapter contains trace files for reference purposes, showing communication between the **cobas®** 4800 software and the host.

10

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About color coding

This publication visualizes the directionality of messages or message elements by different colors as illustrated below:

Incoming message (system->LIS)

Outgoing message (system<-LIS)

Message with unspecified directionality

BRAF ASTM communication traces

Result upload Result upload

c4800	13:33:53,955	[ENQ]		
HOST	13:33:54,064	[ACK]		
c4800	13:33:54,064	[STX]1H ^\& cobas·4800·software^4c96a789-da4f -4ce1-988f-8c2a24a0b5b2^RocheNoCheck^2.2.0.1503 ^1394.LIS2 LIS RSUPL^REAL P 1 2014120913330 1[CR]P 1[CR]O 1 9A13456788G3214^CD0508532^A01^^ ^ ^09BRAF^^AnD 20130903095452 Q ^MUT CONTROL Laboperat[ETB]96[CR][LF]		
HOST	13:33:54,189	[ACK]		
c4800	13:33:54,189	[STX]2or P[CR]R 1 ^09BRAF Valid P Laboperator 20130903104203 20130903121647 501 63_27803[CR]C 1 I F;M7 G[CR]C 2 I , G[CR]P 2[CR]O 1 9A13456788G3214^CD0508532^B01^^ ^09BRA F^^AnD 20130903095452 Q ^WTCONTROL Labo perator P[CR]R 1 ^0[ETB]A4[CR][LF]		
HOST	13:33:54,314	[ACK]		
c4800	13:33:54,314	[STX]39BRAF Valid P Laboperator 2013090310 4203 20130903121647 50163_27803[CR]C 1 I F;M7 G [CR]C 2 I , G[CR]P 3[CR]O 1 01·mut·det^CD050853 2^C01^^ ^09BRAF^^AnD 20130903095452 N ^P Laboperator P[CR]R 1 ^09BRAF M utation·Detected P Lab[ETB]EE[CR][LF]		
HOST	13:33:54,438	[ACK]		
c4800	13:33:54,438	[STX]4operator 20130903104203 20130903121647 50 163_27803[CR]C 1 I F;M7 G[CR]P 4[CR]O 1 02·mut· det^CD0508532^D01^^ ^09BRAF^^AnD 20130903 095452 N ^P Laboperator P[CR]R 1 ^09BRAF Mutation·Detected P Laboperator 20130903104203 20130903[ETB]F3[CR][LF]		
HOST	13:33:54,563	[ACK]		
c4800	13:33:54,563	[STX]5121647 50163_27803[CR]C 1 I F;M7 G[CR]P 5 [CR]O 1 03·mut·det·no·IC^CD0508532^E01^^ ^0 9BRAF^^AnD 20130903095452 N ^P Labopera tor P[CR]R 1 ^09BRAF Mutation·Detec d P Laboperator 20130903104203 20130903121 647 50163_27803[CR]C 1 I F[ETB]85[CR][LF]		
HOST	13:33:54,688	[ACK]		
c4800	13:33:54,688	[STX]6;M7 G[CR]P 6[CR]O 1 04·invalid^CD0508532^ F01^^ ^09BRAF^^AnD 20130903095452 N ^P Laboperator P[CR]R 1 ^09BRAF Inva lid P Laboperator 20130903104203 201309031 21647 50163_27803[CR]C 1 I F;R202,R203,M7 G[CR] P 7[CR]O 1 05·no·mut^CD050853[ETB]DF[CR][LF]		
HOST	13:33:54,813	[ACK]		
c4800	13:33:54,813	[STX]72^G01^^ ^09BRAF^^AnD 20130903095452 N ^P Laboperator P[CR]R 1 ^09B RAF No·Mutation·Detected P Laboperator 201 30903104203 20130903121647 50163_27803[CR]C 1 I F;M7 G[CR]P 8[CR]O 1 06·mut·det^CD0508532^H01^ ^ ^09BRAF^^AnD 20[ETB]9A[CR][LF]		
HOST	13:33:54,938	[ACK]		
c4800	13:33:54,938	[STX]0130903095452 N ^P Laboperator ^P[CR]R 1 ^09BRAF Mutation·Detected P Laboperator 20130903104203 20130903121647 50163		

```

_27803[CR]C|1|I|F;M7|G[CR]P|9[CR]O|1|07 ·mut ·det
^CD0508532^A02^^^|||^09BRAF^^AnD|||20130903095
452||||N||||^P|Labopera[ETB]2C[CR] [LF]
HOST 13:33:55,062 [ACK]
c4800 13:33:55,062 [STX]1tor|||||P[CR]R|1|^09BRAF|Mutation ·D
etected|||||P||Laboperator|20130903104203|20130
903121647|50163_27803[CR]C|1|I|F;M7|G[CR]P|10[C
R]O|1|08 ·mut ·det ·no ·IC^CD0508532^B02^^^|||^09B
RAF^^AnD|||20130903095452||||N||||^P|Laboperato
r|||||P[CR]R|1|^09BR[ETB]B9[CR] [LF]
HOST 13:33:55,187 [ACK]
c4800 13:33:55,187 [STX]2AF|Mutation ·Detected|||||P||Laboperator|2
0130903104203|20130903121647|50163_27803[CR]C|1
|I|F;M7|G[CR]P|11[CR]O|1|09 ·invalid^CD0508532^C
02^^^|||^09BRAF^^AnD|||20130903095452||||N||||^P|Laboperato
r|||||P[CR]R|1|^09BRAF|Inval
id|||||P||Laboperator|2[ETB]4F[CR] [LF]
HOST 13:33:55,312 [ACK]
c4800 13:33:55,312 [STX]30130903104203|20130903121647|50163_27803[
CR]C|1|I|F;R202,R203,M7|G[CR]P|12[CR]O|1|10 ·no ·
mut^CD0508532^D02^^^|||^09BRAF^^AnD|||20130903
095452||||N||||^P|Laboperator|||||P[CR]R|1|^
09BRAF|No ·Mutation ·Detected|||||P||Laboperat
or|20130903104203|20130[ETB]0D[CR] [LF]
HOST 13:33:55,437 [ACK]
c4800 13:33:55,437 [STX]4903121647|50163_27803[CR]C|1|I|F;M7|G[CR]
P|13[CR]O|1|11 ·mut ·det^CD0508532^E02^^^|||^09B
RAF^^AnD|||20130903095452||||N||||^P|Laboperato
r|||||P[CR]R|1|^09BRAF|Mutation ·Detected|
||||P||Laboperator|20130903104203|2013090312164
7|50163_27803[CR]C|1|I|F;M[ETB]2E[CR] [LF]
HOST 13:33:55,562 [ACK]
c4800 13:33:55,562 [STX]57|G[CR]P|14[CR]O|1|12 ·mut ·det^CD0508532^F
02^^^|||^09BRAF^^AnD|||20130903095452||||N||||^P|Laboperato
r|||||P[CR]R|1|^09BRAF|Mutation ·Detected|||||P||Laboperat
or|20130903121647|50163_27803[CR]C|1|I|F;M7|G[CR]P
|15[CR]O|1|13 ·mut ·det^CD05085[ETB]53[CR] [LF]
HOST 13:33:55,686 [ACK]
c4800 13:33:55,686 [STX]632^G02^^^|||^09BRAF^^AnD|||2013090309545
2||||N||||^P|Laboperator|||||P[CR]R|1|^09B
RAF|Mutation ·Detected||||P||Laboperator|20130
903104203|20130903121647|50163_27803[CR]C|1|I|F
;M7|G[CR]P|16[CR]O|1|14 ·mut ·det^CD0508532^H02^
|||^09BRAF^^AnD|||201[ETB]50[CR] [LF]
HOST 13:33:55,811 [ACK]
c4800 13:33:55,811 [STX]730903095452||||N||||^P|Laboperator|||||P
||P[CR]R|1|^09BRAF|Mutation ·Detected|||||P||L
aboperator|20130903104203|20130903121647|50163_
27803[CR]C|1|I|F;M7|G[CR]P|17[CR]O|1|15 ·mut ·det
·no ·IC^CD0508532^A03^^^|||^09BRAF^^AnD|||20130
903095452||||N||||^P|La[ETB]61[CR] [LF]
HOST 13:33:55,952 [ACK]
c4800 13:33:55,952 [STX]Oboperator|||||P[CR]R|1|^09BRAF|Muta
tion ·Detected|||||P||Laboperator|20130903104203
|20130903121647|50163_27803[CR]C|1|I|F;M7|G[CR]
P|18[CR]O|1|16 ·mut ·det^CD0508532^B03^^^|||^09B
RAF^^AnD|||20130903095452||||N||||^P|Laboperato
r|||||P[CR]R|1|^09BR[ETB]90[CR] [LF]

```

```

HOST    13:33:56,092 [ACK]
c4800  13:33:56,092 [STX]1AF|Mutation·Detected|||||P||Laboperator|2
          0130903104203|20130903121647|50163_27803[CR]C|1
          |I|F;M7|G[CR]P|19[CR]O|1|17·mut·det^CD0508532^C
          03^^^|||^09BRAF^^AnD|||20130903095452||||N|||||
          ^P|Laboperator|||||||P[CR]R|1|^|^09BRAF|Mutation
          ·Detected|||||P||Lab[ETB]D4[CR] [LF]
HOST    13:33:56,232 [ACK]
c4800  13:33:56,232 [STX]2operator|20130903104203|20130903121647|50
          163_27803[CR]C|1|I|F;M7|G[CR]P|20[CR]O|1|18·no·
          mut^CD0508532^D03^^^|||^09BRAF^^AnD|||20130903
          095452||||N||||^P|Laboperator|||||||P[CR]R|1|
          ^|^09BRAF|No·Mutation·Detected|||||P||Laboperat
          or|20130903104203|20130[ETB]09[CR] [LF]
HOST    13:33:56,373 [ACK]
c4800  13:33:56,388 [STX]3903121647|50163_27803[CR]C|1|I|F;M7|G[CR]
          P|21[CR]O|1|19·invalid^CD0508532^E03^^^|||^09B
          RAF^^AnD|||20130903095452||||N||||^P|Laboperato
          r|||||||P[CR]R|1|^|^09BRAF|Invalid|||||P||Lab
          operator|20130903104203|20130903121647|50163_27
          803[CR]C|1|I|F;R202,R203,M[ETB]C2[CR] [LF]
HOST    13:33:56,529 [ACK]
c4800  13:33:56,529 [STX]47|G[CR]P|22[CR]O|1|20·no·mut^CD0508532^F0
          3^^^|||^09BRAF^^AnD|||20130903095452||||N||||^
          P|Laboperator|||||||P[CR]R|1|^|^09BRAF|No·Mut
          ation·Detected|||||P||Laboperator|2013090310420
          3|20130903121647|50163_27803[CR]C|1|I|F;M7|G[CR
          ]P|23[CR]O|1|21·invalid^CD050[ETB]93[CR] [LF]
HOST    13:33:56,669 [ACK]
c4800  13:33:56,669 [STX]58532^G03^^^|||^09BRAF^^AnD|||20130903095
          452||||N||||^P|Laboperator|||||||P[CR]R|1|^|^
          09BRAF|Invalid||||P||Laboperator|2013090310420
          3|20130903121647|50163_27803[CR]C|1|I|F;R202,R2
          03,M7|G[CR]P|24[CR]O|1|22·mut·det·no·IC^CD05085
          32^H03^^^|||^09BRAF^^A[ETB]05[CR] [LF]
HOST    13:33:56,810 [ACK]
c4800  13:33:56,810 [STX]6nD|||20130903095452||||N||||^P|Laboperato
          r|||||||P[CR]R|1|^|^09BRAF|Mutation·Detected|
          ||||P||Laboperator|20130903104203|2013090312164
          7|50163_27803[CR]C|1|I|F;M7|G[CR]L|1|N[CR] [ETX]
          49[CR] [LF]
HOST    13:33:56,934 [ACK]
c4800  13:33:56,950 [EOT]

```

BRAF HL7 communication traces

Result upload

```
C4800 10:25:09,002 [VT]
C4800 10:25:09,002 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_
12345^M|""|LIS|LIS·Facility|20150311102455+0100
||OUL^R22^OUL_R22|bb3eae3b-fa75-41a3-9b05-fbb77
f80dec7|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29
^THE[CR]
C4800 10:25:09,002 SPM|1|9A15780220Z1367&ROCHE||""|||||||Q^^HL7036
9[CR]
C4800 10:25:09,002 SAC|||9A15780220Z1367[CR]
C4800 10:25:09,002 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:25:09,002 OBR||""|||09BRAF^09BRAF^99ROC||20150227094731[CR
]
C4800 10:25:09,002 ORC|SC||||CM[CR]
C4800 10:25:09,002 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50227094945^20150227095326||||""|||F||||RocheCh
eck||C4800^Roche~123456_12345^Roche|20150227095
326[CR]
C4800 10:25:09,002 OBX|2|ST|09BRAF^09BRAF^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~123456_1
2345^Roche|20150227095326[CR]
C4800 10:25:09,002 INV||""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508572^^99ROC|A01^^99ROC[CR]
C4800 10:25:09,002 NTE|1||F;M4,M7[CR]
C4800 10:25:09,002 NTE|2|||[CR]
C4800 10:25:09,002 NTE|3|||[CR]
C4800 10:25:09,002 SPM|2|9A15780220Z1367&ROCHE||""|||||||Q^^HL7036
9[CR]
C4800 10:25:09,002 SAC|||9A15780220Z1367[CR]
C4800 10:25:09,002 INV|WTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[CR
]
C4800 10:25:09,002 OBR||""|||09BRAF^09BRAF^99ROC||20150227094731[CR
]
C4800 10:25:09,002 ORC|SC||||CM[CR]
C4800 10:25:09,002 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50227094945^20150227095326||||""|||F||||RocheCh
eck||C4800^Roche~123456_12345^Roche|20150227095
326[CR]
C4800 10:25:09,002 OBX|2|ST|09BRAF^09BRAF^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~123456_1
2345^Roche|20150227095326[CR]
C4800 10:25:09,002 INV||""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508572^^99ROC|B01^^99ROC[CR]
C4800 10:25:09,002 NTE|1||F;M4,M7[CR]
C4800 10:25:09,002 NTE|2|||[CR]
C4800 10:25:09,002 NTE|3|||[CR]
C4800 10:25:09,002 [FS] [CR]

*      10:25:09,833 ACK Result: ExMID = bb3eae3b-fa75-41a3-9b05-fb
b77f80dec7
```

HOST 10:25:09,833 [VT]

```
HOST 10:25:09,843 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2  
    .2.0.1437^SN1234^M|LAB·Name|2015031102509+0100  
    ||ACK^R22^ACK|7934aa30-66a1-4445-a851-32e4db54e  
    c16|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]  
HOST 10:25:09,853 MSA|AA|bb3eae3b-fa75-41a3-9b05-fbb77f80dec7[CR]  
HOST 10:25:09,863 [FS] [CR]
```

Cdiff ASTM communication traces

Order download

```
c4800 17:41:09,717 [ENQ]
HOST   17:41:09,905 [ACK]
c4800 17:41:09,905 [STX]1H|\^&|||cobas·4800^28056ad0-f80e-4983-8d1
f-d8ab565269f1^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141124174023[CR]Q|1|^C
difffdata001[CR]L|1|N[CR] [ETX]0B[CR] [LF]
HOST   17:41:10,014 [ACK]
c4800 17:41:10,029 [EOT]

*      17:41:12,349 TSDWN: SID = Cdiffdata001

HOST   17:41:12,380 [ENQ]
c4800 17:41:12,395 [ACK]
HOST   17:41:12,411 [STX]1H|\^&|||ASTM32^b7778088-e750-45fe-9a51-f7
480d449d55^INSTALL^7.6.5^1394.LIS2||||cobas·48
00|TSDWN^REAL|P|1|20141124174110|[CR] [ETX]89[CR]
] [LF]
c4800 17:41:12,411 [ACK]
HOST   17:41:12,427 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 17:41:12,429 [ACK]
HOST   17:41:12,439 [STX]3O|1|Cdiffdata001|||^04CDIFF^^Full|||2014
1124160153||||N|||20141124160153|STL^P|beffab||
||||||O[CR] [ETX]21[CR] [LF]
c4800 17:41:12,439 [ACK]
HOST   17:41:12,449 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 17:41:12,449 [ACK]
HOST   17:41:12,449 [EOT]

c4800 17:41:14,391 [ENQ]
HOST   17:41:14,453 [ACK]
c4800 17:41:14,453 [STX]1H|\^&|||cobas·4800^686f102a-fb7c-49d1-9a7
b-9599018c0acf^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141124174023[CR]Q|1|^C
difffdata002[CR]L|1|N[CR] [ETX]68[CR] [LF]
HOST   17:41:14,563 [ACK]
c4800 17:41:14,578 [EOT]

*      17:41:16,782 TSDWN: SID = Cdiffdata002

HOST   17:41:16,813 [ENQ]
c4800 17:41:16,813 [ACK]
HOST   17:41:16,845 [STX]1H|\^&|||ASTM32^ba7e6664-64bd-4b20-94bd-a2
feedbccbc7^INSTALL^7.6.5^1394.LIS2||||cobas·48
00|TSDWN^REAL|P|1|20141124174114|[CR] [ETX]48[CR]
] [LF]
c4800 17:41:16,845 [ACK]
HOST   17:41:16,860 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 17:41:16,862 [ACK]
HOST   17:41:16,872 [STX]3O|1|Cdiffdata002|||^04CDIFF^^Full|||2014
1124160153||||N|||20141124160153|STL^P|beffab||
||||||O[CR] [ETX]22[CR] [LF]
c4800 17:41:16,872 [ACK]
HOST   17:41:16,882 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 17:41:16,882 [ACK]
```

HOST 17:41:16,882 [EOT]

Result upload

```
c4800 15:05:02,117 [ENQ]
HOST 15:05:02,180 [ACK]
c4800 15:05:02,180 [STX]1H|\^&|||cobas·4800·software^cbaaldad-8a4b
-43b6-a34f-75ed5eb00547^RocheCheck^2.2.0.1442^1
394.LIS2||||LIS|RSUPL^REAL|P|1|20141120150416[CR]P|1[CR]O|1|4PC121CPCBZ0047^CD0509029^A01^^^A
A5100098|||^04CDIFF^Full|||20140129140152|||
Q||||^POSCONTROL|[ETB]CE[CR][LF]
HOST 15:05:02,305 [ACK]
c4800 15:05:02,305 [STX]2Laboperator|||||||P[CR]R|1|^04CDIFF|V
alid|||||P||Laboperator|20140129141129|20140129
165108|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:
0·(MMx·1),---;Ct:1·(MMx·1),35.9;Ct:5·(MMx·1),38
.6|G[CR]P|2[CR]O|1|0NCR103488E0LGC^CD0509029^B0
1^^^AA5100098|||^04CDIFF^|[ETB]83[CR][LF]
HOST 15:05:02,429 [ACK]
c4800 15:05:02,429 [STX]3^Full|||20140129140152|||Q||||^NEGCONTRO
L|Laboperator|||||||P[CR]R|1|^04CDIFF|Valid
|||||P||Laboperator|20140129141129|201401291651
08|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:0·(M
Mx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),38.6|G[
CR]P|3[CR]O|1|RDR0008801^C[ETB]3A[CR][LF]
HOST 15:05:02,554 [ACK]
c4800 15:05:02,554 [STX]4D0509029^C01^^^AA5100098|||^04CDIFF^Ful
1|||20140129140152|||N||||STL^P|Laboperator|||
|||||P[CR]C|1|I|Cdiff·run1|G[CR]R|1|^04CDIFF
|POS·Cdiff|||||P||Laboperator|20140129141129|20
140129165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|4
[CR]O|1|RDR0008802^CD05090[ETB]69[CR][LF]
HOST 15:05:02,679 [ACK]
c4800 15:05:02,679 [STX]529^D01^^^AA5100098|||^04CDIFF^Full|||20
140129140152|||N|||STL^P|Laboperator|||||||P[CR]R|1|^04CDIFF|POS·C
diff|||||P||Laboperator|20140129141129|20140129
165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|5[CR]O|1|RDR0008803^CD0509029
^E01^^^AA5100098|||^04[ETB]90[CR][LF]
HOST 15:05:02,804 [ACK]
c4800 15:05:02,804 [STX]6CDIFF^Full|||20140129140152|||N||||STL^
P|Laboperator|||||||P[CR]R|1|^04CDIFF|POS·C
diff|||||P||Laboperator|20140129141129|20140129
165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|6[CR]O|1|RDR0008804^CD0509029^F01^^^AA5100098|||^04CD
IFF^Full|||20140129140[ETB]F4[CR][LF]
HOST 15:05:02,929 [ACK]
c4800 15:05:02,929 [STX]7152||||N|||STL^P|Laboperator|||||||P[CR]R|1|^04CDIFF|NEG·Cdiff|||||P||Laboperator|2
0140129141129|20140129165108|50549_30071[CR]C|1
|I|F;M7|G[CR]P|7[CR]O|1|RDR0008805^CD0509029^G0
1^^^AA5100098|||^04CDIFF^Full|||2014012914015
2||||N|||STL^P|Laboper[ETB]41[CR][LF]
HOST 15:05:03,053 [ACK]
c4800 15:05:03,053 [STX]0ator|||||||P[CR]R|1|^04CDIFF|Invalid·
Cdiff|||||P||Laboperator|20140129141129|2014012
9165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|8[CR]O|1|RDR0008806^CD0509029^H01^^^AA5100098|||^04C
```

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        DIFF^^Full|||20140129140152||||N||||STL^P|Labop
        erator|||||P[CR]R|1|^^(ETB)28[CR] [LF]
HOST 15:05:03,178 [ACK]
c4800 15:05:03,178 [STX]1^04CDIFF|NEG·Cdiff||||P||Laboperator|201
        40129141129|20140129165108|50549_30071[CR]C|1|I
        |F;M7|G[CR]P|9[CR]O|1|RDR0008807^CD0509029^A02^
        ^^AA5100098||^^(04CDIFF^^Full|||20140129140152|
        |||N||||STL^P|Laboperator|||||P[CR]R|1|^^(04CDIFF
        4CDIFF|Invalid·Cdiff||||[ETB]63[CR] [LF]
HOST 15:05:03,303 [ACK]
c4800 15:05:03,303 [STX]2||P||Laboperator|20140129141129|201401291
        65108|50549_30071[CR]C|1|I;F;M7|G[CR]P|10[CR]O|
        1|RDR0005733^CD0509029^B02^^(AA5100098||^^(04CD
        IFF^^Full|||20140129140152||||N||||STL^P|Labope
        rator|||||P[CR]R|1|^^(04CDIFF|Failed|||||X|
        |Laboperator|2014012914[ETB]5D[CR] [LF]
HOST 15:05:03,428 [ACK]
c4800 15:05:03,428 [STX]31129|20140129165108|50549_30071[CR]C|1|I|
        F;X3,M7|G[CR]P|11[CR]O|1|RDR0008808^CD0509029^C
        02^^(AA5100098||^^(04CDIFF^^Full|||201401291401
        52||||N||||STL^P|Laboperator|||||P[CR]R|1|^
        ^^(04CDIFF|Failed|||||X||Laboperator|20140129141
        129|20140129165108|5054[ETB]49[CR] [LF]
HOST 15:05:03,553 [ACK]
c4800 15:05:03,553 [STX]49_30071[CR]C|1|I|F;X4,M7|G[CR]P|12[CR]O|1
        |RDR0008809^CD0509029^D02^^(AA5100098||^^(04CDI
        FF^^Full|||20140129140152||||N||||STL^P|Laboper
        ator|||||P[CR]R|1|^^(04CDIFF|POS·Cdiff|||||
        P||Laboperator|20140129141129|20140129165108|50
        549_30071[CR]C|1|I|F;M7|G[CR] [ETB]3A[CR] [LF]
HOST 15:05:03,677 [ACK]
c4800 15:05:03,677 [STX]5P|13[CR]O|1|RDR0008810^CD0509029^E02^^(AA
        5100098||^^(04CDIFF^^Full|||20140129140152||||N
        |||STL^P|Laboperator|||||P[CR]R|1|^^(04CDI
        FF|POS·Cdiff||||P||Laboperator|20140129141129|
        20140129165108|50549_30071[CR]C|1|I|F;M7|G[CR]P
        |14[CR]O|1|RDR0008811^CD05[ETB]21[CR] [LF]
HOST 15:05:03,802 [ACK]
c4800 15:05:03,802 [STX]609029^F02^^(AA5100098||^^(04CDIFF^^Full|||
        |20140129140152||||N||||STL^P|Laboperator|||||
        |||P[CR]R|1|^^(04CDIFF|POS·Cdiff||||P||Laboper
        ator|20140129141129|20140129165108|50549_30071[
        CR]C|1|I|F;M7|G[CR]P|15[CR]O|1|RDR0008812^CD050
        9029^G02^^(AA5100098||^|[ETB]41[CR] [LF]
HOST 15:05:03,927 [ACK]
c4800 15:05:03,927 [STX]7^^(04CDIFF^^Full|||20140129140152||||N|||||
        STL^P|Laboperator|||||P[CR]R|1|^^(04CDIFF|P
        OS·Cdiff||||P||Laboperator|20140129141129|2014
        0129165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|16[
        CR]O|1|RDR0008813^CD0509029^H02^^(AA5100098||^
        ^^(04CDIFF^^Full|||201401[ETB]49[CR] [LF]
HOST 15:05:04,067 [ACK]
c4800 15:05:04,067 [STX]029140152||||N||||STL^P|Laboperator|||||
        ||P[CR]R|1|^^(04CDIFF|NEG·Cdiff||||P||Labopera
        tor|20140129141129|20140129165108|50549_30071[C
        R]C|1|I|F;M7|G[CR]P|17[CR]O|1|RDR0008814^CD0509
        029^A03^^(AA5100098||^^(04CDIFF^^Full|||2014012
        9140152||||N||||STL^P|L[ETB]EE[CR] [LF]
HOST 15:05:04,208 [ACK]

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```

c4800 15:05:04,208 [STX]1aboperator|||||P[CR]R|1|^~~~04CDIFF|In
valid·Cdiff|||||P||Laboperator|20140129141129|2
0140129165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|
18[CR]O|1|RDR0008815^CD0509029^B03^~~AA5100098|
|^~~~04CDIFF^~Full|||20140129140152||||N||||STL^
P|Laboperator|||||P[ETB]8B[CR] [LF]
HOST 15:05:04,348 [ACK]
c4800 15:05:04,348 [STX]2[CR]R|1|^~~~04CDIFF|NEG·Cdiff|||||P||Labop
erator|20140129141129|20140129165108|50549_3007
1[CR]C|1|I|F;M7|G[CR]P|19[CR]O|1|RDR0008816^CD0
509029^C03^~~AA5100098| |^~~~04CDIFF^~Full|||2014
0129140152||||N||||STL^P|Laboperator|||||P[
CR]R|1|^~~~04CDIFF|Invalid·[ETB]8C[CR] [LF]
HOST 15:05:04,489 [ACK]
c4800 15:05:04,489 [STX]3Cdiff|||||P||Laboperator|20140129141129|2
0140129165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|
20[CR]O|1|RDR0008817^CD0509029^D03^~~AA5100098|
|^~~~04CDIFF^~Full|||20140129140152||||N||||STL^
P|Laboperator|||||P[CR]R|1|^~~~04CDIFF|POS·C
diff|||||P||Laboperator[ETB]E5[CR] [LF]
HOST 15:05:04,629 [ACK]
c4800 15:05:04,629 [STX]4|20140129141129|20140129165108|50549_3007
1[CR]C|1|I|F;M7|G[CR]P|21[CR]O|1|RDR0008818^CD0
509029^E03^~~AA5100098| |^~~~04CDIFF^~Full|||2014
0129140152||||N||||STL^P|Laboperator|||||P[
CR]R|1|^~~~04CDIFF|POS·Cdiff|||||P||Laboperator|
20140129141129|20140129[ETB]2E[CR] [LF]
HOST 15:05:04,769 [ACK]
c4800 15:05:04,769 [STX]5|165108|50549_30071[CR]C|1|I|F;M7|G[CR]P|2
2[CR]O|1|RDR0008819^CD0509029^F03^~~AA5100098|||
|^~~~04CDIFF^~Full|||20140129140152||||N||||STL^P
|Laboperator|||||P[CR]R|1|^~~~04CDIFF|POS·Cd
iff|||||P||Laboperator|20140129141129|201401291
65108|50549_30071[CR]C|1|I|[ETB]B6[CR] [LF]
HOST 15:05:04,910 [ACK]
c4800 15:05:04,910 [STX]6|F;M7|G[CR]P|23[CR]O|1|RDR0008820^CD05090
29^G03^~~AA5100098| |^~~~04CDIFF^~Full|||20140129
140152||||N||||STL^P|Laboperator|||||P[CR]R
|1|^~~~04CDIFF|POS·Cdiff|||||P||Laboperator|2014
0129141129|20140129165108|50549_30071[CR]C|1|I|
F;M7|G[CR]P|24[CR]O|1|RDR0008[ETB]95[CR] [LF]
HOST 15:05:05,050 [ACK]
c4800 15:05:05,050 [STX]7821^CD0509029^H03^~~AA5100098| |^~~~04CDIFF
^~Full|||20140129140152||||N||||STL^P|Laboperat
or|||||P[CR]R|1|^~~~04CDIFF|NEG·Cdiff|||||P|
|Laboperator|20140129141129|20140129165108|5054
9_30071[CR]C|1|I|F;M7|G[CR]L|1|N[CR] [ETX]1E[CR]
[LF]
HOST 15:05:05,191 [ACK]
c4800 15:05:05,191 [EOT]

```

Cdiff HL7 communication traces

Order download

```
C4800 10:43:17,491 [VT]
C4800 10:43:17,491 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312104303+0100||QBP^Q11^QBP_Q
11|2e317628-6d46-4007-870f-7fc1ebe80296|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:43:17,491 QPD|WOS^Work·Order·Step^IHE_LAW|cdc7a970-ddfd-41
12-85b9-4e5c347697d8|Cdiff01[CR]
C4800 10:43:17,491 RCP|I||R^^HL70394[CR]
C4800 10:43:17,491 [FS] [CR]

*      10:43:17,794 ACK Inquiry: ExMID = 2e317628-6d46-4007-870f-7
fc1ebe80296

HOST 10:43:17,804 [VT]
HOST 10:43:17,804 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312104317+0100||RSP^K11
^RSP_K11|e09fdb0f-fd39-4386-9c4d-b298e638ab97|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:43:17,835 MSA|AA|2e317628-6d46-4007-870f-7fc1ebe80296[CR]
HOST 10:43:17,847 QAK|cdc7a970-ddfd-4112-85b9-4e5c347697d8|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:43:17,857 QPD|WOS^Work·Order·Step^IHE_LAW|cdc7a970-ddfd-4
112-85b9-4e5c347697d8|Cdiff01[CR]
HOST 10:43:17,867 [FS] [CR]

*      10:43:18,777 Order: SID^MID = Cdiff01^fc9a8e78-86ed-4000-b3
be-118786c527fd

HOST 10:43:18,787 [VT]
HOST 10:43:18,797 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312104318+0100||OML^O33
^OML_O33|fc9a8e78-86ed-4000-b3be-118786c527fd|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:43:18,813 SPM|1|Cdiff01&ROCHE| |STL^^99ROC||||||P^^HL7036
9[CR]
HOST 10:43:18,825 SAC|||Cdiff01[CR]
HOST 10:43:18,835 ORC|NW|||||||20150226102439[CR]
HOST 10:43:18,845 OBR||12345||04CDIFF^04CDIFF^99ROC[CR]
HOST 10:43:18,855 [FS] [CR]

C4800 10:43:20,964 [VT]
C4800 10:43:20,964 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312104306+0100||ORL^O34^ORL_O
34|93731aa7-d531-4f05-a206-00700dc78b72|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:43:20,964 MSA|AA|fc9a8e78-86ed-4000-b3be-118786c527fd[CR]
C4800 10:43:20,964 SPM|1|Cdiff01&ROCHE| |STL^^99ROC||||||P^^HL7036
9[CR]
C4800 10:43:20,964 SAC|||Cdiff01[CR]
C4800 10:43:20,964 ORC|OK|12345|||SC[CR]
C4800 10:43:20,964 [FS] [CR]

C4800 10:43:21,173 [VT]
C4800 10:43:21,173 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
```

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LIS·Facility|20150312104303+0100||QBP^Q11^QBP_Q
11|650ba72f-82bd-463d-aa36-0ed7d0ce56b6|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:43:21,173 QPD|WOS^Work·Order·Step^IHELAW|cedf2a52-2b2d-4e
84-8dcf-ba4926b32b36|Cdiff02[CR]
C4800 10:43:21,173 RCP|I||R^^HL70394[CR]
C4800 10:43:21,173 [FS] [CR]

*      10:43:21,331 ACK Inquiry: ExMID = 650ba72f-82bd-463d-aa36-0
ed7d0ce56b6

HOST 10:43:21,341 [VT]
HOST 10:43:21,341 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312104321+0100||RSP^K11
^RSP_K11|6293f3ae-c5aa-4d66-b844-13866a8ced14|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:43:21,361 MSA|AA|650ba72f-82bd-463d-aa36-0ed7d0ce56b6[CR]
HOST 10:43:21,373 QAK|cedf2a52-2b2d-4e84-8dcf-ba4926b32b36|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:43:21,383 QPD|WOS^Work·Order·Step^IHE_LAW|cedf2a52-2b2d-4
e84-8dcf-ba4926b32b36|Cdiff02[CR]
HOST 10:43:21,393 [FS] [CR]

*      10:43:22,423 Order: SID^MID = Cdiff02^da0b49e5-2a71-41cb-97
c0-edaff9ff5d23

HOST 10:43:22,433 [VT]
HOST 10:43:22,433 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312104322+0100||OML^O33
^OML_O33|da0b49e5-2a71-41cb-97c0-edaff9ff5d23|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:43:22,452 SPM|1|Cdiff02&ROCHE|STL^^99ROC||||||P^^HL7036
9[CR]
HOST 10:43:22,459 SAC|||Cdiff02[CR]
HOST 10:43:22,469 ORC|NW|||||||20150226102439[CR]
HOST 10:43:22,479 OBR||12345||04CDIFF^04CDIFF^99ROC[CR]
HOST 10:43:22,489 [FS] [CR]

C4800 10:43:24,411 [VT]
C4800 10:43:24,411 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312104310+0100||ORL^O34^ORL_O
34|e53ad2b0-f0dc-4685-b064-8ee6b9560b1f|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:43:24,411 MSA|AA|da0b49e5-2a71-41cb-97c0-edaff9ff5d23[CR]
C4800 10:43:24,411 SPM|1|Cdiff02&ROCHE|STL^^99ROC||||||P^^HL7036
9[CR]
C4800 10:43:24,411 SAC|||Cdiff02[CR]
C4800 10:43:24,411 ORC|OK|12345|||SC[CR]
C4800 10:43:24,411 [FS] [CR]

C4800 10:43:24,623 [VT]
C4800 10:43:24,623 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312104303+0100||QBP^Q11^QBP_Q
11|0954facc-c1b0-4e38-84ba-9693b775a562|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:43:24,623 QPD|WOS^Work·Order·Step^IHELAW|669b9240-6a0c-44
a5-946a-901f3d6fe1f8|Cdiff03[CR]
C4800 10:43:24,623 RCP|I||R^^HL70394[CR]
C4800 10:43:24,623 [FS] [CR]

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*      10:43:24,865 ACK Inquiry: ExMID = 0954facc-c1b0-4e38-84ba-9
       693b775a562

HOST  10:43:24,875 [VT]
HOST  10:43:24,875 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
       .2.0.1437|LAB·Name|20150312104324+0100||RSP^K11
       ^RSP_K11|21a42273-be6e-4a3f-91a1-1047832aa73c|P
       |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST  10:43:24,891 MSA|AA|0954facc-c1b0-4e38-84ba-9693b775a562[CR]
HOST  10:43:24,907 QAK|669b9240-6a0c-44a5-946a-901f3d6fe1f8|OK|WOS
       ^Work·Order·Step^IHE_LAW[CR]
HOST  10:43:24,919 QPD|WOS^Work·Order·Step^IHE_LAW|669b9240-6a0c-4
       4a5-946a-901f3d6fe1f8|Cdiff03[CR]
HOST  10:43:24,929 [FS] [CR]

*      10:43:25,839 Order: SID^MID = Cdiff03^9c7c6808-394f-4a4b-be
       dc-70c32e5758f1

HOST  10:43:25,839 [VT]
HOST  10:43:25,856 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
       .2.0.1437|LAB·Name|20150312104325+0100||OML^O33
       ^OML_O33|9c7c6808-394f-4a4b-bede-70c32e5758f1|P
       |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST  10:43:25,866 SPM|1|Cdiff03&ROCHE| |STL^^99ROC||||||P^^HL7036
       9[CR]
HOST  10:43:25,876 SAC|||Cdiff03[CR]
HOST  10:43:25,886 ORC|NW|||||||20150226102439[CR]
HOST  10:43:25,896 OBR||12345||04CDIFF^04CDIFF^99ROC[CR]
HOST  10:43:25,906 [FS] [CR]

C4800 10:43:27,959 [VT]
C4800 10:43:27,959 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
       LIS·Facility|20150312104313+0100||ORL^O34^ORL_O
       34|84d00fbe-0971-4ba1-b5c8-ca04289855cb|P|2.5.1
       |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:43:27,959 MSA|AA|9c7c6808-394f-4a4b-bede-70c32e5758f1[CR]
C4800 10:43:27,959 SPM|1|Cdiff03&ROCHE| |STL^^99ROC||||||P^^HL7036
       9[CR]
C4800 10:43:27,959 SAC|||Cdiff03[CR]
C4800 10:43:27,959 ORC|OK|12345|||SC[CR]
C4800 10:43:27,959 [FS] [CR]

C4800 10:43:28,176 [VT]
C4800 10:43:28,176 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
       LIS·Facility|20150312104303+0100||QBP^Q11^QBP_Q
       11|4a65f2cb-d9d7-4b55-b44b-67fab20bd174|P|2.5.1
       ||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:43:28,176 QPD|WOS^Work·Order·Step^IHELAW|6232037a-132c-4b
       45-a932-bc60959cf06c|Cdiff04[CR]
C4800 10:43:28,176 RCP|I||R^^HL70394[CR]
C4800 10:43:28,176 [FS] [CR]

*      10:43:28,488 ACK Inquiry: ExMID = 4a65f2cb-d9d7-4b55-b44b-6
       7fab20bd174

HOST  10:43:28,498 [VT]
HOST  10:43:28,498 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
       .2.0.1437|LAB·Name|20150312104328+0100||RSP^K11

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^RSP_K11|0f0585fe-6bd7-4c28-9c28-6bae3e71dd20|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:43:28,513 MSA|AA|4a65f2cb-d9d7-4b55-b44b-67fab20bd174[CR]
HOST 10:43:28,525 QAK|6232037a-132c-4b45-a932-bc60959cf06c|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST 10:43:28,535 QPD|WOS^Work·Order·Step^IHE_LAW|6232037a-132c-4
    b45-a932-bc60959cf06c|Cdiff04[CR]
HOST 10:43:28,545 [FS] [CR]

*      10:43:29,455 Order: SID^MID = Cdiff04^506cc78c-7654-4e36-94
        cc-8ea39d8e8cd0

HOST 10:43:29,465 [VT]
HOST 10:43:29,465 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20150312104329+0100||OML^O33
    ^OML_O33|506cc78c-7654-4e36-94cc-8ea39d8e8cd0|P
    |2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:43:29,493 SPM|1|Cdiff04&ROCHE| |STL^^99ROC||||||P^^HL7036
    9[CR]
HOST 10:43:29,503 SAC|||Cdiff04[CR]
HOST 10:43:29,513 ORC|NW|||||||20150226102439[CR]
HOST 10:43:29,523 OBR||12345||04CDIFF^04CDIFF^99ROC[CR]
HOST 10:43:29,533 [FS] [CR]

C4800 10:43:31,560 [VT]
C4800 10:43:31,560 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
    LIS·Facility|20150312104317+0100||ORL^O34^ORL_O
    34|8958abd4-a2f9-4479-9281-874df1b2f923|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:43:31,560 MSA|AA|506cc78c-7654-4e36-94cc-8ea39d8e8cd0[CR]
C4800 10:43:31,560 SPM|1|Cdiff04&ROCHE| |STL^^99ROC||||||P^^HL7036
    9[CR]
C4800 10:43:31,560 SAC|||Cdiff04[CR]
C4800 10:43:31,560 ORC|OK|12345|||SC[CR]
C4800 10:43:31,560 [FS] [CR]

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Result upload

```

C4800 11:15:30,221 [VT]
C4800 11:15:30,221 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_
    12345^M|"|"|LIS|LIS·Facility|20150311111516+0100
    ||OUL^R22^OUL_R22|96ef6b3a-e878-4ebc-a295-63d29
    5a42225|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29
    ^IHE[CR]
C4800 11:15:30,221 SPM|1|4PC121CPCBZ0033&ROCHE||"|||Q^^HL7036
    9[CR]
C4800 11:15:30,221 SAC|||4PC121CPCBZ0033[CR]
C4800 11:15:30,221 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
    R]
C4800 11:15:30,221 OBR||"||04CDIFF^04CDIFF^99ROC||20150227141159[
    CR]
C4800 11:15:30,221 ORC|SC||||CM[CR]
C4800 11:15:30,221 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
    99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
    50227141432^20150227141820|||"||F||||RocheNo
    Check||C4800^Roche~123456_12345^Roche|201502271
    41820[CR]
C4800 11:15:30,221 OBX|2|ST|04CDIFF^04CDIFF^99ROC|1.1|Valid|||AnD^
    ^99ROC|||P||||RocheNoCheck||C4800^Roche~123456

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```

_12345^Roche|20150227141820[CR]
C4800 11:15:30,221 INV|"OK|^HL70383|OT^HL70384|MwpId^^99ROC|DD1
      506690^^99ROC|A01^^99ROC[CR]
C4800 11:15:30,221 NTE|1||F;M3,M7[CR]
C4800 11:15:30,221 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),39.3;Ct:5·
      (MMx·1),39.3[CR]
C4800 11:15:30,221 NTE|3||[CR]
C4800 11:15:30,221 SPM|2|0NC123101BZ0016&ROCHE||"|||||Q^HL7036
      9[CR]
C4800 11:15:30,221 SAC|||0NC123101BZ0016[CR]
C4800 11:15:30,221 INV|NEGCONTROL^^99ROC|OK^HL70383|CO^HL70384[C
      R]
C4800 11:15:30,221 OBR||"||04CDIFF^04CDIFF^99ROC||20150227141159[
      CR]
C4800 11:15:30,221 ORC|SC||||CM[CR]
C4800 11:15:30,221 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
      99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
      50227141432^20150227141820||"||F||||RocheNo
      Check||C4800^Roche~123456_12345^Roche|201502271
      41820[CR]
C4800 11:15:30,221 OBX|2|ST|04CDIFF^04CDIFF^99ROC|1.1|Valid|||AnD^
      99ROC|||P||||RocheNoCheck||C4800^Roche~123456
      _12345^Roche|20150227141820[CR]
C4800 11:15:30,221 INV|"OK|^HL70383|OT^HL70384|MwpId^^99ROC|DD1
      506690^^99ROC|B01^^99ROC[CR]
C4800 11:15:30,221 NTE|1||F;M3,M7[CR]
C4800 11:15:30,221 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·
      (MMx·1),39.3[CR]
C4800 11:15:30,221 NTE|3||[CR]
C4800 11:15:30,221 [FS] [CR]

```

* 11:15:30,860 ACK Result: ExMID = 96ef6b3a-e878-4ebc-a295-63
d295a42225

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HOST 11:15:30,860 [VT]
HOST 11:15:30,860 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437^SN1234^M|LAB·Name|20150311111530+0100
      ||ACK^R22^ACK|0e90fd41-5c36-4b04-8e53-8277a3503
      ec1|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 11:15:30,892 MSA|AA|96ef6b3a-e878-4ebc-a295-63d295a42225[CR]
HOST 11:15:30,907 [FS] [CR]

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CMV ASTM communication traces

Order download

```
c4800 15:34:56,422 [ENQ]
HOST   15:34:56,905 [ACK]
c4800 15:34:56,905 [STX]1H|\^&|||cobas·4800^67c7af86-820f-4470-a8c
3-40e778ad008e^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS01[CR]L|1|N[CR][ETX]E4[CR][LF]
HOST   15:34:57,015 [ACK]
c4800 15:34:57,015 [EOT]

*      15:34:59,213 TSDWN: SID = CMVLIS01

HOST   15:34:59,213 [ENQ]
c4800 15:34:59,262 [ACK]
HOST   15:34:59,272 [STX]1H|\^&|||ASTM32^2bef48b-8b5d-4552-ab17-69
aff9c4d8d9^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153457|[CR][ETX]EF[CR]
][LF]
c4800 15:34:59,272 [ACK]
HOST   15:34:59,292 [STX]2P|1[N][CR][ETX]3F[CR][LF]
c4800 15:34:59,292 [ACK]
HOST   15:34:59,302 [STX]3O|1|CMVLIS01||^^^0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR][ETX]3D
[CR][LF]
c4800 15:34:59,302 [ACK]
HOST   15:34:59,312 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 15:34:59,312 [ACK]
HOST   15:34:59,322 [EOT]

c4800 15:34:59,832 [ENQ]
HOST   15:34:59,872 [ACK]
c4800 15:34:59,882 [STX]1H|\^&|||cobas·4800^03c0cae8-8e2c-41d1-bf6
f-cff1c14b45b3^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS02[CR]L|1|N[CR][ETX]E9[CR][LF]
HOST   15:34:59,982 [ACK]
c4800 15:34:59,992 [EOT]

*      15:35:02,190 TSDWN: SID = CMVLIS02

HOST   15:35:02,221 [ENQ]
c4800 15:35:02,221 [ACK]
HOST   15:35:02,237 [STX]1H|\^&|||ASTM32^324a49cd-c39b-4f34-8d12-65
3dbc88496^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153500|[CR][ETX]1A[CR]
][LF]
c4800 15:35:02,237 [ACK]
HOST   15:35:02,252 [STX]2P|1[N][CR][ETX]3F[CR][LF]
c4800 15:35:02,252 [ACK]
HOST   15:35:02,268 [STX]3O|1|CMVLIS02||^^^0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR][ETX]3E
[CR][LF]
c4800 15:35:02,270 [ACK]
HOST   15:35:02,280 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 15:35:02,280 [ACK]
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HOST 15:35:02,280 [EOT]

c4800 15:35:02,560 [ENQ]
HOST 15:35:02,620 [ACK]
c4800 15:35:02,630 [STX]1H|^\&|||cobas·4800^aa905c17-cd62-4aef-9e6
7-1d89cef875db^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS03[CR]L|1|N[CR] [ETX] DE[CR] [LF]
HOST 15:35:02,760 [ACK]
c4800 15:35:02,760 [EOT]

* 15:35:04,968 TSDWN: SID = CMVLIS03

HOST 15:35:04,983 [ENQ]
c4800 15:35:04,983 [ACK]
HOST 15:35:05,042 [STX]1H|^\&|||ASTM32^e5250341-3c09-4598-b997-c9
3428ea1e8b^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153502|[CR] [ETX] 91[CR]
] [LF]
c4800 15:35:05,042 [ACK]
HOST 15:35:05,062 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 15:35:05,062 [ACK]
HOST 15:35:05,072 [STX]3O|1|CMVLIS03||^^^0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX]3F
[CR] [LF]
c4800 15:35:05,072 [ACK]
HOST 15:35:05,092 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:35:05,092 [ACK]
HOST 15:35:05,102 [EOT]

c4800 15:35:05,352 [ENQ]
HOST 15:35:05,422 [ACK]
c4800 15:35:05,432 [STX]1H|^\&|||cobas·4800^4adf0828-4c50-490b-adf
0-76f5cffdd48d^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS04[CR]L|1|N[CR] [ETX] D2[CR] [LF]
HOST 15:35:05,572 [ACK]
c4800 15:35:05,582 [EOT]

* 15:35:07,770 TSDWN: SID = CMVLIS04

HOST 15:35:07,786 [ENQ]
c4800 15:35:07,786 [ACK]
HOST 15:35:07,817 [STX]1H|^\&|||ASTM32^3c25fcb1-365c-44d2-a832-40
7ed7fb27ea^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153505|[CR] [ETX]6C[CR]
] [LF]
c4800 15:35:07,817 [ACK]
HOST 15:35:07,834 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 15:35:07,835 [ACK]
HOST 15:35:07,845 [STX]3O|1|CMVLIS04||^^^0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX]40
[CR] [LF]
c4800 15:35:07,845 [ACK]
HOST 15:35:07,865 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:35:07,865 [ACK]
HOST 15:35:07,865 [EOT]

c4800 15:35:08,145 [ENQ]

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HOST 15:35:08,195 [ACK]
c4800 15:35:08,195 [STX]1H|\^&|||cobas·4800^347e58d7-445d-407a-81b
1-5ea456fe9446^Laboperator^2.0.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS05[CR]L|1|N[CR] [ETX]BD[CR] [LF]
HOST 15:35:08,305 [ACK]
c4800 15:35:08,315 [EOT]

* 15:35:10,497 TSDWN: SID = CMVLIS05

HOST 15:35:10,513 [ENQ]
c4800 15:35:10,513 [ACK]
HOST 15:35:10,544 [STX]1H|\^&|||ASTM32^bf4293b9-3dc3-4645-8344-8c
4509dad907^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153508| [CR] [ETX]C5[CR
] [LF]
c4800 15:35:10,544 [ACK]
HOST 15:35:10,559 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 15:35:10,561 [ACK]
HOST 15:35:10,571 [STX]3O|1|CMVLIS05||^~~~0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX]41
[CR] [LF]
c4800 15:35:10,571 [ACK]
HOST 15:35:10,591 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:35:10,591 [ACK]
HOST 15:35:10,591 [EOT]

c4800 15:35:10,851 [ENQ]
HOST 15:35:10,931 [ACK]
c4800 15:35:10,931 [STX]1H|\^&|||cobas·4800^ef4c4858-b58a-4f45-b8a
d-c5d0e5b35037^Laboperator^2.0.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160721153027[CR]Q|1|^
CMVLIS06[CR]L|1|N[CR] [ETX]75[CR] [LF]
HOST 15:35:11,051 [ACK]
c4800 15:35:11,061 [EOT]

* 15:35:13,286 TSDWN: SID = CMVLIS06

HOST 15:35:13,317 [ENQ]
c4800 15:35:13,317 [ACK]
HOST 15:35:13,333 [STX]1H|\^&|||ASTM32^8ea8b75a-6b2f-4c2b-ab8a-03
fd71d1c417^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160721153511| [CR] [ETX]C6[CR
] [LF]
c4800 15:35:13,333 [ACK]
HOST 15:35:13,364 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 15:35:13,366 [ACK]
HOST 15:35:13,376 [STX]3O|1|CMVLIS06||^~~~0OCMV^^Full|||2.02E+13|||
||N|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX]42
[CR] [LF]
c4800 15:35:13,376 [ACK]
HOST 15:35:13,386 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:35:13,386 [ACK]
HOST 15:35:13,396 [EOT]

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Result upload

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c4800 08:41:50,360 [ENQ]
HOST 08:41:50,469 [ACK]

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c4800 08:41:50,469 [STX]1H|\^&|||cobas·4800·software^c11a0186-b45c
-4bcf-901f-dfd775fb695f^Laboperator^2.2.0.1509^
1394.LIS2|||||LIS|RSUPL^REAL|P|1|20160722083719
[CR]P|1[CR]O|1|OH1W136052I9652^HD4203181^A01^^^
GG0202714||^^^0OCMV^^Full|||20160721153113||||Q
||||^HPosCtrl|Lab[ETB]D5[CR][LF]
HOST 08:41:50,672 [ACK]
c4800 08:41:50,688 [STX]2operator|||||||F[CR]R|1|^^^0OCMV|2.61E+
05·IU/mL|IU/mL||||F||Laboperator|20160721153852
|20160721182330|50611_30251[CR]C|1|I|F;NONE|G[C
R]C|2|I|Ct:0·(MMx·1),22.20|G[CR]P|2[CR]O|1|OL1W
136082I9653^HD4203181^B01^^^GG0202714||^^^0OCMV
^^Full|||20160721153113|||[ETB]B6[CR][LF]
HOST 08:41:50,813 [ACK]
c4800 08:41:50,813 [STX]3|Q||||^LPosCtrl|Laboperator|||||||F[CR]
R|1|^^^0OCMV|5.51E+02·IU/mL|IU/mL||||F||Laboper
ator|20160721153852|20160721182330|50611_30251[
CR]C|1|I|F;NONE|G[CR]C|2|I|Ct:0·(MMx·1),32.70|G
[CR]P|3[CR]O|1|ON3S103781I9654^HD4203181^C01^^^
GG0202714||^^^0OCMV^^Full|[ETB]2C[CR][LF]
HOST 08:41:50,937 [ACK]
c4800 08:41:50,937 [STX]4||20160721153113||||Q||||^NEGCONTROL|Labo
rator|||||||F[CR]R|1|^^^0OCMV|Target·Not·De
tected|||||F||Laboperator|20160721153852|201607
21182330|50611_30251[CR]C|1|I|F;NONE|G[CR]P|4[C
R]O|1|CMVLIS01^HD4203181^D01^^^GG0202714||^^^0O
CMV^^Full|||20160721153[ETB]54[CR][LF]
HOST 08:41:51,047 [ACK]
c4800 08:41:51,062 [STX]5113||||N|||20160721153031|PLAS^P|nuer|||||
|||||F[CR]R|1|^^^0OCMV|1.56E+03·IU/mL|IU/mL|||||
F||Laboperator|20160721153852|20160721182330|50
611_30251[CR]C|1|I|F;NONE|G[CR]P|5[CR]O|1|CMVL
S02^HD4203181^E01^^^GG0202714||^^^0OCMV^^Full|||
|20160721153113||||N|||[ETB]CB[CR][LF]
HOST 08:41:51,171 [ACK]
c4800 08:41:51,171 [STX]620160721153034|PLAS^P|nuer|||||||F[CR]R
|1|^^^0OCMV|1.30E+03·IU/mL|IU/mL||||F||Labopera
tor|20160721153852|20160721182330|50611_30251[C
R]C|1|I|F;NONE|G[CR]P|6[CR]O|1|CMVLIS03^HD42031
81^F01^^^GG0202714||^^^0OCMV^^Full|||2016072115
3113||||N|||20160721153[ETB]AF[CR][LF]
HOST 08:41:51,281 [ACK]
c4800 08:41:51,281 [STX]7036|PLAS^P|nuer|||||||F[CR]R|1|^^^0OCMV
|Target·Not·Detected|||||F||Laboperator|2016072
1153852|20160721182330|50611_30251[CR]C|1|I|F;N
ONE|G[CR]P|7[CR]O|1|CMVLIS04^HD4203181^G01^^^GG
0202714||^^^0OCMV^^Full|||20160721153113||||N||
|20160721153039|PLAS^P|[ETB]34[CR][LF]
HOST 08:41:51,390 [ACK]
c4800 08:41:51,421 [STX]Onuer|||||||F[CR]R|1|^^^0OCMV|Target·Not
·Detected|||||F||Laboperator|20160721153852|201
60721182330|50611_30251[CR]C|1|I|F;NONE|G[CR]P|
8[CR]O|1|CMVLIS05^HD4203181^H01^^^GG0202714||^
^0OCMV^^Full|||20160721153113||||N|||2016072115
3042|PLAS^P|nuer|||||||[ETB]D9[CR][LF]
HOST 08:41:51,530 [ACK]
c4800 08:41:51,530 [STX]1||F[CR]R|1|^^^0OCMV|Failed|||||F||Laboper
ator|20160721153852|20160721182330|50611_30251[
CR]C|1|I|F;X4|G[CR]P|9[CR]O|1|CMVLIS06^HD420318

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```
1^A02^^GG0202714||^^^OOCMV^^Full|||20160721153  
113||||N|||20160721153045|PLAS^P|nuer|||||||F  
[CR]R|1|^__^OOCMV|Failed|||[ETB]DC[CR][LF]  
HOST 08:41:51,639 [ACK]  
c4800 08:41:51,639 [STX]2||F||Laboperator|20160721153852|201607211  
82330|50611_30251[CR]C|1|I|F;X4|G[CR]L|1|N[CR][  
ETX]2B[CR][LF]  
HOST 08:41:51,749 [ACK]  
c4800 08:41:51,749 [EOT]
```

CMV HL7 communication traces

Order download

```
c4800 16:19:46,528 [VT]
c4800 16:19:46,528 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130161533+0100||QBP^Q11^QBP_Q
    11|c71c38c9-bfff-4bc4-a9b7-eff8b2f84685|P|2.5.1
    |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
c4800 16:19:46,528 QPD|WOS^Work·Order·Step^IHE_LAW|9177a93c-9e8b-48
    7d-8f6a-1174995e6482|A0066312465[CR]
c4800 16:19:46,528 RCP|I||R^HL70394[CR]
c4800 16:19:46,528 [FS] [CR]

*      16:19:46,757 ACK Inquiry: ExMID = c71c38c9-bfff-4bc4-a9b7-e
    ff8b2f84685
HOST   16:19:46,767 [VT]
HOST   16:19:46,767 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130161946+0100||RSP^K11
    ^RSP_K11|93208fb2-5eb9-47dd-8d96-fdeb08f07e9a|P
    |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST   16:19:46,793 MSA|AA|c71c38c9-bfff-4bc4-a9b7-eff8b2f84685[CR]
HOST   16:19:46,805 QAK|9177a93c-9e8b-487d-8f6a-1174995e6482|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST   16:19:46,815 QPD|WOS^Work·Order·Step^IHE_LAW|9177a93c-9e8b-4
    87d-8f6a-1174995e6482|A0066312465[CR]
HOST   16:19:46,825 [FS] [CR]

*      16:19:47,715 Order: SID^MID = A0066312465^d0e5f020-0865-4d6
    9-9281-9d6f54da2c2c
HOST   16:19:47,715 [VT]
HOST   16:19:47,715 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130161947+0100||OML^O33
    ^OML_O33|d0e5f020-0865-4d69-9281-9d6f54da2c2c|P
    |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST   16:19:47,735 SPM|1|A0066312465&ROCHE||PLAS^^99ROC||||||P^H
    L70369[CR]
HOST   16:19:47,745 SAC|||A0066312465[CR]
HOST   16:19:47,755 ORC|NW|||||||2.02E+13[CR]
HOST   16:19:47,767 OBR||12345||0OCMV^0OCMV^99ROC[CR]
HOST   16:19:47,777 [FS] [CR]

c4800 16:19:48,017 [VT]
c4800 16:19:48,017 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130161535+0100||ORI^O34^ORI_O
    34|e9cd397d-d654-4acc-beb6-33ca1fa7855c|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
c4800 16:19:48,017 MSA|AA|d0e5f020-0865-4d69-9281-9d6f54da2c2c[CR]
c4800 16:19:48,017 SPM|1|A0066312465&ROCHE||PLAS^^99ROC||||||P^H
    L70369[CR]
c4800 16:19:48,017 SAC|||A0066312465[CR]
c4800 16:19:48,017 ORC|OK|12345|||SC[CR]
c4800 16:19:48,017 [FS] [CR]
```

Result upload

```
C4800 15:17:07,186 [VT]
C4800 15:17:07,186 MSH|^~\&|cobas·4800·software·2.2.0.1509^50049_3
```

```

5344^M|""|LIS|LIS·Facility|20160721151347+0200|
|OUL^R22^OUL_R22|9b4a6405-8e3a-4d9d-9d70-cac1db
e0c3ef|P|2.5.1||||ER|AL|UNICODE·UTF-8|||LAB-29^
IHE[CR]
C4800 15:17:07,186 SPM|1|OH1W136052I9636&ROCHE||"|||||||Q^^HL7036
9 [CR]
C4800 15:17:07,186 SAC|||OH1W136052I9636[CR]
C4800 15:17:07,186 INV|HPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 15:17:07,186 OBR||"|||OOCMV^OOCMV^99ROC||20160721114227[CR]
C4800 15:17:07,186 ORC|SC||||CM[CR]
C4800 15:17:07,186 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
60721114803^20160721145735||||"|||F|||||Laboper
ator||C4800^Roche~50049_35344^Roche|20160721145
735 [CR]
C4800 15:17:07,186 OBX|2|ST|OOCMV^OOCMV^99ROC|1.1|1.99E+05·IU/mL|U
/mL^^UCUM||Full^^99ROC|||F|||||Laboperator||C48
00^Roche~50049_35344^Roche|20160721145735[CR]
C4800 15:17:07,186 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|HD4
203183^^99ROC|A01^^99ROC[CR]
C4800 15:17:07,186 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
501264^^99ROC[CR]
C4800 15:17:07,186 NTE|1||F;NONE[CR]
C4800 15:17:07,186 NTE|2||Ct:0·(MMx·1),23.40[CR]
C4800 15:17:07,186 NTE|3||[CR]
C4800 15:17:07,186 SPM|2|OL1W136082I9637&ROCHE||"|||||||Q^^HL7036
9 [CR]
C4800 15:17:07,186 SAC|||OL1W136082I9637[CR]
C4800 15:17:07,186 INV|LPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 15:17:07,186 OBR||"|||OOCMV^OOCMV^99ROC||20160721114227[CR]
C4800 15:17:07,186 ORC|SC||||CM[CR]
C4800 15:17:07,186 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
60721114803^20160721145735||||"|||F|||||Laboper
ator||C4800^Roche~50049_35344^Roche|20160721145
735 [CR]
C4800 15:17:07,186 OBX|2|ST|OOCMV^OOCMV^99ROC|1.1|4.84E+02·IU/mL|U
/mL^^UCUM||Full^^99ROC|||F|||||Laboperator||C48
00^Roche~50049_35344^Roche|20160721145735[CR]
C4800 15:17:07,186 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|HD4
203183^^99ROC|B01^^99ROC[CR]
C4800 15:17:07,186 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
501264^^99ROC[CR]
C4800 15:17:07,186 NTE|1||F;NONE[CR]
C4800 15:17:07,186 NTE|2||Ct:0·(MMx·1),32.20[CR]
C4800 15:17:07,186 NTE|3||[CR]
C4800 15:17:07,186 [FS] [CR]

*      15:17:10,618 ACK Result: ExMID = 9b4a6405-8e3a-4d9d-9d70-ca
                           c1dbe0c3ef
HOST   15:17:10,634 [VT]
HOST   15:17:10,649 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
                           .2.0.1437^SN1234^M|LAB·Name|20160721151710+0200
                           ||ACK^R22^ACK|96708c6c-0614-4292-b382-35763e857
                           a31|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   15:17:10,712 MSA|AA|9b4a6405-8e3a-4d9d-9d70-cac1dbe0c3ef[CR]
HOST   15:17:10,743 [FS] [CR]

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CT/NG ASTM communication traces

Order download

```
c4800 16:42:33,126 [ENQ]
HOST   16:42:33,266 [ACK]
c4800 16:42:33,266 [STX]1H|\^&|||cobas·4800^c6f387f7-709a-4588-8f2
                           3-fe1cb7e6a725^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141118164357[CR]Q|1|^t
                           estdata·001[CR]L|1|N[CR] [ETX]59[CR] [LF]
HOST   16:42:33,391 [ACK]
c4800 16:42:33,391 [EOT]

*      16:42:35,601 TSDWN: SID = testdata001

HOST   16:42:35,632 [ENQ]
c4800 16:42:35,632 [ACK]
HOST   16:42:35,647 [STX]1H|\^&|||ASTM32^84e827cf-1a1f-4b49-ab73-ad
                           2687eaaaf5^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141118164233|[CR] [ETX]C4[CR]
                           ] [LF]
c4800 16:42:35,647 [ACK]
HOST   16:42:35,663 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 16:42:35,665 [ACK]
HOST   16:42:35,675 [STX]3O|1|testdata·001|||^01CTNG^^Full|||20140
                           402134912||||N|||20140402134912|SWAB^P|schreudt
                           |||||||O[CR] [ETX]3C[CR] [LF]
c4800 16:42:35,675 [ACK]
HOST   16:42:35,695 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 16:42:35,695 [ACK]
HOST   16:42:35,695 [EOT]

c4800 16:42:36,375 [ENQ]
HOST   16:42:36,475 [ACK]
c4800 16:42:36,475 [STX]1H|\^&|||cobas·4800^b5fe871c-774a-42d7-93b
                           7-d6512bdb54b3^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141118164357[CR]Q|1|^t
                           estdata·002[CR]L|1|N[CR] [ETX]73[CR] [LF]
HOST   16:42:36,595 [ACK]
c4800 16:42:36,595 [EOT]

*      16:42:38,824 TSDWN: SID = testdata002

HOST   16:42:38,855 [ENQ]
c4800 16:42:38,855 [ACK]
HOST   16:42:38,871 [STX]1H|\^&|||ASTM32^174221d3-d080-4c57-84c5-44
                           cf235cef67^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141118164236|[CR] [ETX]A5[CR]
                           ] [LF]
c4800 16:42:38,871 [ACK]
HOST   16:42:38,887 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 16:42:38,889 [ACK]
HOST   16:42:38,899 [STX]3O|1|testdata·002|||^01CTNG^^Full|||20140
                           402134912||||N|||20140402134912|SWAB^P|schreudt
                           |||||||O[CR] [ETX]3D[CR] [LF]
c4800 16:42:38,899 [ACK]
HOST   16:42:38,909 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 16:42:38,909 [ACK]
```

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HOST 16:42:38,909 [EOT]

c4800 16:42:39,439 [ENQ]
HOST 16:42:39,469 [ACK]
c4800 16:42:39,469 [STX]1H|\^&|||cobas·4800^12be6490-ff3d-4c3f-9ea
                2-eb300699ad74^RocheCheck^2.2.0.1442^1394.LIS2|
                ||||LIS|TSREQ^REAL|P|1|20141118164357[CR]Q|1|^t
                estdata·003[CR]L|1|N[CR][ETX]A1[CR][LF]
HOST 16:42:39,589 [ACK]
c4800 16:42:39,599 [EOT]

* 16:42:41,828 TSDWN: SID = testdata003

HOST 16:42:41,875 [ENQ]
c4800 16:42:41,875 [ACK]
HOST 16:42:41,890 [STX]1H|\^&|||ASTM32^faaebcbd-8865-4b80-83cb-6b
                49c2b87607^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                00|TSDWN^REAL|P|1|20141118164239|[CR][ETX]A0[CR]
                ][LF]
c4800 16:42:41,890 [ACK]
HOST 16:42:41,906 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 16:42:41,908 [ACK]
HOST 16:42:41,918 [STX]3O|1|testdata·003|||^01CTNG^^Full|||20140
                402134912||||N|||20140402134912|SWAB^P|schreudt
                |||||||O[CR][ETX]3E[CR][LF]
c4800 16:42:41,918 [ACK]
HOST 16:42:41,928 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 16:42:41,928 [ACK]
HOST 16:42:41,928 [EOT]

c4800 16:42:42,478 [ENQ]
HOST 16:42:42,588 [ACK]
c4800 16:42:42,588 [STX]1H|\^&|||cobas·4800^69332d5e-866e-4230-ad8
                2-dc59554b1e5e^RocheCheck^2.2.0.1442^1394.LIS2|
                ||||LIS|TSREQ^REAL|P|1|20141118164357[CR]Q|1|^t
                estdata·004[CR]L|1|N[CR][ETX]1A[CR][LF]
HOST 16:42:42,698 [ACK]
c4800 16:42:42,708 [EOT]

* 16:42:44,937 TSDWN: SID = testdata004

HOST 16:42:44,984 [ENQ]
c4800 16:42:44,984 [ACK]
HOST 16:42:44,999 [STX]1H|\^&|||ASTM32^e56497f4-446f-463a-810c-66
                9b8f2d31ca^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                00|TSDWN^REAL|P|1|20141118164242|[CR][ETX]E0[CR]
                ][LF]
c4800 16:42:45,001 [ACK]
HOST 16:42:45,021 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 16:42:45,021 [ACK]
HOST 16:42:45,041 [STX]3O|1|testdata·004|||^01CTNG^^Full|||20140
                402134912||||N|||20140402134912|SWAB^P|schreudt
                |||||||O[CR][ETX]3F[CR][LF]
c4800 16:42:45,041 [ACK]
HOST 16:42:45,061 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 16:42:45,061 [ACK]
HOST 16:42:45,061 [EOT]

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Result upload

```
c4800 11:35:00,124 [ENQ]
HOST   11:35:00,248 [ACK]
c4800 11:35:00,248 [STX]1H|\^&|||cobas·4800·software^9a417702-cc23
-4764-9fbe-e8f4c7d8b1f1^Laboperator^2.2.0.1442^
1394.LIS2||||LIS|RSUP|^REAL|P|1|20141030113522
[CR]P|1[CR]O|1|1C1R11844AE05VI^CD0508498^A01^^^
AA6000402||^^^01CTNG^^Full|||20130812092745|||
Q||||^POSCONTROL|[ETB]97[CR][LF]
HOST   11:35:00,358 [ACK]
c4800 11:35:00,358 [STX]2Laboperator|||||||P[CR]R|1|^^^01CT|Vali
d|||||P||Laboperator|20130812093814|20130812123
428|LC·502_25098[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:0·
(MMx·1),36.5;Ct:1·(MMx·1),35.3;Ct:5·(MMx·1),35.
2|G[CR]R|2|^^^01NG|Valid|||||P||Laboperator|201
30812093814|20130812123[ETB]B6[CR][LF]
HOST   11:35:00,482 [ACK]
c4800 11:35:00,482 [STX]3428|LC·502_25098[CR]C|1|I|F;M7|G[CR]C|2|I
|Ct:0·(MMx·1),36.5;Ct:1·(MMx·1),35.3;Ct:5·(MMx·
1),35.2|G[CR]P|2[CR]O|1|0NCR13794AE07RV^CD05084
98^B01^^^AA6000402||^^^01CTNG^^Full|||201308120
92745||||Q||||^NEGCONTROL|Laboperator|||||||P
[CR]R|1|^^^01CT|Valid|||||[ETB]B2[CR][LF]
HOST   11:35:00,607 [ACK]
c4800 11:35:00,607 [STX]4P||Laboperator|20130812093814|20130812123
428|LC·502_25098[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:0·
(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),36.0|G
[CR]R|2|^^^01NG|Valid|||||P||Laboperator|20130
812093814|20130812123428|LC·502_25098[CR]C|1|I|
F;M7|G[CR]C|2|I|Ct:0·(MMx·1)[ETB]3E[CR][LF]
HOST   11:35:00,732 [ACK]
c4800 11:35:00,732 [STX]51),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),36.0
|G[CR]P|3[CR]O|1|RDR0006711^CD0508498^C01^^^AA6
000402||^^^01CTNG^^Full|||20130812092745|||N|||
|||PCYT^P|Laboperator|||||||P[CR]R|1|^^^01CT|I
nvalid·CT|||||P||Laboperator|20130812093814|201
30812123428|LC·502_2[ETB]DB[CR][LF]
HOST   11:35:00,857 [ACK]
c4800 11:35:00,857 [STX]65098[CR]C|1|I|F;M7|G[CR]R|2|^^^01NG|POS·N
G|||||P||Laboperator|20130812093814|20130812123
428|LC·502_25098[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1|
RDR0006712^CD0508498^D01^^^AA6000402||^^^01CTNG
^^^Full|||20130812092745|||N|||PCYT^P|Labopera
tor|||||||P[CR]R|1|^^^01CT|[ETB]F9[CR][LF]
HOST   11:35:01,013 [ACK]
c4800 11:35:01,013 [STX]7Invalid·CT|||||P||Laboperator|20130812093
814|20130812123428|LC·502_25098[CR]C|1|I|F;M7|G
[CR]R|2|^^^01NG|Invalid·NG|||||P||Laboperator|2
0130812093814|20130812123428|LC·502_25098[CR]C|
1|I|F;M7|G[CR]P|5[CR]O|1|RDR0005171^CD0508498^E
01^^^AA6000402||^^^01CTNG^|[ETB]50[CR][LF]
HOST   11:35:01,138 [ACK]
c4800 11:35:01,138 [STX]0^Full|||20130812092745||||N||||PCYT^P|Lab
operator|||||||P[CR]C|1|I|Clot|G[CR]R|1|^^^01
CT|Failed|||||X||Laboperator|20130812093814|201
30812123428|LC·502_25098[CR]C|1|I|F;X3,M7|G[CR]
R|2|^^^01NG|Failed|||||X||Laboperator|201308120
93814|20130812123428|LC[ETB]EC[CR][LF]
HOST   11:35:01,262 [ACK]
```

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c4800 11:35:01,262 [STX]1·502_25098[CR]C|1|I|F;X3,M7|G[CR]P|6[CR]O
|1|RDR0006713^CD0508498^F01^^AA6000402||^^^01C
TNG^^Full||||20130812092745||||N||||PCYT^P|Labop
erator|||||||P[CR]R|1|^^^01CT|POS·CT|||||P|||L
aboperator|20130812093814|20130812123428|LC·502
_25098[CR]C|1|I|F;M7|G[CR]R|2[ETB]F2[CR][LF]
HOST 11:35:01,387 [ACK]
c4800 11:35:01,387 [STX]2|^^^01NG|POS·NG|||||P||Laboperator|201308
12093814|20130812123428|LC·502_25098[CR]C|1|I|F
;M7|G[CR]P|7[CR]O|1|RDR0006714^CD0508498^G01^^
AA6000402||^^^01CTNG^^Full||||20130812092745|||
N||||PCYT^P|Laboperator|||||||P[CR]R|1|^^^01C
T|POS·CT|||||P||Laboper[ETB]36[CR][LF]
HOST 11:35:01,512 [ACK]
c4800 11:35:01,512 [STX]3ator|20130812093814|20130812123428|LC·502
_25098[CR]C|1|I|F;M7|G[CR]R|2|^^^01NG|NEG·NG|||
|||P||Laboperator|20130812093814|20130812123428|
LC·502_25098[CR]C|1|I|F;M7|G[CR]P|8[CR]O|1|RDR0
006715^CD0508498^H01^^AA6000402||^^^01CTNG^^Fu
11||||20130812092745||||N|||[ETB]DA[CR][LF]
HOST 11:35:01,637 [ACK]
c4800 11:35:01,637 [STX]4||PCYT^P|Laboperator|||||||P[CR]R|1|^^
01CT|NEG·CT|||||P||Laboperator|20130812093814|2
0130812123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]R
|2|^^^01NG|POS·NG|||||P||Laboperator|2013081209
3814|20130812123428|LC·502_25098[CR]C|1|I|F;M7|
G[CR]P|9[CR]O|1|RDR0006716^CD[ETB]C9[CR][LF]
HOST 11:35:01,762 [ACK]
c4800 11:35:01,762 [STX]50508498^A02^^AA6000402||^^^01CTNG^^Full|
|||20130812092745||||N||||PCYT^P|Laboperator|||||
|||||P[CR]R|1|^^^01CT|NEG·CT|||||P||Laboperator
|20130812093814|20130812123428|LC·502_25098[CR]
C|1|I|F;M7|G[CR]R|2|^^^01NG|NEG·NG|||||P||Labop
erator|2013081209381[ETB]15[CR][LF]
HOST 11:35:01,886 [ACK]
c4800 11:35:01,886 [STX]64|20130812123428|LC·502_25098[CR]C|1|I|F;
M7|G[CR]P|10[CR]O|1|RDR0006717^CD0508498^B02^^
AA6000402||^^^01CTNG^^Full||||20130812092745|||
N||||PCYT^P|Laboperator|||||||P[CR]C|1|I|empt
y·tube|G[CR]R|1|^^^01CT|Failed|||||X||Laboperat
or|20130812093814|20130812[ETB]20[CR][LF]
HOST 11:35:02,011 [ACK]
c4800 11:35:02,011 [STX]7123428|LC·502_25098[CR]C|1|I|F;X4,M7|G[CR
]R|2|^^^01NG|Failed|||||X||Laboperator|20130812
093814|20130812123428|LC·502_25098[CR]C|1|I|F;X
4,M7|G[CR]P|11[CR]O|1|RDR0006718^CD0508498^C02^
^^AA6000402||^^^01CTNG^^Full||||20130812092745|||
||N||||PCYT^P|Laboperator|[ETB]85[CR][LF]
HOST 11:35:02,152 [ACK]
c4800 11:35:02,152 [STX]0|||||||P[CR]R|1|^^^01CT|POS·CT|||||P||La
boperator|20130812093814|20130812123428|LC·502_
25098[CR]C|1|I|F;M7|G[CR]R|2|^^^01NG|POS·NG|||
|P||Laboperator|20130812093814|20130812123428|L
C·502_25098[CR]C|1|I|F;M7|G[CR]P|12[CR]O|1|RDR0
006719^CD0508498^D02^^AA6000[ETB]89[CR][LF]
HOST 11:35:02,292 [ACK]
c4800 11:35:02,292 [STX]1402||^^^01CTNG^^Full||||20130812092745|||
N||||PCYT^P|Laboperator|||||||P[CR]R|1|^^^01C
T|POS·CT|||||P||Laboperator|20130812093814|2013

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0812123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]R|2|
^^^01NG|Invalid·NG||||P||Laboperator|201308120
93814|20130812123428[ETB]B6[CR] [LF]
HOST 11:35:02,432 [ACK]
c4800 11:35:02,432 [STX]2|LC·502_25098[CR]C|1|I|F;M7|G[CR]P|13[CR]
O|1|RDR0006720^CD0508498^E02^^AA6000402||^^^01
CT^^Full||||20130812092745||||N||||PCYT^P|Labope
rator|||||||P[CR]R|1|^01CT|Invalid·CT||||P
||Laboperator|20130812093814|20130812123428|LC·
502_25098[CR]C|1|I|F;M7|G[CR][ETB]B3[CR] [LF]
HOST 11:35:02,573 [ACK]
c4800 11:35:02,573 [STX]3P|14[CR]O|1|RDR0006721^CD0508498^F02^^AA
6000402||^01CT^^Full||||20130812092745||||N|||
|PCYT^P|Laboperator|||||||P[CR]R|1|^01CT|In
valid·CT||||P||Laboperator|20130812093814|2013
0812123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]P|15
[CR]O|1|RDR0005713^CD05084[ETB]60[CR] [LF]
HOST 11:35:02,713 [ACK]
c4800 11:35:02,713 [STX]498^G02^^AA6000402||^01CT^^Full||||20130
812092745||||N||||PCYT^P|Laboperator|||||||P[
CR]C|1|I|Clot|G[CR]R|1|^01CT|Failed|||||X||La
boperator|20130812093814|20130812123428|LC·502_
25098[CR]C|1|I|F;X4,M7|G[CR]P|16[CR]O|1|RDR0006
722^CD0508498^H02^^AA6000[ETB]75[CR] [LF]
HOST 11:35:02,854 [ACK]
c4800 11:35:02,854 [STX]5402||^01CT^^Full||||20130812092745||||N|
||||PCYT^P|Laboperator|||||||P[CR]R|1|^01CT|
POS·CT||||P||Laboperator|20130812093814|201308
12123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]P|17[C
R]O|1|RDR0006723^CD0508498^A03^^AA6000402||^
01CT^^Full||||2013081209[ETB]06[CR] [LF]
HOST 11:35:03,010 [ACK]
c4800 11:35:03,010 [STX]62745||||N||||PCYT^P|Laboperator|||||||P
[CR]R|1|^01CT|POS·CT||||P||Laboperator|20130
812093814|20130812123428|LC·502_25098[CR]C|1|I|
F;M7|G[CR]P|18[CR]O|1|RDR0006724^CD0508498^B03^
^^AA6000402||^01CT^^Full||||20130812092745||||N
||||PCYT^P|Laboperator[ETB]92[CR] [LF]
HOST 11:35:03,150 [ACK]
c4800 11:35:03,150 [STX]7|||||||P[CR]R|1|^01CT|NEG·CT||||P||L
aboperator|20130812093814|20130812123428|LC·502_
25098[CR]C|1|I|F;M7|G[CR]P|19[CR]O|1|RDR000672
5^CD0508498^C03^^AA6000402||^01NG^^Full||||20
130812092745||||N||||PCYT^P|Laboperator|||||||P
[CR]R|1|^01NG|NEG·NG||[ETB]DE[CR] [LF]
HOST 11:35:03,290 [ACK]
c4800 11:35:03,290 [STX]0||||P||Laboperator|20130812093814|20130812
123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]P|20[CR]
O|1|RDR0006726^CD0508498^D03^^AA6000402||^
01NG^^Full||||20130812092745||||N||||PCYT^P|Labope
rator|||||||P[CR]C|1|I|empty·tube|G[CR]R|1|^
^01NG|Failed|||||X||Labope[ETB]53[CR] [LF]
HOST 11:35:03,431 [ACK]
c4800 11:35:03,431 [STX]1rator|20130812093814|20130812123428|LC·50
2_25098[CR]C|1|I|F;X4,M7|G[CR]P|21[CR]O|1|RDR00
06727^CD0508498^E03^^AA6000402||^01NG^^Full|
||20130812092745||||N||||PCYT^P|Laboperator|||||P
|||P[CR]R|1|^01NG|POS·NG||||P||Laboperator
|20130812093814|2013081[ETB]A3[CR] [LF]

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HOST    11:35:03,571 [ACK]
c4800  11:35:03,571 [STX]22123428|LC·502_25098[CR]C|1|I|F;M7|G[CR]P
          |22[CR]O|1|RDR0006728^CD0508498^F03^^AA6000402
          ||^^01NG^^Full|||20130812092745||||N||||PCYT^P
          |Laboperator|||||||P[CR]R|1|^/^01NG|Invalid·N
          G|||||P||Laboperator|20130812093814|20130812123
          428|LC·502_25098[CR]C|1|I|[ETB]48[CR][LF]
HOST    11:35:03,712 [ACK]
c4800  11:35:03,712 [STX]3F;M7|G[CR]P|23[CR]O|1|RDR0006729^CD050849
          8^G03^^AA6000402|||^01NG^^Full|||201308120927
          45||||N||||PCYT^P|Laboperator|||||||P[CR]R|1|
          ^/^01NG|POS·NG|||||P||Laboperator|2013081209381
          4|20130812123428|LC·502_25098[CR]C|1|I|F;M7|G[C
          R]P|24[CR]O|1|RDR0006730^CD05[ETB]C8[CR][LF]
HOST    11:35:03,852 [ACK]
c4800  11:35:03,852 [STX]408498^H03^^AA6000402|||^01NG^^Full|||20
          130812092745||||N||||PCYT^P|Laboperator|||||||
          |P[CR]R|1|^/^01NG|Invalid·NG|||||P||Laboperator
          |20130812093814|20130812123428|LC·502_25098[CR]
          C|1|I|F;M7|G[CR]L|1|N[CR][ETX]ED[CR][LF]
HOST    11:35:03,992 [ACK]
c4800  11:35:03,992 [EOT]

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CT/NG HL7 communication traces

Order download

```
C4800 10:55:30,916 [VT]
C4800 10:55:30,916 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
LIS·Facility|20150312105516+0100||QBP^Q11^QBP_Q
11|e6416998-a9f4-49f9-9000-d1ff0bf1b092|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:55:30,916 QPD|WOS^Work·Order·Step^IHE_LAW|74983d1a-2a70-4a
46-8a69-e30c66011684|testdata·001[CR]
C4800 10:55:30,916 RCP|I||R^HL70394[CR]
C4800 10:55:30,916 [FS] [CR]

*      10:55:31,167 ACK Inquiry: ExMID = e6416998-a9f4-49f9-9000-d
1ff0bf1b092

HOST 10:55:31,177 [VT]
HOST 10:55:31,177 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312105531+0100||RSP^K11
^RSP_K11|39e6d4ed-c37c-4ffb-8165-5efffacae7c4|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:55:31,207 MSA|AA|e6416998-a9f4-49f9-9000-d1ff0bf1b092[CR]
HOST 10:55:31,217 QAK|74983d1a-2a70-4a46-8a69-e30c66011684|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:55:31,227 QPD|WOS^Work·Order·Step^IHE_LAW|74983d1a-2a70-4
a46-8a69-e30c66011684|testdata·001[CR]
HOST 10:55:31,237 [FS] [CR]

*      10:55:32,137 Order: SID^MID = testdata 001^a914860b-c591-49
cf-bca2-edfcf317f4fd

HOST 10:55:32,147 [VT]
HOST 10:55:32,147 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312105532+0100||OML^O33
^OML_O33|a914860b-c591-49cf-bca2-edfcf317f4fd|P
|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:55:32,172 SPM|1|testdata·001&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
HOST 10:55:32,184 SAC|||testdata·001[CR]
HOST 10:55:32,194 ORC|NW|||||||20150204090944[CR]
HOST 10:55:32,204 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST 10:55:32,214 [FS] [CR]

C4800 10:55:34,433 [VT]
C4800 10:55:34,433 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
LIS·Facility|20150312105520+0100||ORL^O34^ORL_O
34|4ce84e07-ded9-4194-aca9-e7b553d96af0|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:55:34,433 MSA|AA|a914860b-c591-49cf-bca2-edfcf317f4fd[CR]
C4800 10:55:34,433 SPM|1|testdata·001&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
C4800 10:55:34,433 SAC|||testdata·001[CR]
C4800 10:55:34,433 ORC|OK|12345|||SC[CR]
C4800 10:55:34,433 [FS] [CR]

C4800 10:55:34,652 [VT]
C4800 10:55:34,652 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
```

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LIS·Facility|20150312105516+0100||QBP^Q11^QBP_Q
11|f1e26218-79e5-4caa-bde5-f5b8636af41b|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:55:34,652 QPD|WOS^Work·Order·Step^IHELAW|241e4999-d1d8-42
8b-8fcfd-51c725780e07|testdata·003[CR]
C4800 10:55:34,652 RCP|I||R^^HL70394[CR]
C4800 10:55:34,652 [FS] [CR]

*      10:55:34,910 ACK Inquiry: ExMID = f1e26218-79e5-4caa-bde5-f
5b8636af41b

HOST  10:55:34,910 [VT]
HOST  10:55:34,920 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312105534+0100||RSP^K11
^RSP_K11|862b62f7-df42-46db-99b9-9e4b1aacaf59|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST  10:55:34,932 MSA|AA|f1e26218-79e5-4caa-bde5-f5b8636af41b[CR]
HOST  10:55:34,942 QAK|241e4999-d1d8-428b-8fcfd-51c725780e07|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST  10:55:34,952 QPD|WOS^Work·Order·Step^IHE_LAW|241e4999-d1d8-4
28b-8fcfd-51c725780e07|testdata·003[CR]
HOST  10:55:34,962 [FS] [CR]

*      10:55:35,902 Order: SID^MID = testdata 003^333e99fc-0761-43
30-880b-03d589f51a11

HOST  10:55:35,912 [VT]
HOST  10:55:35,915 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312105535+0100||OML^O33
^OML_O33|333e99fc-0761-4330-880b-03d589f51a11|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST  10:55:35,932 SPM|1|testdata·003&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
HOST  10:55:35,942 SAC|||testdata·003[CR]
HOST  10:55:35,952 ORC|NW|||||||20150204090944[CR]
HOST  10:55:35,962 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST  10:55:35,972 [FS] [CR]

C4800 10:55:38,124 [VT]
C4800 10:55:38,124 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312105523+0100||ORL^O34^ORL_O
34|09c60ae9-28b5-4745-bcce-a4fe226113f9|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:55:38,124 MSA|AA|333e99fc-0761-4330-880b-03d589f51a11[CR]
C4800 10:55:38,124 SPM|1|testdata·003&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
C4800 10:55:38,124 SAC|||testdata·003[CR]
C4800 10:55:38,124 ORC|OK|12345|||SC[CR]
C4800 10:55:38,124 [FS] [CR]

C4800 10:55:38,342 [VT]
C4800 10:55:38,342 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312105516+0100||QBP^Q11^QBP_Q
11|edd0bdb9-de3a-4a6f-80e3-5f4efd05118c|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:55:38,342 QPD|WOS^Work·Order·Step^IHELAW|2b8c4eab-9b7c-43
0c-8454-69e1c0bf5345|testdata·004[CR]
C4800 10:55:38,342 RCP|I||R^^HL70394[CR]
C4800 10:55:38,342 [FS] [CR]

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*      10:55:38,551 ACK Inquiry: ExMID = edd0bdb9-de3a-4a6f-80e3-5
          f4efd05118c

HOST  10:55:38,551 [VT]
HOST  10:55:38,561 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
          .2.0.1437|LAB·Name|20150312105538+0100||RSP^K11
          ^RSP_K11|2ab545f5-e926-40a6-b289-a2974087d728|P
          |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST  10:55:38,573 MSA|AA|edd0bdb9-de3a-4a6f-80e3-5f4efd05118c[CR]
HOST  10:55:38,583 QAK|2b8c4eab-9b7c-430c-8454-69e1c0bf5345|OK|WOS
          ^Work·Order·Step^IHE_LAW[CR]
HOST  10:55:38,593 QPD|WOS^Work·Order·Step^IHE_LAW|2b8c4eab-9b7c-4
          30c-8454-69e1c0bf5345|testdata·004[CR]
HOST  10:55:38,603 [FS] [CR]

*      10:55:39,503 Order: SID^MID = testdata 004^aa58f573-d821-42
          5c-a248-88ec3c7e328b

HOST  10:55:39,513 [VT]
HOST  10:55:39,513 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
          .2.0.1437|LAB·Name|20150312105539+0100||OML^O33
          ^OML_O33|aa58f573-d821-425c-a248-88ec3c7e328b|P
          |2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST  10:55:39,529 SPM|1|testdata·004&ROCHE||SWAB^^99ROC||||||P^
          HL70369[CR]
HOST  10:55:39,541 SAC|||testdata·004[CR]
HOST  10:55:39,551 ORC|NW|||||||20150204090944[CR]
HOST  10:55:39,561 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST  10:55:39,571 [FS] [CR]

C4800 10:55:41,723 [VT]
C4800 10:55:41,723 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
          LIS·Facility|20150312105527+0100||ORL^O34^ORL_O
          34|fade5f04-52dd-4bb0-9385-fbe16aa82c08|P|2.5.1
          |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:55:41,723 MSA|AA|aa58f573-d821-425c-a248-88ec3c7e328b[CR]
C4800 10:55:41,723 SPM|1|testdata·004&ROCHE||SWAB^^99ROC||||||P^
          HL70369[CR]
C4800 10:55:41,723 SAC|||testdata·004[CR]
C4800 10:55:41,723 ORC|OK|12345|||SC[CR]
C4800 10:55:41,723 [FS] [CR]

C4800 10:55:41,935 [VT]
C4800 10:55:41,935 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
          LIS·Facility|20150312105516+0100||QBP^Q11^QBP_Q
          11|2f224ce5-95d9-4a53-9308-f94809563479|P|2.5.1
          |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:55:41,935 QPD|WOS^Work·Order·Step^IHELAW|07535f03-30b0-42
          f0-a5cd-c68870719b70|testdata·002[CR]
C4800 10:55:41,935 RCP|I||R^^HL70394[CR]
C4800 10:55:41,935 [FS] [CR]

*      10:55:42,147 ACK Inquiry: ExMID = 2f224ce5-95d9-4a53-9308-f
          94809563479

HOST  10:55:42,147 [VT]
HOST  10:55:42,147 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
          .2.0.1437|LAB·Name|20150312105542+0100||RSP^K11

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^RSP_K11|d6d8d535-5c0f-4b49-a32b-5955d32020e8|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:55:42,178 MSA|AA|2f224ce5-95d9-4a53-9308-f94809563479[CR]
HOST 10:55:42,190 QAK|07535f03-30b0-42f0-a5cd-c68870719b70|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST 10:55:42,200 QPD|WOS^Work·Order·Step^IHE_LAW|07535f03-30b0-4
    2f0-a5cd-c68870719b70|testdata·002[CR]
HOST 10:55:42,210 [FS] [CR]

*      10:55:43,230 Order: SID^MID = testdata 002^321a0ef1-7969-43
        f2-b89b-c773472e73a0

HOST 10:55:43,240 [VT]
HOST 10:55:43,250 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20150312105543+0100||OML^O33
    ^OML_O33|321a0ef1-7969-43f2-b89b-c773472e73a0|P
    |2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:55:43,266 SPM|1|testdata·002&ROCHE||SWAB^^99ROC||||||P^
    HL70369[CR]
HOST 10:55:43,278 SAC|||testdata·002[CR]
HOST 10:55:43,288 ORC|NW|||||||20150204090944[CR]
HOST 10:55:43,298 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST 10:55:43,308 [FS] [CR]

C4800 10:55:45,330 [VT]
C4800 10:55:45,330 MSH|^~\&|cobas·4800·software·2.2.0.1507|"|"|LIS|
    LIS·Facility|20150312105530+0100||ORL^O34^ORL_O
    34|81c4db7b-3474-41d5-8682-f668d8510280|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:55:45,330 MSA|AA|321a0ef1-7969-43f2-b89b-c773472e73a0[CR]
C4800 10:55:45,330 SPM|1|testdata·002&ROCHE||SWAB^^99ROC||||||P^
    HL70369[CR]
C4800 10:55:45,330 SAC|||testdata·002[CR]
C4800 10:55:45,330 ORC|OK|12345|||SC[CR]
C4800 10:55:45,330 [FS] [CR]

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Result upload

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C4800 10:44:10,528 [VT]
C4800 10:44:10,528 MSH|^~\&|cobas·4800·software·2.2.0.1507^50549_3
    0071^M|"|"|LIS|LIS·Facility|20150311104354+0100|
    |OUL^R22^OUL_R22|9cd584bd-1fc0-4c06-ac4a-12e6b5
    f7cc32|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29^
    IHE[CR]
C4800 10:44:10,528 SPM|1|1C1123150BZ5009&ROCHE||"|||Q^^HL7036
    9[CR]
C4800 10:44:10,528 SAC|||1C1123150BZ5009[CR]
C4800 10:44:10,528 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
    R]
C4800 10:44:10,528 OBR||"|||01CTNG^01CTNG^99ROC||20150304120353[CR
    ]
C4800 10:44:10,528 ORC|SC||||CM[CR]
C4800 10:44:10,528 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
    99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
    50304121113^20150304155202|||"|||F||||Laboper
    ator||C4800^Roche~50549_30071^Roche|20150304155
    202[CR]
C4800 10:44:10,528 OBX|2|ST|01CT^01CT^99ROC|1.1|Valid|||Full^^99RO
    C|||F||||RocheNoCheck||C4800^Roche~50549_30071

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    ^Roche|20150304155202[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
      504203^^99ROC|A01^^99ROC[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
      100100^^99ROC[CR]
C4800 10:44:10,528 NTE|1||F;M7[CR]
C4800 10:44:10,528 NTE|2||Ct:0·(MMx·1),36.4;Ct:1·(MMx·1),35.5;Ct:5
      ·(MMx·1),34.8[CR]
C4800 10:44:10,528 NTE|3||[CR]
C4800 10:44:10,528 OBX|3|ST|01NG^01NG^99ROC|1.2|Valid|||Full^^99RO
      C||||F||||RocheNoCheck||C4800^Roche~50549_30071
      ^Roche|20150304155202[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
      504203^^99ROC|A01^^99ROC[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
      100100^^99ROC[CR]
C4800 10:44:10,528 NTE|1||F;M7[CR]
C4800 10:44:10,528 NTE|2||Ct:0·(MMx·1),36.4;Ct:1·(MMx·1),35.5;Ct:5
      ·(MMx·1),34.8[CR]
C4800 10:44:10,528 NTE|3||[CR]
C4800 10:44:10,528 SPM|2|ONCS015345F0058&ROCHE||""|||||||Q^^HL7036
      9[CR]
C4800 10:44:10,528 SAC|||ONCS015345F0058[CR]
C4800 10:44:10,528 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
      R]
C4800 10:44:10,528 OBR||""||01CTNG^01CTNG^99ROC||20150304120353[CR
      ]
C4800 10:44:10,528 ORC|SC||||CM[CR]
C4800 10:44:10,528 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
      99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
      50304121113^20150304155202|||""||||F||||Laboper
      ator||C4800^Roche~50549_30071^Roche|20150304155
      202[CR]
C4800 10:44:10,528 OBX|2|ST|01CT^01CT^99ROC|1.1|Valid|||Full^^99RO
      C||||F||||RocheNoCheck||C4800^Roche~50549_30071
      ^Roche|20150304155202[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
      504203^^99ROC|B01^^99ROC[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
      100100^^99ROC[CR]
C4800 10:44:10,528 NTE|1||F;M7[CR]
C4800 10:44:10,528 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(
      MMx·1),35.5[CR]
C4800 10:44:10,528 NTE|3||[CR]
C4800 10:44:10,528 OBX|3|ST|01NG^01NG^99ROC|1.2|Valid|||Full^^99RO
      C||||F||||RocheNoCheck||C4800^Roche~50549_30071
      ^Roche|20150304155202[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
      504203^^99ROC|B01^^99ROC[CR]
C4800 10:44:10,528 INV|"OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
      100100^^99ROC[CR]
C4800 10:44:10,528 NTE|1||F;M7[CR]
C4800 10:44:10,528 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(
      MMx·1),35.5[CR]
C4800 10:44:10,528 NTE|3||[CR]
C4800 10:44:10,543 [FS][CR]

*
  10:44:20,357 ACK Result: ExMID = 9cd584bd-1fc0-4c06-ac4a-12
      e6b5f7cc32

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```
HOST 10:44:20,367 [VT]
HOST 10:44:20,367 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437^SN1234^M|LAB·Name|20150311104420+0100
    ||ACK^R22^ACK|b9f4fe44-8974-46ed-a3a2-888638f8d
    3f3|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 10:44:20,387 MSA|AA|9cd584bd-1fc0-4c06-ac4a-12e6b5f7cc32[CR]
HOST 10:44:20,397 [FS] [CR]
```

CT/NG V2.0 ASTM communication traces

Order download

```
c4800 08:57:50,064 [ENQ]
HOST   08:57:50,126 [ACK]
c4800 08:57:50,126 [STX]1H|\^&|||cobas·4800^4af6637f-5099-4a39-b73
                           8-c3d0f5a4d38e^Laboperator^2.2.0.1442^1394.LIS2
                           |||||LIS|TSREQ^REAL|P|1|20141127085703[CR]Q|1|^
                           testdata·001[CR]L|1|N[CR] [ETX]F6[CR] [LF]
HOST   08:57:50,235 [ACK]
c4800 08:57:50,235 [EOT]

*      08:57:52,443 TSDWN: SID = testdata001

HOST   08:57:52,474 [ENQ]
c4800 08:57:52,474 [ACK]
HOST   08:57:52,490 [STX]1H|\^&|||ASTM32^81d7030a-9fb4-4e67-ac1b-90
                           e5e2e783c0^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141127085750|[CR] [ETX]35[CR]
                           ] [LF]
c4800 08:57:52,490 [ACK]
HOST   08:57:52,505 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 08:57:52,507 [ACK]
HOST   08:57:52,517 [STX]3O|1|testdata·001|||^01CTNG^^Full|||20140
                           402134912||||N|||20140402134912|SWAB^P|schreudt
                           |||||||O[CR] [ETX]3C[CR] [LF]
c4800 08:57:52,517 [ACK]
HOST   08:57:52,527 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 08:57:52,527 [ACK]
HOST   08:57:52,527 [EOT]

c4800 08:57:54,465 [ENQ]
HOST   08:57:54,496 [ACK]
c4800 08:57:54,512 [STX]1H|\^&|||cobas·4800^904b666d-36e9-4d82-ab8
                           5-8b29eca9cd0a^Laboperator^2.2.0.1442^1394.LIS2
                           |||||LIS|TSREQ^REAL|P|1|20141127085703[CR]Q|1|^
                           testdata·002[CR]L|1|N[CR] [ETX]53[CR] [LF]
HOST   08:57:54,621 [ACK]
c4800 08:57:54,621 [EOT]

*      08:57:56,831 TSDWN: SID = testdata002

HOST   08:57:56,862 [ENQ]
c4800 08:57:56,862 [ACK]
HOST   08:57:56,878 [STX]1H|\^&|||ASTM32^bed79869-1f44-4582-9337-bb
                           7cd0215a4e^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141127085754|[CR] [ETX]E9[CR]
                           ] [LF]
c4800 08:57:56,878 [ACK]
HOST   08:57:56,893 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 08:57:56,895 [ACK]
HOST   08:57:56,905 [STX]3O|1|testdata·002|||^01CTNG^^Full|||20140
                           402134912||||N|||20140402134912|SWAB^P|schreudt
                           |||||||O[CR] [ETX]3D[CR] [LF]
c4800 08:57:56,905 [ACK]
HOST   08:57:56,915 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 08:57:56,915 [ACK]
```

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HOST 08:57:56,915 [EOT]

c4800 08:57:58,775 [ENQ]
HOST 08:57:58,900 [ACK]
c4800 08:57:58,900 [STX]1H|\^&|||cobas·4800^0577976c-9605-4ec3-b60
a-482b0349e8f4^Laboperator^2.2.0.1442^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20141127085703[CR]Q|1|^
testdata·003[CR]L|1|N[CR] [ETX]66[CR] [LF]
HOST 08:57:59,009 [ACK]
c4800 08:57:59,025 [EOT]

* 08:58:01,237 TSDWN: SID = testdata003

HOST 08:58:01,284 [ENQ]
c4800 08:58:01,284 [ACK]
HOST 08:58:01,299 [STX]1H|\^&|||ASTM32^df17962a-5418-4a1b-a13d-96
f0f86b6595^INSTALL^7.6.5^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20141127085759| [CR] [ETX]EB[CR]
] [LF]
c4800 08:58:01,301 [ACK]
HOST 08:58:01,311 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 08:58:01,311 [ACK]
HOST 08:58:01,321 [STX]3O|1|testdata·003| |^^^01CTNG^^Full|||20140
402134912|||N|||20140402134912|SWAB^P|schreudt
|||||||O[CR] [ETX]3E[CR] [LF]
c4800 08:58:01,321 [ACK]
HOST 08:58:01,331 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 08:58:01,331 [ACK]
HOST 08:58:01,331 [EOT]

c4800 08:58:03,197 [ENQ]
HOST 08:58:03,306 [ACK]
c4800 08:58:03,306 [STX]1H|\^&|||cobas·4800^a86581c0-b22e-409e-bbc
4-af318ad897a6^Laboperator^2.2.0.1442^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20141127085703[CR]Q|1|^
testdata·004[CR]L|1|N[CR] [ETX]47[CR] [LF]
HOST 08:58:03,415 [ACK]
c4800 08:58:03,431 [EOT]

* 08:58:05,666 TSDWN: SID = testdata004

HOST 08:58:05,713 [ENQ]
c4800 08:58:05,713 [ACK]
HOST 08:58:05,728 [STX]1H|\^&|||ASTM32^9d7fb139-c758-491e-8618-46
810b45152d^INSTALL^7.6.5^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20141127085803| [CR] [ETX]5A[CR]
] [LF]
c4800 08:58:05,730 [ACK]
HOST 08:58:05,750 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 08:58:05,750 [ACK]
HOST 08:58:05,760 [STX]3O|1|testdata·004| |^^^01CTNG^^Full|||20140
402134912|||N|||20140402134912|SWAB^P|schreudt
|||||||O[CR] [ETX]3F[CR] [LF]
c4800 08:58:05,770 [ACK]
HOST 08:58:05,780 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 08:58:05,780 [ACK]
HOST 08:58:05,790 [EOT]

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Result upload

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c4800 08:51:05,888 [ENQ]
HOST   08:51:06,200 [ACK]
c4800 08:51:06,200 [STX]1H|^\&|||cobas·4800·software^e9aa973c-cbce
-41d1-b5e5-5abe8af74e41^Laboperator^2.2.0.1442^
1394.LIS2||||LIS|RSUP|^REAL|P|1|20141127085017
[CR]P|1[CR]O|1|1C1784513BZ0073^AD1200031^A01^^^
AA6204237||^^^01CTNG^^Full|||20141126115120|||
Q||||^POSCONTROL|[ETB]2A[CR][LF]
HOST   08:51:06,325 [ACK]
c4800 08:51:06,325 [STX]2Laboperator|||||||P[CR]R|1|^^^01CT|Inva
lid|||||P||Laboperator|20141126115549|201411261
45914|503_27768[CR]C|1|I|F;R20,R21|G[CR]C|2|I|C
t:0·(MMx·1),Invalid;Ct:1·(MMx·1),Invalid;Ct:5·(
MMx·1),Invalid|G[CR]R|2|^^^01NG|Invalid|||||P||
Laboperator|20141126115[ETB]84[CR][LF]
HOST   08:51:06,450 [ACK]
c4800 08:51:06,450 [STX]3549|20141126145914|503_27768[CR]C|1|I|F;R
20,R21|G[CR]C|2|I|Ct:0·(MMx·1),Invalid;Ct:1·(MM
x·1),Invalid;Ct:5·(MMx·1),Invalid|G[CR]P|2[CR]O
|1|0NC542348BZ0131^AD1200031^B01^^^AA6204237|||^
^^^01CTNG^^Full|||20141126115120|||Q||||^NEGCON
TROL|Laboperator|||||||[ETB]2C[CR][LF]
HOST   08:51:06,575 [ACK]
c4800 08:51:06,575 [STX]4|||P[CR]R|1|^^^01CT|Invalid|||||P||Laboper
ator|20141126115549|20141126145914|503_27768[CR
]C|1|I|F;R20,R21|G[CR]C|2|I|Ct:0·(MMx·1),Invali
d;Ct:1·(MMx·1),Invalid;Ct:5·(MMx·1),Invalid|G[C
R]R|2|^^^01NG|Invalid|||||P||Laboperator|201411
26115549|20141126145914[ETB]8E[CR][LF]
HOST   08:51:06,700 [ACK]
c4800 08:51:06,700 [STX]5|503_27768[CR]C|1|I|F;R20,R21|G[CR]C|2|I|
Ct:0·(MMx·1),Invalid;Ct:1·(MMx·1),Invalid;Ct:5·
(MMx·1),Invalid|G[CR]P|3[CR]O|1|testdata·001^AD
1200031^C01^^^AA6204237||^^^01CTNG^^Full|||2014
1126115120||||N||||SWAB^P|Laboperator||||||||P
[CR]R|1|^^^01CT|Failed|||||[ETB]0A[CR][LF]
HOST   08:51:06,824 [ACK]
c4800 08:51:06,824 [STX]6|X||Laboperator|20141126115549|2014112614
5914|503_27768[CR]C|1|I|F;X4|G[CR]R|2|^^^01NG|F
ailed|||||X||Laboperator|20141126115549|2014112
6145914|503_27768[CR]C|1|I|F;X4|G[CR]P|4[CR]O|1
|testdata·002^AD1200031^D01^^^AA6204237||^^^01C
TNG^^Full|||20141126115120[ETB]55[CR][LF]
HOST   08:51:06,949 [ACK]
c4800 08:51:06,949 [STX]7||||N||||SWAB^P|Laboperator||||||||P[CR]
R|1|^^^01CT|Failed|||||X||Laboperator|201411261
15549|20141126145914|503_27768[CR]C|1|I|F;X4|G[
CR]R|2|^^^01NG|Failed|||||X||Laboperator|201411
26115549|20141126145914|503_27768[CR]C|1|I|F;X4
|G[CR]P|5[CR]O|1|testdata·003[ETB]F1[CR][LF]
HOST   08:51:07,074 [ACK]
c4800 08:51:07,074 [STX]0^AD1200031^E01^^^AA6204237||^^^01CTNG^^Fu
ll|||20141126115120||||N||||SWAB^P|Laboperator|
|||||||P[CR]R|1|^^^01CT|Invalid|||||P||Laboper
ator|20141126115549|20141126145914|503_27768[CR
]C|1|I|F;R20,R21|G[CR]R|2|^^^01NG|Invalid|||||P
||Laboperator|201411[ETB]31[CR][LF]
HOST   08:51:07,199 [ACK]

```

```
c4800 08:51:07,199 [STX]126115549|20141126145914|503_27768[CR]C|1|  
I|F;R20,R21|G[CR]P|6[CR]O|1|testdata·004^AD1200  
031^F01^^^AA6204237||^^^01CTNG^^Full|||20141126  
115120||||N||||SWAB^P|Laboperator|||||||P[CR]  
R|1|^01CT|Invalid||||P||Laboperator|20141126  
115549|20141126145914|5[ETB]BC[CR] [LF]  
HOST 08:51:07,324 [ACK]  
c4800 08:51:07,324 [STX]203_27768[CR]C|1|I|F;R20,R21|G[CR]R|2|^^^0  
1NG|Invalid||||P||Laboperator|20141126115549|2  
0141126145914|503_27768[CR]C|1|I|F;R20,R21|G[CR]  
]L|1|N[CR] [ETX]27[CR] [LF]  
HOST 08:51:07,433 [ACK]  
c4800 08:51:07,448 [EOT]
```

CT/NG V2.0 HL7 communication traces

Order download

```
C4800 10:17:38,416 [VT]
C4800 10:17:38,416 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312101724+0100||QBP^Q11^QBP_Q
11|5be0071b-d8e2-4412-8825-33ead2b77ae1|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:17:38,416 QPD|WOS^Work·Order·Step^IHE_LAW|e8ef687d-84cc-4a
b7-9963-3c53c1edfaa7|testdata·001[CR]
C4800 10:17:38,416 RCP|I||R^^HL70394[CR]
C4800 10:17:38,416 [FS] [CR]

*      10:17:38,703 ACK Inquiry: ExMID = 5be0071b-d8e2-4412-8825-3
3ead2b77ae1

HOST  10:17:38,713 [VT]
HOST  10:17:38,713 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312101738+0100||RSP^K11
^RSP_K11|891c163f-9331-4b61-8d66-83d061e9e0df|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST  10:17:38,740 MSA|AA|5be0071b-d8e2-4412-8825-33ead2b77ae1[CR]
HOST  10:17:38,750 QAK|e8ef687d-84cc-4ab7-9963-3c53c1edfaa7|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST  10:17:38,760 QPD|WOS^Work·Order·Step^IHE_LAW|e8ef687d-84cc-4
ab7-9963-3c53c1edfaa7|testdata·001[CR]
HOST  10:17:38,770 [FS] [CR]

*      10:17:39,670 Order: SID^MID = testdata 001^2ebf732c-5cf7-4b
52-99b6-5a1196b74389

HOST  10:17:39,680 [VT]
HOST  10:17:39,680 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312101739+0100||OML^O33
^OML_O33|2ebf732c-5cf7-4b52-99b6-5a1196b74389|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST  10:17:39,698 SPM|1|testdata·001&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
HOST  10:17:39,708 SAC|||testdata·001[CR]
HOST  10:17:39,718 ORC|NW|||||||20150204090944[CR]
HOST  10:17:39,728 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST  10:17:39,738 [FS] [CR]

C4800 10:17:41,853 [VT]
C4800 10:17:41,853 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150312101727+0100||ORL^O34^ORL_O
34|c46f5c57-ce72-4d7a-b192-1aaafde694b6c|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:17:41,853 MSA|AA|2ebf732c-5cf7-4b52-99b6-5a1196b74389[CR]
C4800 10:17:41,853 SPM|1|testdata·001&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
C4800 10:17:41,853 SAC|||testdata·001[CR]
C4800 10:17:41,853 ORC|OK|12345|||SC[CR]
C4800 10:17:41,853 [FS] [CR]

C4800 10:17:42,068 [VT]
C4800 10:17:42,068 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
```

```

LIS·Facility|20150312101724+0100||QBP^Q11^QBP_Q
11|63d46a2a-53ba-412d-9027-c3590de6169a|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:17:42,068 QPD|WOS^Work·Order·Step^IHELAW|420c5fa6-585f-4c
5c-a1af-f5c14b8dfbb1|testdata·003[CR]
C4800 10:17:42,068 RCP|I||R^^HL70394[CR]
C4800 10:17:42,068 [FS] [CR]

*      10:17:49,628 ACK Inquiry: ExMID = 5cd94fbf-26f7-4b82-b3cb-8
d880d6e07b8

HOST 10:17:49,643 [VT]
HOST 10:17:49,645 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312101749+0100||RSP^K11
^RSP_K11|f314bd0d-7cec-44e8-85e2-f74d696ff788|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:17:49,655 MSA|AA|5cd94fbf-26f7-4b82-b3cb-8d880d6e07b8[CR]
HOST 10:17:49,665 QAK|eb9f2eec-1582-462d-835b-0ad0d2ed7535|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:17:49,675 QPD|WOS^Work·Order·Step^IHE_LAW|eb9f2eec-1582-4
62d-835b-0ad0d2ed7535|testdata·002[CR]
HOST 10:17:49,685 [FS] [CR]

*      10:17:50,595 Order: SID^MID = testdata 002^ac722cc4-edbb-4a
96-94a0-67a7c8796561

HOST 10:17:50,595 [VT]
HOST 10:17:50,595 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312101750+0100||OML^O33
^OML_O33|ac722cc4-edbb-4a96-94a0-67a7c8796561|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:17:50,623 SPM|1|testdata·002&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
HOST 10:17:50,633 SAC|||testdata·002[CR]
HOST 10:17:50,643 ORC|NW|||||||20150204090944[CR]
HOST 10:17:50,653 OBR||12345||01CTNG^01CTNG^99ROC[CR]
HOST 10:17:50,663 [FS] [CR]

C4800 10:17:52,815 [VT]
C4800 10:17:52,815 MSH|^~\&|cobas·4800·software·2.2.0.1507|"||LIS|
LIS·Facility|20150312101738+0100||ORL^O34^ORL_O
34|78cb27ad-089d-48c9-a413-bf0f1a5ddc75|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:17:52,815 MSA|AA|ac722cc4-edbb-4a96-94a0-67a7c8796561[CR]
C4800 10:17:52,815 SPM|1|testdata·002&ROCHE||SWAB^^99ROC||||||P^
HL70369[CR]
C4800 10:17:52,815 SAC|||testdata·002[CR]
C4800 10:17:52,815 ORC|OK|12345|||SC[CR]
C4800 10:17:52,815 [FS] [CR]

```

Result upload

```

C4800 15:47:03,503 [VT]
C4800 15:47:03,503 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_
12345^M|"||LIS|LIS·Facility|20150311154648+0100
||OUL^R22^OUL_R22|c71b6574-96b3-4fac-90fe-0fcbb2
d82acb2|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29
^IHE[CR]
C4800 15:47:03,503 SPM|1|1C1123150BZ5028&ROCHE||"||||||Q^^HL7036

```

```

9 [CR]
C4800 15:47:03,503 SAC|||1C1123150BZ5028[CR]
C4800 15:47:03,503 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:47:03,503 OBR||""||01CTNG^01CTNG^99ROC||20150302134136[CR
]
C4800 15:47:03,503 ORC|SC||||CM[CR]
C4800 15:47:03,503 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50302135819^20150302160220|||""|||F||||Laboper
ator||C4800^Roche~123456_12345^Roche|2015030216
0220[CR]
C4800 15:47:03,503 OBX|2|ST|01CT^01CT^99ROC|1.1|Valid|||Full^^99RO
C|||P||||RocheNoCheck||C4800^Roche~123456_1234
5^Roche|20150302160220[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200038^^99ROC|A01^^99ROC[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA6
204461^^99ROC[CR]
C4800 15:47:03,503 NTE|1||F;M10,M7[CR]
C4800 15:47:03,503 NTE|2||Ct:0·(MMx·1),38.4;Ct:1·(MMx·1),36.9;Ct:5
·(MMx·1),35.2[CR]
C4800 15:47:03,503 NTE|3||[CR]
C4800 15:47:03,503 OBX|3|ST|01NG^01NG^99ROC|1.2|Valid|||Full^^99RO
C|||P||||RocheNoCheck||C4800^Roche~123456_1234
5^Roche|20150302160220[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200038^^99ROC|A01^^99ROC[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA6
204461^^99ROC[CR]
C4800 15:47:03,503 NTE|1||F;M10,M7[CR]
C4800 15:47:03,503 NTE|2||Ct:0·(MMx·1),38.4;Ct:1·(MMx·1),36.9;Ct:5
·(MMx·1),35.2[CR]
C4800 15:47:03,503 NTE|3||[CR]
C4800 15:47:03,503 SPM|2|0NC542348BZ0034&ROCHE||"|||Q^^HL7036
9 [CR]
C4800 15:47:03,503 SAC|||0NC542348BZ0034[CR]
C4800 15:47:03,503 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:47:03,503 OBR||""||01CTNG^01CTNG^99ROC||20150302134136[CR
]
C4800 15:47:03,503 ORC|SC||||CM[CR]
C4800 15:47:03,503 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50302135819^20150302160220|||""|||F||||Laboper
ator||C4800^Roche~123456_12345^Roche|2015030216
0220[CR]
C4800 15:47:03,503 OBX|2|ST|01CT^01CT^99ROC|1.1|Valid|||Full^^99RO
C|||P||||RocheNoCheck||C4800^Roche~123456_1234
5^Roche|20150302160220[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200038^^99ROC|B01^^99ROC[CR]
C4800 15:47:03,503 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA6
204461^^99ROC[CR]
C4800 15:47:03,503 NTE|1||F;M10,M7[CR]
C4800 15:47:03,503 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(
MMx·1),34.5[CR]
C4800 15:47:03,503 NTE|3||[CR]
C4800 15:47:03,503 OBX|3|ST|01NG^01NG^99ROC|1.2|Valid|||Full^^99RO

```

```
C||||P|||||RocheNoCheck||C4800^Roche~123456_1234
5^Roche|20150302160220[CR]
C4800 15:47:03,503 INV|"OK^HL70383|OT^HL70384|MwpId^99ROC|AD1
200038^99ROC|B01^99ROC[CR]
C4800 15:47:03,503 INV|"OK^HL70383|OT^HL70384|DwpId^99ROC|AA6
204461^99ROC[CR]
C4800 15:47:03,503 NTE|1||F;M10,M7[CR]
C4800 15:47:03,503 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(
MMx·1),34.5[CR]
C4800 15:47:03,503 NTE|3|||[CR]
C4800 15:47:03,503 [FS] [CR]

*      15:47:04,784 ACK Result: ExMID = c71b6574-96b3-4fac-90fe-0f
cb2d82acb2

HOST   15:47:04,794 [VT]
HOST   15:47:04,794 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311154704+0100
||ACK^R22^ACK|7e7c72b4-4135-491f-ace0-8de8c0ebd
c03|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   15:47:04,816 MSA|AA|c71b6574-96b3-4fac-90fe-0fcbb2d82acb2[CR]
HOST   15:47:04,826 [FS] [CR]
```

EGFR P1 ASTM communication traces

Result upload

```
c4800 17:16:13,619 [ENQ]
HOST   17:16:13,728 [ACK]
c4800 17:16:13,728 [STX]1H|^\&|||cobas·4800·software^c0f49ae5-907d
-4773-9773-5a2885ea4bbb^RocheCheck^2.2.0.1503^1
394.LIS2||||LIS|RSUPL^REAL|P|1|20141209171521[
CR]P|1[CR]O|1|8A15780220Z1367^AD1200000^A01:A02
:A03^^^|||^08EGFR^^AnD|||20141209160327|||Q||
|||^MUTCONTROL|Roc[ETB]C0[CR][LF]
HOST   17:16:13,853 [ACK]
c4800 17:16:13,853 [STX]2heCheck|||||||P[CR]R|1|^08EGFR|Valid|
||||P||RocheCheck|20141209161630|20141209162055
|123456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R
|2|^08EGFR08|N/A||||P||RocheCheck|2014120916
1630|20141209162055|123456_12345[CR]C|1|I|F;M4|
G[CR]C|2|I|,|G[CR]P|2[CR]O|1|8A1578[ETB]73[CR][
LF]
HOST   17:16:13,977 [ACK]
c4800 17:16:13,977 [STX]30220Z1367^AD1200000^B01:B02:B03^^^|||^08
EGFR^^AnD|||20141209160327|||Q|||^NEGCONTROL|
RocheCheck|||||||P[CR]R|1|^08EGFR|Valid|||||P||RocheCheck|20141209161630|20141209162055|12
3456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|
|^08EGFR08|N/A||||P||[ETB]B3[CR][LF]
HOST   17:16:14,102 [ACK]
c4800 17:16:14,102 [STX]4RocheCheck|20141209161630|20141209162055|
123456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]P|
3[CR]O|1|11^AD1200000^C01:C02:C03^^^|||^08EGFR
^^AnD|||20141209160327|||N||||P||RocheCheck|||
||||||P[CR]R|1|^08EGFR|Mutation.Detected|||||P||RocheCheck|201412091616[ETB]D7[CR][LF]
HOST   17:16:14,227 [ACK]
c4800 17:16:14,227 [STX]530|20141209162055|123456_12345[CR]C|1|I|F
;M4|G[CR]R|2|^08EGFR01|Exon.19.Deletion||||P||RocheCheck|20141209161630|20141209162055|1234
56_12345[CR]C|1|I|F;M4|G[CR]R|3|^08EGFR02|Exo
n.20.S768I||||P||RocheCheck|20141209161630|201
41209162055|123456_1234[ETB]08[CR][LF]
HOST   17:16:14,352 [ACK]
c4800 17:16:14,352 [STX]65[CR]C|1|I|F;M4|G[CR]R|4|^08EGFR03|Exon
.21.L858R||||P||RocheCheck|20141209161630|2014
1209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|5|
|^08EGFR04|Exon.20.T790M||||P||RocheCheck|201
41209161630|20141209162055|123456_12345[CR]C|1|
I|F;M4|G[CR]R|6|^08EGFR06|E[ETB]2C[CR][LF]
HOST   17:16:14,477 [ACK]
c4800 17:16:14,477 [STX]7xon.18.G719X||||P||RocheCheck|2014120916
1630|20141209162055|123456_12345[CR]C|1|I|F;M4|
G[CR]R|7|^08EGFR07|Exon.20.Insertion||||P||RocheCheck|20141209161630|20141209162055|123456_
12345[CR]C|1|I|F;M4|G[CR]P|4[CR]O|1|22^AD120000
0^D01:D02:D03^^^|||^08EGF[ETB]1E[CR][LF]
HOST   17:16:14,601 [ACK]
c4800 17:16:14,601 [STX]0R^AnD|||20141209160327|||N||||P||RocheC
heck|||||||P[CR]R|1|^08EGFR|Mutation.Detect
```

ed|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^~~~0EGFR01|Exon·19·Deletion|||||P||RocheCheck|201412091630|201412091620[ETB]C8[CR] [LF]
HOST 17:16:14,726 [ACK]
c4800 17:16:14,726 [STX]155|123456_12345[CR]C|1|I|F;M4|G[CR]R|3|^~~~0EGFR03|Exon·21·L858R|||||P||RocheCheck|201412091630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]P|5[CR]O|1|23^AD1200000^E01:E02:E03^~~~0EGFR^~AnD|||||20141209160327||||N||||^P|R|ocheCheck||||||||P[CR]R|1|^~[ETB]17[CR] [LF]
HOST 17:16:14,851 [ACK]
c4800 17:16:14,851 [STX]2^08EGFR|Mutation·Detected|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^~~~0EGFR02|Exon·20·S768I|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|3|^~~~0EGFR04|Exon·20·T790M|||||P|[ETB]BF[CR] [LF]
HOST 17:16:14,976 [ACK]
c4800 17:16:14,976 [STX]3|RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|4|^~~~08EGFR07|Exon·20·Insertion|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]P|6[CR]O|1|24^AD1200000^F01:F02:F03^~~~||^~~~08EGFR^~AnD|||||2014120916[ETB]1A[CR] [LF]
HOST 17:16:15,101 [ACK]
c4800 17:16:15,101 [STX]40327||||N||||^P|RocheCheck||||||||P[CR]R|1|^~~~08EGFR|Mutation·Detected|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^~~~08EGFR01|Exon·19·Deletion|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|[ETB]D3[CR] [LF]
HOST 17:16:15,225 [ACK]
c4800 17:16:15,225 [STX]5|I|F;M4|G[CR]R|3|^~~~08EGFR03|Exon·21·L858R|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]R|4|^~~~08EGFR06|Exon·18·G719X|||||P||RocheCheck|20141209161630|20141209162055|123456_12345[CR]C|1|I|F;M4|G[CR]L|1|N[CR] [ETX]6E[CR] [LF]
HOST 17:16:15,350 [ACK]
c4800 17:16:15,350 [EOT]

EGFR P1 HL7 communication traces

Result upload

```
C4800 10:17:07,597 [VT]
C4800 10:17:07,597 MSH|^~\&|cobas·4800·software·2.2.0.1507^51243_3
1750^M|""|LIS|LIS·Facility|20150311101653+0100|
|OUL^R22^OUL_R22|92b2c693-9cc2-4222-a83b-bb3970
e5130a|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
THE[CR]
C4800 10:17:07,597 SPM|1|8A13456788G3214&ROCHE||""|||||||Q^^HL7036
9[CR]
C4800 10:17:07,597 SAC|||8A13456788G3214[CR]
C4800 10:17:07,597 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:17:07,597 OBR||""|||08EGFR^08EGFR^99ROC||20130829135145[CR
]
C4800 10:17:07,597 ORC|SC||||CM[CR]
C4800 10:17:07,597 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30829161155^20130829174054||||""|||F|||||Laboper
ator||C4800^Roche~51243_31750^Roche|20130829174
054[CR]
C4800 10:17:07,597 OBX|2|ST|08EGFR^08EGFR^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~51243_31
750^Roche|20130829174054[CR]
C4800 10:17:07,597 INV||""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508525^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 10:17:07,597 NTE|1||F;M7[CR]
C4800 10:17:07,597 NTE|2||,[CR]
C4800 10:17:07,597 NTE|3||[CR]
C4800 10:17:07,597 OBX|3|ST|08EGFR08^08EGFR08^99ROC|1.2|N/A|||AnD^
99ROC|||P||||RocheNoCheck||C4800^Roche~51243_
31750^Roche|20130829174054[CR]
C4800 10:17:07,597 INV||""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508525^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 10:17:07,597 NTE|1||F;M7[CR]
C4800 10:17:07,597 NTE|2||,[CR]
C4800 10:17:07,597 NTE|3||[CR]
C4800 10:17:07,597 SPM|2|8A13456788G3214&ROCHE||""|||||||Q^^HL7036
9[CR]
C4800 10:17:07,597 SAC|||8A13456788G3214[CR]
C4800 10:17:07,597 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:17:07,597 OBR||""|||08EGFR^08EGFR^99ROC||20130829135145[CR
]
C4800 10:17:07,597 ORC|SC||||CM[CR]
C4800 10:17:07,597 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30829161155^20130829174054||||""|||F|||||Laboper
ator||C4800^Roche~51243_31750^Roche|20130829174
054[CR]
C4800 10:17:07,597 OBX|2|ST|08EGFR^08EGFR^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~51243_31
750^Roche|20130829174054[CR]
C4800 10:17:07,597 INV||""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508525^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 10:17:07,597 NTE|1||F;M7[CR]
```

```

C4800 10:17:07,597 NTE|2||,[CR]
C4800 10:17:07,597 NTE|3||[CR]
C4800 10:17:07,597 OBX|3|ST|08EGFR08^08EGFR08^99ROC|1.2|N/A|||AnD^
    ^99ROC|||P||||RocheNoCheck||C4800^Roche~51243_
    31750^Roche|20130829174054[CR]
C4800 10:17:07,597 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
    508525^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 10:17:07,597 NTE|1||F;M7[CR]
C4800 10:17:07,597 NTE|2||,[CR]
C4800 10:17:07,597 NTE|3||[CR]
C4800 10:17:07,597 [FS][CR]

*      10:17:09,855 ACK Result: ExMID = 92b2c693-9cc2-4222-a83b-bb
            3970e5130a

HOST   10:17:09,855 [VT]
HOST   10:17:09,865 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
            .2.0.1437^SN1234^M|LAB·Name|20150311101709+0100
            ||ACK^R22^ACK|f5fdfd24-ad82-4282-ab49-0624d3867
            243|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   10:17:09,875 MSA|AA|92b2c693-9cc2-4222-a83b-bb3970e5130a[CR]
HOST   10:17:09,887 [FS][CR]

```

EGFR P2 ASTM communication traces

Result upload

```
c4800 13:37:31,626 [ENQ]
HOST   13:37:31,735 [ACK]
c4800 13:37:31,751 [STX]1H|\^&|||cobas·4800·software^6ef8404e-82b1
-47f2-ad72-8ef4e9bdb6c3^RocheCheck^2.2.0.1503^1
394.LIS2|||||LIS|RSUPL^REAL|P|1|20141210133640[CR]P|1[CR]O|1|8A15780220Z1367^AD1200000^A01:A02
:A03^^^|||^08EGFR^^AnD|||20141210120916|||Q|||MutControl|Roc[ETB]3C[CR][LF]
HOST   13:37:31,876 [ACK]
c4800 13:37:31,876 [STX]2heCheck|||||||P[CR]R|1|^08EGFR|Valid|||P||RocheCheck|20141210121016|20141210123802
|123456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|^08EGFR08|N/A|||||P||RocheCheck|20141210121016|20141210123802|12
3456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|^08EGFR08|N/A|||||P||[ETB]41[CR][LF]
HOST   13:37:32,001 [ACK]
c4800 13:37:32,001 [STX]30220Z1367^AD1200000^B01:B02:B03^^^|||^08EGFR^^AnD|||20141210120916|||Q|||^NEGCONTROL|
RocheCheck|||||||P[CR]R|1|^08EGFR|Valid|||||P||RocheCheck|20141210121016|20141210123802|12
3456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|^08EGFR08|N/A|||||P||[ETB]92[CR][LF]
HOST   13:37:32,125 [ACK]
c4800 13:37:32,125 [STX]4RocheCheck|20141210121016|20141210123802|
123456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]P|3[CR]O|1|11111^AD1200000^C01:C02:C03^^^|||^08EGFR^^AnD|||20141210120916|||N|||||P||RocheCheck
|||||||P[CR]R|1|^08EGFR|Mutation.Detected|||P||RocheCheck|201412101[ETB]A4[CR][LF]
HOST   13:37:32,250 [ACK]
c4800 13:37:32,250 [STX]521016|20141210123802|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^08EGFR01|Exon·19·Deletion|||P||RocheCheck|20141210121016|20141210123802|1
23456_12345[CR]C|1|I|F;M4|G[CR]R|3|^08EGFR03|Exon·21·L858R|||||P||RocheCheck|20141210121016|20141210123802|123456_1[ETB]CD[CR][LF]
HOST   13:37:32,375 [ACK]
c4800 13:37:32,375 [STX]62345[CR]C|1|I|F;M4|G[CR]P|4[CR]O|1|22222^AD1200000^D01:D02:D03^^^|||^08EGFR^^AnD|||2014
1210120916|||N|||||P||RocheCheck|||||||P[CR]R|1|^08EGFR|Mutation.Detected|||||P||RocheCheck|20141210121016|20141210123802|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^08EGF[ETB]28[CR][LF]
HOST   13:37:32,500 [ACK]
c4800 13:37:32,500 [STX]7R01|Exon·19·Deletion|||||P||RocheCheck|20141210121016|20141210123802|123456_12345[CR]C|1|I|F;M4|G[CR]R|3|^08EGFR03|Exon·21·L858R|||||P||RocheCheck|20141210121016|20141210123802|123456_12345[CR]C|1|I|F;M4|G[CR]P|5[CR]O|1|33333^AD1200000^E01:E02:E03^^^|||[ETB]7F[CR][LF]
HOST   13:37:32,625 [ACK]
c4800 13:37:32,625 [STX]0^08EGFR^^AnD|||20141210120916|||N|||||P||RocheCheck|||||||P[CR]R|1|^08EGFR|No·Mutat
```

```

ion · Detected|||||P||RocheCheck|20141210121016|2
0141210123802|123456_12345[CR]C|1|I|F;M4|G[CR]R
|2|^^^08EGFR08|N/A|||||P||RocheCheck|2014121012
1016|20141210123802|[ETB]94[CR][LF]
HOST 13:37:32,749 [ACK]
c4800 13:37:32,749 [STX]1123456_12345[CR]C|1|I|F;M4|G[CR]P|6[CR]O|
1|44444^AD1200000^F01:F02:F03^^^|||^08EGFR^^An
D||||20141210120916||||N||||^P|RocheCheck|||||||
||P[CR]R|1|^^^08EGFR|Mutation · Detected|||||P||R
ocheCheck|20141210121016|20141210123802|123456_
12345[CR]C|1|I|F;M4|G[CR]R|2|[ETB]A6[CR][LF]
HOST 13:37:32,874 [ACK]
c4800 13:37:32,874 [STX]2^^^08EGFR01|Exon ·19 · Deletion|||||P||Roche
Check|20141210121016|20141210123802|123456_1234
5[CR]C|1|I|F;M4|G[CR]R|3|^^^08EGFR03|Exon ·21 ·L8
58R|||||P||RocheCheck|20141210121016|2014121012
3802|123456_12345[CR]C|1|I|F;M4|G[CR]P|7[CR]O|1
|55555^AD1200000^G01:G02:G[ETB]0D[CR][LF]
HOST 13:37:32,999 [ACK]
c4800 13:37:32,999 [STX]303^^^|||^08EGFR^^AnD|||20141210120916|||
|N||||^P|RocheCheck|||||||P[CR]R|1|^^^08EGFR|
No · Mutation · Detected|||||P||RocheCheck|20141210
121016|20141210123802|123456_12345[CR]C|1|I|F;M
4|G[CR]R|2|^^^08EGFR08|N/A|||||P||RocheCheck|20
141210121016|2014121[ETB]8E[CR][LF]
HOST 13:37:33,124 [ACK]
c4800 13:37:33,124 [STX]40123802|123456_12345[CR]C|1|I|F;M4|G[CR]L
|1|N[CR][ETX]86[CR][LF]
HOST 13:37:33,233 [ACK]
c4800 13:37:33,233 [EOT]

```

EGFR P2 HL7 communication traces

Result upload

```
C4800 15:25:36,082 [VT]
C4800 15:25:36,082 MSH|^~\&|cobas·4800·software·2.2.0.1507^51243_3
1750^M|""|LIS|LIS·Facility|20150311152521+0100|
|OUL^R22^OUL_R22|c1f12b6c-6976-48c8-9197-6ff5ec
bc2a3a|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
THE[CR]
C4800 15:25:36,082 SPM|1|8A19872342J5412&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:25:36,082 SAC|||8A19872342J5412[CR]
C4800 15:25:36,082 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:25:36,082 OBR||"|||08EGFR^08EGFR^99ROC||20130909104738[CR
]
C4800 15:25:36,082 ORC|SC||||CM[CR]
C4800 15:25:36,082 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30909152147^20130909165042||||"|||F||||Laboper
ator||C4800^Roche~51243_31750^Roche|20130909165
042[CR]
C4800 15:25:36,082 OBX|2|ST|08EGFR^08EGFR^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~51243_31
750^Roche|20130909165042[CR]
C4800 15:25:36,082 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508565^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 15:25:36,082 NTE|1||F;M7[CR]
C4800 15:25:36,082 NTE|2||,[CR]
C4800 15:25:36,082 NTE|3||[CR]
C4800 15:25:36,082 OBX|3|ST|08EGFR08^08EGFR08^99ROC|1.2|N/A|||AnD^
^99ROC|||P||||RocheNoCheck||C4800^Roche~51243_
31750^Roche|20130909165042[CR]
C4800 15:25:36,082 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508565^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 15:25:36,082 NTE|1||F;M7[CR]
C4800 15:25:36,082 NTE|2||,[CR]
C4800 15:25:36,082 NTE|3||[CR]
C4800 15:25:36,082 SPM|2|8A19872342J5412&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:25:36,082 SAC|||8A19872342J5412[CR]
C4800 15:25:36,082 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:25:36,082 OBR||"|||08EGFR^08EGFR^99ROC||20130909104738[CR
]
C4800 15:25:36,082 ORC|SC||||CM[CR]
C4800 15:25:36,082 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30909152147^20130909165042||||"|||F||||Laboper
ator||C4800^Roche~51243_31750^Roche|20130909165
042[CR]
C4800 15:25:36,082 OBX|2|ST|08EGFR^08EGFR^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~51243_31
750^Roche|20130909165042[CR]
C4800 15:25:36,082 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508565^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 15:25:36,082 NTE|1||F;M7[CR]
```

```

C4800 15:25:36,082 NTE|2||,[CR]
C4800 15:25:36,082 NTE|3||[CR]
C4800 15:25:36,082 OBX|3|ST|08EGFR08^08EGFR08^99ROC|1.2|N/A|||AnD^
    ^99ROC|||P||||RocheNoCheck||C4800^Roche~51243_
    31750^Roche|20130909165042[CR]
C4800 15:25:36,082 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
    508565^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 15:25:36,082 NTE|1||F;M7[CR]
C4800 15:25:36,082 NTE|2||,[CR]
C4800 15:25:36,082 NTE|3||[CR]
C4800 15:25:36,082 [FS][CR]

*      15:25:38,197 ACK Result: ExMID = c1f12b6c-6976-48c8-9197-6f
        f5ecbc2a3a

HOST   15:25:38,197 [VT]
HOST   15:25:38,207 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437^SN1234^M|LAB·Name|20150311152538+0100
    ||ACK^R22^ACK|ae455d88-097e-4d90-ad59-d4285ab89
    dd7|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   15:25:38,217 MSA|AA|c1f12b6c-6976-48c8-9197-6ff5ecbc2a3a[CR]
HOST   15:25:38,227 [FS][CR]

```

EGFR Plasma P1 ASTM communication traces

Result upload

```
c4800 15:41:08,788 [ENQ]
HOST   15:41:08,803 [ACK]
c4800 15:41:08,819 [STX]1H|\^&|||cobas·4800·software^0472a409-6278
-4a2e-94a4-3527ea94079d^RocheNoCheck^2.2.0.1507
^1394.LIS2||||LIS|RSUPL^REAL|P|1|2015031015405
4[CR]P|1[CR]O|1|IA1M5384M0IW7B8^AD0000001^A01:A
02:A03^^^|^^^IEGFRP1^^AnD|||20150116141251|||
Q||||^MUTCONTROL|[ETB]54[CR][LF]
HOST   15:41:08,944 [ACK]
c4800 15:41:08,944 [STX]2Laboperator|||||||P[CR]R|1|^ ^^IEGFRP1|V
alid|||||P||Laboperator|20150116141340|20150116
141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]C|2|I|
,G[CR]R|2|^ ^^IEGFRP108|N/A|||||P||Laboperator|
20150116141340|20150116141425|INI_TEST_12345[CR
]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|[ETB]DE[CR][LF]
HOST   15:41:09,069 [ACK]
c4800 15:41:09,084 [STX]33|^ ^^IEGFRP108|N/A|||||P||Laboperator|201
50116141340|20150116141425|INI_TEST_12345[CR]C|
1|I|F;M7|G[CR]C|2|I|,|G[CR]P|2[CR]O|1|IA1M5384M
0IW7B8^AD0000001^B01:B02:B03^^^| | ^ ^^IEGFRP1^^An
D|||20150116141251|||Q||||^NEGCONTROL|Labopera
tor|||||||P[CR]R|1|^ ^^IE[ETB]59[CR][LF]
HOST   15:41:09,209 [ACK]
c4800 15:41:09,209 [STX]4GFRP1|Valid|||||P||Laboperator|2015011614
1340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M
7|G[CR]C|2|I|,|G[CR]R|2|^ ^^IEGFRP108|N/A|||||P|
|Laboperator|20150116141340|20150116141425|INI_
TEST_12345[CR]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|3|
^ ^^IEGFRP108|N/A|||||P||Labop[ETB]84[CR][LF]
HOST   15:41:09,334 [ACK]
c4800 15:41:09,334 [STX]5erator|20150116141340|20150116141425|INI_
TEST_12345[CR]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]P|3[
CR]O|1|54055535446^AD0000001^C01:C02:C03^^^||^
^IEGFRP1^^AnD|||20150116141251|||N||||^P||Labop
erator|||||||P[CR]R|1|^ ^^IEGFRP1|No ·Mutation ·
Detected|||||P||Laboperato[ETB]53[CR][LF]
HOST   15:41:09,459 [ACK]
c4800 15:41:09,459 [STX]6r|20150116141340|20150116141425|INI_TEST_
12345[CR]C|1|I|F;M7|G[CR]R|2|^ ^^IEGFRP108|N/A|||
||||P||Laboperator|20150116141340|20150116141425
|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^ ^^IEGFR
P108|N/A|||||P||Laboperator|20150116141340|2015
0116141425|INI_TEST_123[ETB]94[CR][LF]
HOST   15:41:09,583 [ACK]
c4800 15:41:09,583 [STX]745[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1|54055535
426^AD0000001^D01:D02:D03^^^| | ^ ^^IEGFRP1^^AnD|||
|20150116141251|||N||||^P||Laboperator|||||||P[CR]R|1|^ ^^IEGFRP1|Mutation ·Detected|||||P||La
boperator|20150116141340|20150116141425|INI_TES
T_12345[CR]C|1|I|F;M7|G[CR]R|[ETB]7B[CR][LF]
HOST   15:41:09,708 [ACK]
c4800 15:41:09,724 [STX]02|^ ^^IEGFRP101|Ex19Del|||||P||Laboperator
```

```

|20150116141340|20150116141425|INI_TEST_12345[C
R]C|1|I|F;M7|G[CR]R|3|^__IEGFRP102|S768I|||||P|
|Laboperator|20150116141340|20150116141425|INI_
TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^__IEGFRP103|
L858R|||||P||Laboperator[ETB]41[CR][LF]
HOST 15:41:09,849 [ACK]
c4800 15:41:09,864 [STX]1r|20150116141340|20150116141425|INI_TEST_
12345[CR]C|1|I|F;M7|G[CR]R|5|^__IEGFRP104|T790M
|||||P||Laboperator|20150116141340|201501161414
25|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|6|^__IEG
FRP105|L861Q|||||P||Laboperator|20150116141340|
20150116141425|INI_TEST[ETB]9A[CR][LF]
HOST 15:41:09,989 [ACK]
c4800 15:41:10,005 [STX]2_12345[CR]C|1|I|F;M7|G[CR]R|7|^__IEGFRP10
6|G719X|||||P||Laboperator|20150116141340|20150
116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|8
|^__IEGFRP107|Ex20Ins|||||P||Laboperator|201501
16141340|20150116141425|INI_TEST_12345[CR]C|1|I
|F;M7|G[CR]R|9|^__IEGFRP109|E[ETB]F2[CR][LF]
HOST 15:41:10,129 [ACK]
c4800 15:41:10,145 [STX]3x19Del:-8.89|||||P||Laboperator|201501161
41340|20150116141425|INI_TEST_12345[CR]C|1|I|F;
M7|G[CR]R|10|^__IEGFRP110|S768I:-5.70|||||P||La
boperator|20150116141340|20150116141425|INI_TES
T_12345[CR]C|1|I|F;M7|G[CR]R|11|^__IEGFRP111|L8
58R:-6.51|||||P||Labope[ETB]89[CR][LF]
HOST 15:41:10,270 [ACK]
c4800 15:41:10,270 [STX]4rator|20150116141340|20150116141425|INI_T
EST_12345[CR]C|1|I|F;M7|G[CR]R|12|^__IEGFRP112|
T790M:-8.91|||||P||Laboperator|20150116141340|2
0150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR
]R|13|^__IEGFRP113|L861Q:-3.44|||||P||Laboperat
or|20150116141340|20150|[ETB]36[CR][LF]
HOST 15:41:10,395 [ACK]
c4800 15:41:10,395 [STX]5116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[
CR]R|14|^__IEGFRP114|G719X:-17.99|||||P||Labope
rator|20150116141340|20150116141425|INI_TEST_12
345[CR]C|1|I|F;M7|G[CR]R|15|^__IEGFRP115|Ex20In
s:-3.11|||||P||Laboperator|20150116141340|20150
116141425|INI_TEST_1234[ETB]95[CR][LF]
HOST 15:41:10,519 [ACK]
c4800 15:41:10,519 [STX]65[CR]C|1|I|F;M7|G[CR]P|5[CR]O|1|540555354
19^AD0000001^E01:E02:E03^__|^__IEGFRP1^__AnD|||
20150116141251||||N||||^P||Laboperator||||||||P
[CR]R|1|^__IEGFRP1|Invalid|||||P||Laboperator|2
0150116141340|20150116141425|INI_TEST_12345[CR
]C|1|I|F;R812,M7|G[CR]R|2|^__I[ETB]AA[CR][LF]
HOST 15:41:10,644 [ACK]
c4800 15:41:10,644 [STX]7EGFRP108|N/A|||||P||Laboperator|201501161
41340|20150116141425|INI_TEST_12345[CR]C|1|I|F;
R812,M7|G[CR]R|3|^__IEGFRP108|N/A|||||P||Labope
rator|20150116141340|20150116141425|INI_TEST_12
345[CR]C|1|I|F;R812,M7|G[CR]P|6[CR]O|1|54055535
447^AD0000001^F01:F02:F03^__[ETB]32[CR][LF]
HOST 15:41:10,769 [ACK]
c4800 15:41:10,769 [STX]0^__|^__IEGFRP1^__AnD|||20150116141251|||N
||||^P||Laboperator||||||||P[CR]R|1|^__IEGFRP1|
No Mutation Detected|||||P||Laboperator|201501
16141340|20150116141425|INI_TEST_12345[CR]C|1|I|

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F;M7|G[CR]R|2|^__^IEGFRP108|N/A|||||P||Laboperator
or|20150116141340|20[ETB]5C[CR] [LF]
HOST 15:41:10,894 [ACK]
c4800 15:41:10,894 [STX]1150116141425|INI_TEST_12345[CR]C|1|I|F;M7
|G[CR]R|3|^__^IEGFRP108|N/A|||||P||Laboperator|2
0150116141340|20150116141425|INI_TEST_12345[CR]
C|1|I|F;M7|G[CR]P|7[CR]O|1|54055535463^AD000000
1^G01:G02:G03^__^|__^__^IEGFRP1^__^AnD|||20150116141
251||||N||||^P|Laboperator[ETB]DF[CR] [LF]
HOST 15:41:11,019 [ACK]
c4800 15:41:11,019 [STX]2|||||||P[CR]R|1|^__^IEGFRP1|Mutation·Det
ected|||||P||Laboperator|20150116141340|2015011
6141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|2|^
__^IEGFRP101|Ex19Del|||||P||Laboperator|20150116
141340|20150116141425|INI_TEST_12345[CR]C|1|I|F
;M7|G[CR]R|3|^__^IEGFRP102|[ETB]B6[CR] [LF]
HOST 15:41:11,143 [ACK]
c4800 15:41:11,159 [STX]3S768I|||||P||Laboperator|20150116141340|2
0150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR
]R|4|^__^IEGFRP103|L858R|||||P||Laboperator|2015
0116141340|20150116141425|INI_TEST_12345[CR]C|1
|I|F;M7|G[CR]R|5|^__^IEGFRP104|T790M|||||P||Labo
rator|20150116141340|[ETB]E1[CR] [LF]
HOST 15:41:11,284 [ACK]
c4800 15:41:11,284 [STX]420150116141425|INI_TEST_12345[CR]C|1|I|F;
M7|G[CR]R|6|^__^IEGFRP105|L861Q|||||P||Laboperat
or|20150116141340|20150116141425|INI_TEST_12345
[CR]C|1|I|F;M7|G[CR]R|7|^__^IEGFRP106|G719X|||||P
||Laboperator|20150116141340|20150116141425|IN
I_TEST_12345[CR]C|1|I|F;M7[ETB]1A[CR] [LF]
HOST 15:41:11,409 [ACK]
c4800 15:41:11,424 [STX]5|G[CR]R|8|^__^IEGFRP107|Ex20Ins|||||P||Lab
operator|20150116141340|20150116141425|INI_TEST
_12345[CR]C|1|I|F;M7|G[CR]R|9|^__^IEGFRP109|Ex19
Del:-8.89|||||P||Laboperator|20150116141340|201
50116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R
|10|^__^IEGFRP110|S768I:-5.[ETB]5F[CR] [LF]
HOST 15:41:11,549 [ACK]
c4800 15:41:11,549 [STX]670|||||P||Laboperator|20150116141340|2015
0116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|
11|^__^IEGFRP111|L858R:-6.51|||||P||Laboperator|
20150116141340|20150116141425|INI_TEST_12345[CR
]C|1|I|F;M7|G[CR]R|12|^__^IEGFRP112|T790M:-8.91|
|||||P||Laboperator|2015[ETB]41[CR] [LF]
HOST 15:41:11,674 [ACK]
c4800 15:41:11,689 [STX]70116141340|20150116141425|INI_TEST_12345[
CR]C|1|I|F;M7|G[CR]R|13|^__^IEGFRP113|L861Q:-3.4
4|||||P||Laboperator|20150116141340|20150116141
425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|14|^__^I
EGFRP114|G719X:-17.99|||||P||Laboperator|201501
16141340|20150116141425[ETB]D1[CR] [LF]
HOST 15:41:11,814 [ACK]
c4800 15:41:11,814 [STX]0|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|15|^
__^IEGFRP115|Ex20Ins:-3.11|||||P||Laboperator|20
150116141340|20150116141425|INI_TEST_12345[CR]C
|1|I|F;M7|G[CR]P|8[CR]O|1|54055535514^AD0000001
^H01:H02:H03^__^|__^__^IEGFRP1^__^AnD|||201501161412
51||||N||||^P|Laboperator|[ETB]D5[CR] [LF]
HOST 15:41:11,939 [ACK]

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c4800 15:41:11,939 [STX]1|||||P[CR]R|1|^__^IEGFRP1|Invalid|||||P
||Laboperator|20150116141340|20150116141425|INI
_TEST_12345[CR]C|1|I|F;R812,M7|G[CR]R|2|^__^IEGF
RP108|N/A||||P||Laboperator|20150116141340|201
50116141425|INI_TEST_12345[CR]C|1|I|F;R812,M7|G
[CR]R|3|^__^IEGFRP108|N/A|[ETB]E4[CR] [LF]
HOST 15:41:12,064 [ACK]
c4800 15:41:12,064 [STX]2|||P||Laboperator|20150116141340|20150116
141425|INI_TEST_12345[CR]C|1|I|F;R812,M7|G[CR]P
|9[CR]O|1|54055535502^AD0000001^A04:A05:A06^__|
|^__^IEGFRP1^__AnD|||20150116141251||||N||||^P|La
boperator|||||||P[CR]R|1|^__^IEGFRP1|Mutation·
Detected|||||P||Laboper[ETB]C6[CR] [LF]
HOST 15:41:12,189 [ACK]
c4800 15:41:12,189 [STX]3ator|20150116141340|20150116141425|INI_TE
ST_12345[CR]C|1|I|F;M7|G[CR]R|2|^__^IEGFRP101|Ex
19Del|||||P||Laboperator|20150116141340|2015011
6141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^
__^IEGFRP102|S768I|||||P||Laboperator|2015011614
1340|20150116141425|INI[ETB]35[CR] [LF]
HOST 15:41:12,313 [ACK]
c4800 15:41:12,329 [STX]4_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^__^IEG
FRP103|L858R|||||P||Laboperator|20150116141340|
20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[C
R]R|5|^__^IEGFRP104|T790M|||||P||Laboperator|201
50116141340|20150116141425|INI_TEST_12345[CR]C|
1|I|F;M7|G[CR]R|6|^__^IEGFRP10[ETB]85[CR] [LF]
HOST 15:41:12,454 [ACK]
c4800 15:41:12,454 [STX]55|L861Q|||||P||Laboperator|20150116141340
|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[
CR]R|7|^__^IEGFRP106|G719X|||||P||Laboperator|20
150116141340|20150116141425|INI_TEST_12345[CR]C
|1|I|F;M7|G[CR]R|8|^__^IEGFRP107|Ex20Ins|||||P||
Laboperator|20150116141[ETB]8D[CR] [LF]
HOST 15:41:12,579 [ACK]
c4800 15:41:12,579 [STX]6340|20150116141425|INI_TEST_12345[CR]C|1|
I|F;M7|G[CR]R|9|^__^IEGFRP109|Ex19Del:·8.89|||||
P||Laboperator|20150116141340|20150116141425|IN
I_TEST_12345[CR]C|1|I|F;M7|G[CR]R|10|^__^IEGFRP1
10|S768I:·5.70|||||P||Laboperator|2015011614134
0|20150116141425|INI_TE[ETB]69[CR] [LF]
HOST 15:41:12,703 [ACK]
c4800 15:41:12,719 [STX]7ST_12345[CR]C|1|I|F;M7|G[CR]R|11|^__^IEGFR
P111|L858R:·11.26|||||P||Laboperator|2015011614
1340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M
7|G[CR]R|12|^__^IEGFRP112|T790M:·10.32|||||P||La
boperator|20150116141340|20150116141425|INI_TES
T_12345[CR]C|1|I|F;M7|G[CR]R|[ETB]A0[CR] [LF]
HOST 15:41:12,844 [ACK]
c4800 15:41:12,859 [STX]013|^__^IEGFRP113|L861Q:·5.04|||||P||Labope
rator|20150116141340|20150116141425|INI_TEST_12
345[CR]C|1|I|F;M7|G[CR]R|14|^__^IEGFRP114|G719X:
·6.44|||||P||Laboperator|20150116141340|2015011
6141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|15|
__^IEGFRP115|Ex20Ins:·5[ETB]FE[CR] [LF]
HOST 15:41:12,984 [ACK]
c4800 15:41:12,984 [STX]1.97|||||P||Laboperator|20150116141340|201
50116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P
|10[CR]O|1|54055535486^AD0000001^B04:B05:B06^__|

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||^^^IEGFRP1^^AnD|||20150116141251||||N||||^P|Laboperator|||||||P[CR]R|1|^ ^^IEGFRP1|Invalid|||P||Laboperator|2015[ETB]A6[CR][LF]
HOST 15:41:13,109 [ACK]
c4800 15:41:13,125 [STX]20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;R812,M7|G[CR]R|2|^ ^^IEGFRP108|N/A|||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;R812,M7|G[CR]R|3|^ ^^IEGFRP108|N/A||||P||Laboperator|20150116141340|20150116141425|INI_TEST[ETB]17[CR][LF]
HOST 15:41:13,249 [ACK]
c4800 15:41:13,265 [STX]3_12345[CR]C|1|I|F;R812,M7|G[CR]P|11[CR]O|1|54055535470^AD0000001^C04:C05:C06^^^|||^P||Laboperator|||P[CR]R|1|^ ^^IEGFRP1|^AnD|||20150116141251||||N||||^P|Laboperator|||P[CR]R|1|^ ^^IEGFRP1|No Mutation Detected||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;R812,M7|G[CR]R|3|^ ^^IEGFRP108|N/A||||P||Laboperator|20150116141340|20150116141425|INI_TEST[ETB]80[CR][LF]
HOST 15:41:13,390 [ACK]
c4800 15:41:13,405 [STX]41|I|F;M7|G[CR]R|2|^ ^^IEGFRP108|N/A||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^ ^^IEGFRP108|N/A||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|12[CR]O|1|54055535472^AD0000001^D0[ETB]F8[CR][LF]
HOST 15:41:13,530 [ACK]
c4800 15:41:13,530 [STX]54:D05:D06^^^|||^P||IEGFRP1|^AnD|||20150116141251||||N||||^P|Laboperator|||||||P[CR]R|1|^ ^^IEGFRP1|Mutation Detected||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|2|^ ^^IEGFRP101|Ex19Del||||P||Laboperator|201501[ETB]E2[CR][LF]
HOST 15:41:13,655 [ACK]
c4800 15:41:13,655 [STX]616141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^ ^^IEGFRP102|S768I||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^ ^^IEGFRP103|L858R||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|5|^ ^^IEGFRP104|T790M||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|6|^ ^^IEGFRP105|L861Q||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|7|^ ^^IEGFRP106|G719X||||P[ETB]E7[CR][LF]
HOST 15:41:13,780 [ACK]
c4800 15:41:13,795 [STX]7|1|I|F;M7|G[CR]R|5|^ ^^IEGFRP104|T790M||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|6|^ ^^IEGFRP105|L861Q||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|7|^ ^^IEGFRP106|G719X||||P[ETB]E7[CR][LF]
HOST 15:41:13,920 [ACK]
c4800 15:41:13,920 [STX]0|||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|8|^ ^^IEGFRP107|Ex20Ins||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|9|^ ^^IEGFRP109|Ex19Del:·8.89||||P||Laboperator|20150116141340|2[ETB]56[CR][LF]
HOST 15:41:14,045 [ACK]
c4800 15:41:14,045 [STX]10150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|10|^ ^^IEGFRP110|S768I:·5.70||||P||Laboperator|20150116141340|20150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|11|^ ^^IEGFRP111|L858R:·6.51||||P||Laboperator|20150116141340|20150116141425|INI_TEST_123[ETB]D7[CR][LF]

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HOST 15:41:14,170 [ACK]
c4800 15:41:14,185 [STX]245[CR]C|1|I|F;M7|G[CR]R|12|^__^IEGFRP112|T
790M:·8.91|||||P||Laboperator|20150116141340|20
150116141425|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]
R|13|^__^IEGFRP113|L861Q:·3.44|||||P||Laboperato
r|20150116141340|20150116141425|INI_TEST_12345[
CR]C|1|I|F;M7|G[CR]R|14|^__^IE[ETB]32[CR][LF]
HOST 15:41:14,310 [ACK]
c4800 15:41:14,310 [STX]3GFRP114|G719X:·17.99|||||P||Laboperator|2
0150116141340|20150116141425|INI_TEST_12345[CR]
C|1|I|F;M7|G[CR]R|15|^__^IEGFRP115|Ex20Ins:·3.11
|||||P||Laboperator|20150116141340|201501161414
25|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|13[CR]O|
1|54055535488^AD0000001^E0[ETB]4F[CR][LF]
HOST 15:41:14,435 [ACK]
c4800 15:41:14,435 [STX]44:E05:E06^__|||^__^IEGFRP1^__AnD|||201501161
41251||||N||||^P|Laboperator|||||||||P[CR]R|1|^
__^IEGFRP1|Invalid|||||P||Laboperator|2015011614
1340|20150116141425|INI_TEST_12345[CR]C|1|I|F;R
812,M7|G[CR]R|2|^__^IEGFRP108|N/A|||||P||Laboper
ator|20150116141340|[ETB]C9[CR][LF]
HOST 15:41:14,560 [ACK]
c4800 15:41:14,575 [STX]520150116141425|INI_TEST_12345[CR]C|1|I|F;
R812,M7|G[CR]R|3|^__^IEGFRP108|N/A|||||P||Labope
rator|20150116141340|20150116141425|INI_TEST_12
345[CR]C|1|I|F;R812,M7|G[CR]P|14[CR]O|1|5405553
5500^AD0000001^F04:F05:F06^__|||^__^IEGFRP1^__AnD|
||20150116141251||||N||||^ETB]5C[CR][LF]
HOST 15:41:14,700 [ACK]
c4800 15:41:14,700 [STX]6P|Laboperator||||||||P[CR]R|1|^__^IEGFRP1
|No.Mutation.Detected|||||P||Laboperator|201501
16141340|20150116141425|INI_TEST_12345[CR]C|1|I
|F;M7|G[CR]R|2|^__^IEGFRP108|N/A|||||P||Labopera
tor|20150116141340|20150116141425|INI_TEST_1234
5[CR]C|1|I|F;M7|G[CR]R|3|^ETB]DF[CR][LF]
HOST 15:41:14,825 [ACK]
c4800 15:41:14,825 [STX]7^__^IEGFRP108|N/A|||||P||Laboperator|201501
16141340|20150116141425|INI_TEST_12345[CR]C|1|I
|F;M7|G[CR]L|1|N[CR][ETX]67[CR][LF]
HOST 15:41:14,950 [ACK]
c4800 15:41:14,950 [EOT]

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EGFR Plasma P1 HL7 communication traces

Result upload

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C4800 10:03:29,323 [VT]
C4800 10:03:29,323 MSH|^~\&|cobas·4800·software·2.2.0.1507^INI_TES
T_12345^M|""|LIS|LIS·Facility|20150311100315+01
00||OUL^R22^OUL_R22|1c6a2216-3e7c-4041-bac4-ee8
cf30e57c1|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-
29^IHE[CR]
C4800 10:03:29,323 SPM|1|IA1M5384M0IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 10:03:29,323 SAC|||IA1M5384M0IW7B8[CR]
C4800 10:03:29,323 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:03:29,323 OBR||"||IEGFRP1^IEGFRP1^99ROC||20150116141251[
CR]
C4800 10:03:29,323 ORC|SC||||CM[CR]
C4800 10:03:29,323 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50116141340^20150116141425|||"|||F||||Laboper
ator||C4800^Roche~INI_TEST_12345^Roche|20150116
141425[CR]
C4800 10:03:29,323 OBX|2|ST|IEGFRP1^IEGFRP1^99ROC|1.1|Valid|||AnD^
99ROC|||P||||RocheNoCheck||C4800^Roche~INI_TE
ST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 OBX|3|ST|IEGFRP108^IEGFRP108^99ROC|1.2|N/A|||An
D^99ROC|||P||||RocheNoCheck||C4800^Roche~INI_
TEST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 OBX|4|ST|IEGFRP108^IEGFRP108^99ROC|1.3|N/A|||An
D^99ROC|||P||||RocheNoCheck||C4800^Roche~INI_
TEST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 SPM|2|IA1M5384M0IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 10:03:29,323 SAC|||IA1M5384M0IW7B8[CR]
C4800 10:03:29,323 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:03:29,323 OBR||"||IEGFRP1^IEGFRP1^99ROC||20150116141251[
CR]
C4800 10:03:29,323 ORC|SC||||CM[CR]
C4800 10:03:29,323 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
```

```

99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50116141340^20150116141425||||"|||F||||Laboper
ator||C4800^Roche~INI_TEST_12345^Roche|20150116
141425[CR]
C4800 10:03:29,323 OBX|2|ST|IEGFRP1^IEGFRP1^99ROC|1.1|Valid|||AnD^
^99ROC|||P||||RocheNoCheck||C4800^Roche~INI_TE
ST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 OBX|3|ST|IEGFRP108^IEGFRP108^99ROC|1.2|N/A|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~INI_
TEST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 OBX|4|ST|IEGFRP108^IEGFRP108^99ROC|1.3|N/A|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~INI_
TEST_12345^Roche|20150116141425[CR]
C4800 10:03:29,323 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|ADO
000001^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 10:03:29,323 NTE|1||F;M7[CR]
C4800 10:03:29,323 NTE|2||,[CR]
C4800 10:03:29,323 NTE|3||[CR]
C4800 10:03:29,323 [FS][CR]

*      10:03:32,870 ACK Result: ExMID = 1c6a2216-3e7c-4041-bac4-ee
8cf30e57c1

HOST 10:03:32,870 [VT]
HOST 10:03:32,880 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311100332+0100
||ACK^R22^ACK|a5d4a94b-45db-480e-aa9e-30107a891
d4a|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 10:03:32,900 MSA|AA|1c6a2216-3e7c-4041-bac4-ee8cf30e57c1[CR]
HOST 10:03:32,912 [FS][CR]

```

EGFR Plasma P2 ASTM communication traces

Result upload

```
c4800 14:11:03,824 [ENQ]
HOST 14:11:03,918 [ACK]
c4800 14:11:03,918 [STX]1H|\^&|||cobas·4800·software^800b9954-b10e
-45b2-b17e-d3260c953495^Laboperator^2.2.0.1509^
1394.LIS2|||||LIS|RSUP|^REAL|P|1|20150728141058
[CR]P|1[CR]O|1|IA1M5384M0IW7B8^AD1200001^A01:A0
2:A03^^^| |^^^IEGFRP2^^AnD|||20150727163814||||Q
|||||^MUTCONTROL|L[ETB]D9[CR][LF]
HOST 14:11:04,027 [ACK]
c4800 14:11:04,042 [STX]2aboperator|||||||F[CR]R|1|^^^IEGFRP2|Va
lid|||||F||Laboperator|20150728124748|201507281
24827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]C|2|I
|,IG[CR]R|2|^^^IEGFRP208|N/A|||||F||Laboperator
|20150728124748|20150728124827|INI_TEST_12345[C
R]C|1|I|F;NONE|G[CR]C|2|I|,|G[ETB]3F[CR][LF]
HOST 14:11:04,167 [ACK]
c4800 14:11:04,183 [STX]3[CR]P|2[CR]O|1|IA1M5384M0IW7B8^AD1200001^
B01:B02:B03^^^| |^^^IEGFRP2^^AnD|||2015072716381
4|||||Q|||||^NEGCONTROL|Laboperator|||||||F[CR]
R|1|^^^IEGFRP2|Valid|||||F||Laboperator|2015072
8124748|20150728124827|INI_TEST_12345[CR]C|1|I|
F;NONE|G[CR]C|2|I|,|G[CR]R|2|[ETB]29[CR][LF]
HOST 14:11:04,308 [ACK]
c4800 14:11:04,308 [STX]4^^^IEGFRP208|N/A|||||F||Laboperator|20150
728124748|20150728124827|INI_TEST_12345[CR]C|1|
I|F;NONE|G[CR]C|2|I|,|G[CR]P|3[CR]O|1|540555354
43^AD1200001^C01:C02:C03^^^| |^^^IEGFRP2^^AnD|||
20150727163814||||N||||^P|Laboperator|||||||F
[CR]R|1|^^^IEGFRP2|No·Muta[ETB]B7[CR][LF]
HOST 14:11:04,432 [ACK]
c4800 14:11:04,432 [STX]5tion·Detected|||||F||Laboperator|20150728
124748|20150728124827|INI_TEST_12345[CR]C|1|I|F
;NONE|G[CR]R|2|^^^IEGFRP208|N/A|||||F||Labopera
tor|20150728124748|20150728124827|INI_TEST_1234
5[CR]C|1|I|F;NONE|G[CR]P|4[CR]O|1|54055535435^A
D1200001^D01:D02:D03^^^| |^ [ETB]4D[CR][LF]
HOST 14:11:04,557 [ACK]
c4800 14:11:04,557 [STX]6^^^IEGFRP2^^AnD|||20150727163814||||N||||^
P|Laboperator|||||||F[CR]R|1|^^^IEGFRP2|Muta
tion·Detected|||||F||Laboperator|20150728124748|
20150728124827|INI_TEST_12345[CR]C|1|I|F;NONE|G
[CR]R|2|^^^IEGFRP201|Ex19Del|||||F||Laboperator
|20150728124748|2015[ETB]2E[CR][LF]
HOST 14:11:04,963 [ACK]
c4800 14:11:04,978 [STX]70728124827|INI_TEST_12345[CR]C|1|I|F;NONE
|G[CR]R|3|^^^IEGFRP202|S768I|||||F||Laboperator
|20150728124748|20150728124827|INI_TEST_12345[C
R]C|1|I|F;NONE|G[CR]R|4|^^^IEGFRP203|L858R|||||F
||Laboperator|20150728124748|20150728124827|IN
I_TEST_12345[CR]C|1|I|F;NO[ETB]0C[CR][LF]
HOST 14:11:05,103 [ACK]
c4800 14:11:05,119 [STX]ONE|G[CR]R|5|^^^IEGFRP204|T790M|||||F||Lab
```

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operator|20150728124748|20150728124827|INI_TEST
_12345[CR]C|1|I|F;NONE|G[CR]R|6|^__IEGFRP205|L8
61Q|||||F||Laboperator|20150728124748|201507281
24827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|7|^
__IEGFRP206|G719X|||||F||L[ETB]4D[CR][LF]
HOST 14:11:05,244 [ACK]
c4800 14:11:05,244 [STX]1aboperator|20150728124748|20150728124827|
INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|8|^__IEGF
RP207|Ex20Ins|||||F||Laboperator|20150728124748
|20150728124827|INI_TEST_12345[CR]C|1|I|F;NONE|
G[CR]P|5[CR]O|1|54055535419^AD1200001^E01:E02:E
03^__| |__^__IEGFRP2__AnD|||2[ETB]ED[CR][LF]
HOST 14:11:05,368 [ACK]
c4800 14:11:05,368 [STX]20150727163814||||N||||^P|Laboperator|||||
||||F[CR]R|1|^__IEGFRP2|Invalid|||||F||Labopera
tor|20150728124748|20150728124827|INI_TEST_1234
5[CR]C|1|I|F;R812|G[CR]R|2|^__IEGFRP208|N/A|||||
|F||Laboperator|20150728124748|20150728124827|I
NI_TEST_12345[CR]C|1|I|[ETB]44[CR][LF]
HOST 14:11:05,493 [ACK]
c4800 14:11:05,493 [STX]3F;R812|G[CR]P|6[CR]O|1|54055535409^AD1200
001^F01:F02:F03^__| |__^__IEGFRP2__AnD|||201507271
63814||||N||||^P|Laboperator||||||||F[CR]R|1|^
__IEGFRP2|No ·Mutation ·Detected|||||F||Laboperat
or|20150728124748|20150728124827|INI_TEST_12345
[CR]C|1|I|F;NONE|G[CR]R|2|[ETB]A1[CR][LF]
HOST 14:11:05,618 [ACK]
c4800 14:11:05,618 [STX]4^__IEGFRP208|N/A|||||F||Laboperator|20150
728124748|20150728124827|INI_TEST_12345[CR]C|1|
I|F;NONE|G[CR]P|7[CR]O|1|54055535425^AD1200001^
G01:G02:G03^__| |__^__IEGFRP2__AnD|||2015072716381
4||||N||||^P|Laboperator||||||||F[CR]R|1|^__IE
GFRP2|Mutation ·Detected[ETB]B8[CR][LF]
HOST 14:11:05,743 [ACK]
c4800 14:11:05,743 [STX]5|||||F||Laboperator|20150728124748|201507
28124827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|
2|^__IEGFRP201|Ex19Del|||||F||Laboperator|20150
728124748|20150728124827|INI_TEST_12345[CR]C|1|
I|F;NONE|G[CR]R|3|^__IEGFRP202|S768I|||||F||Lab
operator|20150728124748[ETB]B5[CR][LF]
HOST 14:11:05,868 [ACK]
c4800 14:11:05,868 [STX]6|20150728124827|INI_TEST_12345[CR]C|1|I|F
;NONE|G[CR]R|4|^__IEGFRP203|L858R|||||F||Labope
rator|20150728124748|20150728124827|INI_TEST_12
345[CR]C|1|I|F;NONE|G[CR]R|5|^__IEGFRP204|T790M
|||||F||Laboperator|20150728124748|201507281248
27|INI_TEST_12345[CR]C|1|I|[ETB]B9[CR][LF]
HOST 14:11:05,992 [ACK]
c4800 14:11:05,992 [STX]7|F;NONE|G[CR]R|6|^__IEGFRP205|L861Q|||||F
||Laboperator|20150728124748|20150728124827|INI
_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|7|^__IEGFRP2
06|G719X|||||F||Laboperator|20150728124748|2015
0728124827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]
R|8|^__IEGFRP207|Ex20Ins||[ETB]FE[CR][LF]
HOST 14:11:06,117 [ACK]
c4800 14:11:06,117 [STX]0||||F||Laboperator|20150728124748|20150728
124827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]P|8[
CR]O|1|54055535433^AD1200001^H01:H02:H03^__| |__^
__IEGFRP2__AnD|||20150727163814||||N||||^P|Labop

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operator|||||F[CR]R|1|^__IEGFRP2|Invalid|||||
F||Laboperator|20150728[ETB]82[CR][LF]
HOST 14:11:06,242 [ACK]
c4800 14:11:06,242 [STX]1124748|20150728124827|INI_TEST_12345[CR]C
|1|I|F;R812|G[CR]R|2|^__IEGFRP208|N/A|||||F||La
boperator|20150728124748|20150728124827|INI_TES
T_12345[CR]C|1|I|F;R812|G[CR]P|9[CR]O|1|5405553
5445^AD1200001^A04:A05:A06^__|^__IEGFRP2^__AnD|
|20150727163814||||N||||^ETB]BC[CR][LF]
HOST 14:11:06,367 [ACK]
c4800 14:11:06,367 [STX]2P|Laboperator|||||F[CR]R|1|^__IEGFRP2
|Mutation-Detected|||||F||Laboperator|201507281
24748|20150728124827|INI_TEST_12345[CR]C|1|I|F;
NONE|G[CR]R|2|^__IEGFRP201|Ex19Del|||||F||Labop
erator|20150728124748|20150728124827|INI_TEST_1
2345[CR]C|1|I|F;NONE|G[CR] [ETB]22[CR][LF]
HOST 14:11:06,492 [ACK]
c4800 14:11:06,492 [STX]3R|3|^__IEGFRP202|S768I||||F||Laboperator
|20150728124748|20150728124827|INI_TEST_12345[C
R]C|1|I|F;NONE|G[CR]R|4|^__IEGFRP203|L858R|||||F||Laboperator|20150728124748|20150728124827|IN
I_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|5|^__IEGFRP
204|T790M||||F||Labope[ETB]F0[CR][LF]
HOST 14:11:06,632 [ACK]
c4800 14:11:06,632 [STX]4rator|20150728124748|20150728124827|INI_T
EST_12345[CR]C|1|I|F;NONE|G[CR]R|6|^__IEGFRP205
|L861Q|||||F||Laboperator|20150728124748|201507
28124827|INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|
7|^__IEGFRP206|G719X|||||F||Laboperator|2015072
8124748|20150728124827|[ETB]8F[CR][LF]
HOST 14:11:06,757 [ACK]
c4800 14:11:06,757 [STX]5INI_TEST_12345[CR]C|1|I|F;NONE|G[CR]R|8|^
__IEGFRP207|Ex20Ins||||F||Laboperator|20150728
124748|20150728124827|INI_TEST_12345[CR]C|1|I|F
;NONE|G[CR]P|10[CR]O|1|54055535453^AD1200001^B0
4:B05:B06^__|^__IEGFRP2^__AnD|||20150727163814|
|||N||||^P|Laboperator||||[ETB]34[CR][LF]
HOST 14:11:06,882 [ACK]
c4800 14:11:06,882 [STX]6|||||F[CR]R|1|^__IEGFRP2|Invalid|||||F||L
aboperator|20150728124748|20150728124827|INI_TE
ST_12345[CR]C|1|I|F;R812|G[CR]R|2|^__IEGFRP208|
N/A|||||F||Laboperator|20150728124748|201507281
24827|INI_TEST_12345[CR]C|1|I|F;R812|G[CR]P|11[CR]O|1|54055535408^AD1200001^ETB]AA[CR][LF]
HOST 14:11:07,006 [ACK]
c4800 14:11:07,006 [STX]7C04:C05:C06^__|^__IEGFRP2^__AnD|||2015072
7163814||||N||||^P|Laboperator|||||||||F[CR]R|1
|^__IEGFRP2|No-Mutation-Detected|||||F||Laboper
ator|20150728124748|20150728124827|INI_TEST_123
45[CR]C|1|I|F;NONE|G[CR]R|2|^__IEGFRP208|N/A|||
|||F||Laboperator|201[ETB]ED[CR][LF]
HOST 14:11:07,131 [ACK]
c4800 14:11:07,131 [STX]050728124748|20150728124827|INI_TEST_12345
[CR]C|1|I|F;NONE|G[CR]P|12[CR]O|1|54055535415^A
D1200001^D04:D05:D06^__|^__IEGFRP2^__AnD|||2015
0727163814||||N||||^P|Laboperator|||||||||F[CR]
R|1|^__IEGFRP2|Mutation-Detected|||||F||Laboper
ator|20150728124748|201[ETB]83[CR][LF]
HOST 14:11:07,256 [ACK]

```


EGFR Plasma P2 HL7 communication traces

Result upload

```
C4800 12:41:26,812 [VT]
C4800 12:41:26,812 MSH|^~\&|cobas·4800·software·2.2.0.1509^INI_TES
T_12345^M|""|LIS|LIS·Facility|20150731124120+02
00||OUL^R22^OUL_R22|53e0fa8f-33f0-4898-8613-6aa
4c117dcbe|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-
29^IHE[CR]
C4800 12:41:26,812 SPM|1|IA1M5384M0IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 12:41:26,812 SAC|||IA1M5384M0IW7B8[CR]
C4800 12:41:26,812 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 12:41:26,812 OBR||"||IEGFRP2^IEGFRP2^99ROC||20150727163814[
CR]
C4800 12:41:26,812 ORC|SC||||CM[CR]
C4800 12:41:26,812 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50728124748^20150728124827||||"|||F||||Laboper
ator||C4800^Roche~INI_TEST_12345^Roche|20150728
124827[CR]
C4800 12:41:26,812 OBX|2|ST|IEGFRP2^IEGFRP2^99ROC|1.1|Valid|||AnD^
99ROC|||F||||Laboperator||C4800^Roche~INI_TES
T_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200001^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||,[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|3|ST|IEGFRP208^IEGFRP208^99ROC|1.2|N/A|||An
D^99ROC|||F||||Laboperator||C4800^Roche~INI_T
EST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200001^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||,[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 SPM|2|IA1M5384M0IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 12:41:26,812 SAC|||IA1M5384M0IW7B8[CR]
C4800 12:41:26,812 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 12:41:26,812 OBR||"||IEGFRP2^IEGFRP2^99ROC||20150727163814[
CR]
C4800 12:41:26,812 ORC|SC||||CM[CR]
C4800 12:41:26,812 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50728124748^20150728124827||||"|||F||||Laboper
ator||C4800^Roche~INI_TEST_12345^Roche|20150728
124827[CR]
C4800 12:41:26,812 OBX|2|ST|IEGFRP2^IEGFRP2^99ROC|1.1|Valid|||AnD^
99ROC|||F||||Laboperator||C4800^Roche~INI_TES
T_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
```

200001^^99ROC|B01:B02:B03^^99ROC[CR]

C4800 12:41:26,812 NTE|1||F;NONE[CR]

C4800 12:41:26,812 NTE|2||,[CR]

C4800 12:41:26,812 NTE|3||[CR]

C4800 12:41:26,812 OBX|3|ST|IEGFRP208^IEGFRP208^99ROC|1.2|N/A|||AnD^^99ROC|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1200001^^99ROC|B01:B02:B03^^99ROC[CR]

C4800 12:41:26,812 NTE|1||F;NONE[CR]

C4800 12:41:26,812 NTE|2||,[CR]

C4800 12:41:26,812 NTE|3||[CR]

C4800 12:41:26,812 SPM|3|54055535443&ROCHE||"||||||P^HL70369[CR]

C4800 12:41:26,812 SAC|||54055535443[CR]

C4800 12:41:26,812 OBR||"||IEGFRP2^IEGFRP2^99ROC||20150727163814[CR]

C4800 12:41:26,812 ORC|SC||||CM[CR]

C4800 12:41:26,812 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20150728124748^20150728124827||||"|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 OBX|2|ST|IEGFRP2^IEGFRP2^99ROC|1.1|No·Mutation·Detected|||AnD^^99ROC|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1200001^^99ROC|C01:C02:C03^^99ROC[CR]

C4800 12:41:26,812 NTE|1||F;NONE[CR]

C4800 12:41:26,812 NTE|2||,[CR]

C4800 12:41:26,812 NTE|3||[CR]

C4800 12:41:26,812 OBX|3|ST|IEGFRP208^IEGFRP208^99ROC|1.2|N/A|||AnD^^99ROC|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1200001^^99ROC|C01:C02:C03^^99ROC[CR]

C4800 12:41:26,812 NTE|1||F;NONE[CR]

C4800 12:41:26,812 NTE|2||,[CR]

C4800 12:41:26,812 NTE|3||[CR]

C4800 12:41:26,812 SPM|4|54055535435&ROCHE||"||||||P^HL70369[CR]

C4800 12:41:26,812 SAC|||54055535435[CR]

C4800 12:41:26,812 OBR||"||IEGFRP2^IEGFRP2^99ROC||20150727163814[CR]

C4800 12:41:26,812 ORC|SC||||CM[CR]

C4800 12:41:26,812 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20150728124748^20150728124827||||"|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 OBX|2|ST|IEGFRP2^IEGFRP2^99ROC|1.1|Mutation·Detected|||AnD^^99ROC|||F||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20150728124827[CR]

C4800 12:41:26,812 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1200001^^99ROC|D01:D02:D03^^99ROC[CR]

C4800 12:41:26,812 NTE|1||F;NONE[CR]

C4800 12:41:26,812 NTE|2||,[CR]

C4800 12:41:26,812 NTE|3||[CR]

C4800 12:41:26,812 OBX|3|ST|IEGFRP201^IEGFRP201^99ROC|1.2|Ex19Del|

```

    ||AnD^^99ROC|||F|||||Laboperator||C4800^Roche~I
    NI_TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|4|ST|IEGFRP202^IEGFRP202^99ROC|1.3|S768I|||
        AnD^^99ROC|||F|||||Laboperator||C4800^Roche~INI
        _TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|5|ST|IEGFRP203^IEGFRP203^99ROC|1.4|L858R|||
        AnD^^99ROC|||F|||||Laboperator||C4800^Roche~INI
        _TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|6|ST|IEGFRP204^IEGFRP204^99ROC|1.5|T790M|||
        AnD^^99ROC|||F|||||Laboperator||C4800^Roche~INI
        _TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|7|ST|IEGFRP205^IEGFRP205^99ROC|1.6|L861Q|||
        AnD^^99ROC|||F|||||Laboperator||C4800^Roche~INI
        _TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|8|ST|IEGFRP206^IEGFRP206^99ROC|1.7|G719X|||
        AnD^^99ROC|||F|||||Laboperator||C4800^Roche~INI
        _TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 OBX|9|ST|IEGFRP207^IEGFRP207^99ROC|1.8|Ex20Ins|
        ||AnD^^99ROC|||F|||||Laboperator||C4800^Roche~I
        NI_TEST_12345^Roche|20150728124827[CR]
C4800 12:41:26,812 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
        200001^^99ROC|D01:D02:D03^^99ROC[CR]
C4800 12:41:26,812 NTE|1||F;NONE[CR]
C4800 12:41:26,812 NTE|2||[CR]
C4800 12:41:26,812 NTE|3||[CR]
C4800 12:41:26,812 [FS][CR]

*
```

* 12:41:28,761 ACK Result: ExMID = 53e0fa8f-33f0-4898-8613-6a
a4c117dcfc

```
HOST 12:41:28,771 [VT]
HOST 12:41:28,771 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437^SN1234^M|LAB·Name|20150731124128+0200
      ||ACK^R22^ACK|9d3eec60-44e6-445d-a99d-9697ccc27
      75d|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 12:41:28,791 MSA|AA|53e0fa8f-33f0-4898-8613-6aa4c117dcbc[CR]
HOST 12:41:28,803 [FS] [CR]
```

EGFR Plasma RUO ASTM communication traces

Result upload

```
c4800 11:37:08,905 [ENQ]
HOST   11:37:08,968 [ACK]
c4800 11:37:08,968 [STX]1H|\^&|||cobas·4800·software^4701d638-1493
-4f9a-9777-deb44ec0c249^FSE^2.2.0.1507^1394.LIS
|||||LIS|RSUPL^REAL|P|1|20150312113654[CR]P|1[
CR]O|1|LA1M5384M3IW7B8^AD1200007^A01:A02:A03^^^
||^^^LEGFR^^AnD|||20150312102948|||Q||||^MUTCO
NTROL|FSE|||||||[ETB]69[CR][LF]
HOST   11:37:09,092 [ACK]
c4800 11:37:09,092 [STX]2|P[CR]R|1|^__^LEGFR|Valid|||||P||FSE|20150
312105202|20150312105621|123456_12345[CR]C|1|I|
F;M7|G[CR]C|2|I|,|G[CR]R|2|^__^LEGFR08|N/A|||||P
||FSE|20150312105202|20150312105621|123456_1234
5[CR]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|3|^__^LEGFR0
8|N/A|||||P||FSE|20150312105202|[ETB]C4[CR][LF]
HOST   11:37:09,217 [ACK]
c4800 11:37:09,233 [STX]320150312105621|123456_12345[CR]C|1|I|F;M7
|G[CR]C|2|I|,|G[CR]P|2[CR]O|1|LA1M5384M3IW7B8^A
D1200007^B01:B02:B03^^^|||^LEGFR^^AnD|||201503
12102948|||Q||||^NEGCONTROL|FSE|||||||P[CR]R
|1|^__^LEGFR|Valid|||||P||FSE|20150312105202|201
50312105621|123456_12345[CR]C|[ETB]76[CR][LF]
HOST   11:37:09,358 [ACK]
c4800 11:37:09,358 [STX]4|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|2|^__^LEGFR0
8|N/A|||||P||FSE|20150312105202|20150312105621|
123456_12345[CR]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|
3|^__^LEGFR08|N/A|||||P||FSE|20150312105202|2015
0312105621|123456_12345[CR]C|1|I|F;M7|G[CR]C|2|
I|,|G[CR]P|3[CR]O|1|1111^AD1200007^C01[ETB]B2[C
R][LF]
HOST   11:37:09,482 [ACK]
c4800 11:37:09,482 [STX]5:C02:C03^^^|||^LEGFR^^AnD|||201503121029
48|||||N|||||^P||FSE|||||||P[CR]R|1|^__^LEGFR|No
Mutation·Detected|||||P||FSE|20150312105202|201
50312105621|123456_12345[CR]C|1|I|F;M7|G[CR]R|2
|^__^LEGFR08|N/A|||||P||FSE|20150312105202|20150
312105621|123456_123[ETB]DE[CR][LF]
HOST   11:37:09,607 [ACK]
c4800 11:37:09,607 [STX]645[CR]C|1|I|F;M7|G[CR]R|3|^__^LEGFR08|N/A|
|||||P||FSE|20150312105202|20150312105621|123456
_12345[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1|2222^AD120
0007^D01:D02:D03^^^|||^LEGFR^^AnD|||2015031210
2948|||||N|||||^P||FSE|||||||P[CR]R|1|^__^LEGFR|M
utation·Detected|||||P||FSE|2[ETB]A9[CR][LF]
HOST   11:37:09,732 [ACK]
c4800 11:37:09,732 [STX]70150312105202|20150312105621|123456_12345
[CR]C|1|I|F;M7|G[CR]R|2|^__^LEGFR01|Ex19Del|||||
P||FSE|20150312105202|20150312105621|123456_123
45[CR]C|1|I|F;M7|G[CR]R|3|^__^LEGFR02|S768I|||||
P||FSE|20150312105202|20150312105621|123456_123
45[CR]C|1|I|F;M7|G[CR]R|4|^__^|[ETB]4E[CR][LF]
HOST   11:37:09,857 [ACK]
```

c4800 11:37:09,857 [STX]0LEGFR03|L858R||||P||FSE|20150312105202|2
 0150312105621|123456_12345[CR]C|1|I|F;M7|G[CR]R
 |5|^__^LEGFR04|T790M||||P||FSE|20150312105202|2
 0150312105621|123456_12345[CR]C|1|I|F;M7|G[CR]R
 |6|^__^LEGFR05|L861Q||||P||FSE|20150312105202|2
 0150312105621|123456_12[ETB]DE[CR][LF]

HOST 11:37:09,982 [ACK]

c4800 11:37:09,982 [STX]1345[CR]C|1|I|F;M7|G[CR]R|7|^__^LEGFR06|G71
 9X||||P||FSE|20150312105202|20150312105621|123
 456_12345[CR]C|1|I|F;M7|G[CR]R|8|^__^LEGFR07|Ex2
 0Ins||||P||FSE|20150312105202|20150312105621|1
 23456_12345[CR]C|1|I|F;M7|G[CR]R|9|^__^LEGFR09|E
 x19Del:-8.89||||P||FSE|20150[ETB]03[CR][LF]

HOST 11:37:10,106 [ACK]

c4800 11:37:10,106 [STX]2312105202|20150312105621|123456_12345[CR]
 C|1|I|F;M7|G[CR]R|10|^__^LEGFR10|S768I:-5.70||||
 |P||FSE|20150312105202|20150312105621|123456_12
 345[CR]C|1|I|F;M7|G[CR]R|11|^__^LEGFR11|L858R:-6
 .51||||P||FSE|20150312105202|20150312105621|12
 3456_12345[CR]C|1|I|F;M7|G[ETB]8B[CR][LF]

HOST 11:37:10,231 [ACK]

c4800 11:37:10,231 [STX]3|CR|R|12|^__^LEGFR12|T790M:-8.91||||P||FS
 E|20150312105202|20150312105621|123456_12345[CR]
]C|1|I|F;M7|G[CR]R|13|^__^LEGFR13|L861Q:-3.44|||
 ||P||FSE|20150312105202|20150312105621|123456_1
 2345[CR]C|1|I|F;M7|G[CR]R|14|^__^LEGFR14|G719X:
 17.99||||P||FSE|201503121[ETB]1A[CR][LF]

HOST 11:37:10,356 [ACK]

c4800 11:37:10,372 [STX]405202|20150312105621|123456_12345[CR]C|1|
 I|F;M7|G[CR]R|15|^__^LEGFR15|Ex20Ins:-3.11||||P
 ||FSE|20150312105202|20150312105621|123456_1234
 5[CR]C|1|I|F;M7|G[CR]P|5[CR]O|1|3333^AD1200007^
 E01:E02:E03^__|^__^LEGFR^__AnD|||20150312102948|
 |||N||||^P|FSE|||||||P[CR]R[ETB]5E[CR][LF]

HOST 11:37:10,496 [ACK]

c4800 11:37:10,496 [STX]5|1|^__^LEGFR|Invalid||||P||FSE|2015031210
 5202|20150312105621|123456_12345[CR]C|1|I|F;R81
 2,M7|G[CR]R|2|^__^LEGFR08|N/A||||P||FSE|2015031
 2105202|20150312105621|123456_12345[CR]C|1|I|F;
 R812,M7|G[CR]R|3|^__^LEGFR08|N/A||||P||FSE|2015
 0312105202|201503121056[ETB]A3[CR][LF]

HOST 11:37:10,621 [ACK]

c4800 11:37:10,621 [STX]621|123456_12345[CR]C|1|I|F;R812,M7|G[CR]P
 |6[CR]O|1|4444^AD1200007^F01:F02:F03^__|^__^LEG
 FR^__AnD|||20150312102948||||N||||^P|FSE|||||||
 |P[CR]R|1|^__^LEGFR|No Mutation Detected||||P||
 FSE|20150312105202|20150312105621|123456_12345[
 CR]C|1|I|F;M7|G[CR]R|2|^__^LEG[ETB]3D[CR][LF]

HOST 11:37:10,746 [ACK]

c4800 11:37:10,746 [STX]7FR08|N/A||||P||FSE|20150312105202|201503
 12105621|123456_12345[CR]C|1|I|F;M7|G[CR]R|3|^__
 ^LEGFR08|N/A||||P||FSE|20150312105202|20150312
 105621|123456_12345[CR]C|1|I|F;M7|G[CR]L|1|N[CR]
][ETX]2F[CR][LF]

HOST 11:37:10,871 [ACK]

c4800 11:37:10,871 [EOT]

EGFR Plasma RUO HL7 communication traces

Result upload

```
C4800 11:25:06,229 [VT]
C4800 11:25:06,229 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_
12345^M|""|LIS|LIS·Facility|20150312112451+0100
||OUL^R22^OUL_R22|af434a1d-0afe-4c0c-a8de-c901e
5ff0bf0|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29
^IHE[CR]
C4800 11:25:06,229 SPM|1|LA1M5384M3IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 11:25:06,229 SAC|||LA1M5384M3IW7B8[CR]
C4800 11:25:06,229 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 11:25:06,229 OBR||"||LEGFR^LEGFR^99ROC||20150312102948[CR]
C4800 11:25:06,229 ORC|SC||||CM[CR]
C4800 11:25:06,229 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50312105202^20150312105621||||"|||F|||||FSE||C4
800^Roche~123456_12345^Roche|20150312105621[CR]
C4800 11:25:06,229 OBX|2|ST|LEGFR^LEGFR^99ROC|1.1|Valid|||AnD^^99R
OC||||P|||||RocheNoCheck||C4800^Roche~123456_123
45^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200007^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 OBX|3|ST|LEGFR08^LEGFR08^99ROC|1.2|N/A|||AnD^^9
9ROC||||P|||||RocheNoCheck||C4800^Roche~123456_1
2345^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200007^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 OBX|4|ST|LEGFR08^LEGFR08^99ROC|1.3|N/A|||AnD^^9
9ROC||||P|||||RocheNoCheck||C4800^Roche~123456_1
2345^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200007^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 SPM|2|LA1M5384M3IW7B8&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 11:25:06,229 SAC|||LA1M5384M3IW7B8[CR]
C4800 11:25:06,229 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 11:25:06,229 OBR||"||LEGFR^LEGFR^99ROC||20150312102948[CR]
C4800 11:25:06,229 ORC|SC||||CM[CR]
C4800 11:25:06,229 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50312105202^20150312105621||||"|||F|||||FSE||C4
800^Roche~123456_12345^Roche|20150312105621[CR]
```

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C4800 11:25:06,229 OBX|2|ST|LEGFR^LEGFR^99ROC|1.1|Valid|||AnD^^99R
          OC||||P||||RocheNoCheck||C4800^Roche~123456_123
          45^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
          200007^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 OBX|3|ST|LEGFR08^LEGFR08^99ROC|1.2|N/A|||AnD^^9
          9ROC|||P||||RocheNoCheck||C4800^Roche~123456_1
          2345^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
          200007^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 OBX|4|ST|LEGFR08^LEGFR08^99ROC|1.3|N/A|||AnD^^9
          9ROC|||P||||RocheNoCheck||C4800^Roche~123456_1
          2345^Roche|20150312105621[CR]
C4800 11:25:06,229 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
          200007^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 11:25:06,229 NTE|1||F;M7[CR]
C4800 11:25:06,229 NTE|2||,[CR]
C4800 11:25:06,229 NTE|3||[CR]
C4800 11:25:06,229 [FS][CR]

*      11:25:07,436 ACK Result: ExMID = af434a1d-0afe-4c0c-a8de-c9
          01e5ff0bf0

HOST   11:25:07,436 [VT]
HOST   11:25:07,446 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
          .2.0.1437^SN1234^M|LAB·Name|20150312112507+0100
          ||ACK^R22^ACK|fe3866c1-6913-4b26-a008-258076068
          fc8|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   11:25:07,459 MSA|AA|af434a1d-0afe-4c0c-a8de-c901e5ff0bf0[CR]
HOST   11:25:07,463 [FS][CR]

```

EGFR Tissue P1 ASTM communication traces

Result upload

```
c4800 15:38:25,408 [ENQ]
HOST   15:38:25,470 [ACK]
c4800 15:38:25,486 [STX]1H|\^&|||cobas·4800·software^494cd90c-5bb4
-4107-b756-8f471c1495b5^RocheNoCheck^2.2.0.1507
^1394.LIS2||||LIS|RSUPL^REAL|P|1|2015031015381
1[CR]P|1[CR]O|1|IA165HO332GWG6O^AD1200000^A01:A
02:A03^^^| |^^^IEGFRT1^^AnD|||20150310150539|||
Q||||^MUTCONTROL|[ETB]D4[CR][LF]
HOST   15:38:25,611 [ACK]
c4800 15:38:25,611 [STX]2RocheNoCheck|||||||F[CR]R|1|^ ^^IEGFRT1|
Valid|||||F||RocheNoCheck|20150310151714|201503
10152620|123456_12345[CR]C|1|I|F;M3,M7|G[CR]C|2
|I|,|G[CR]R|2|^ ^^IEGFRT108|N/A|||||F||RocheNoCh
eck|20150310151714|20150310152620|123456_12345[
CR]C|1|I|F;M3,M7|G[CR]C|2|I|,[ETB]1B[CR][LF]
HOST   15:38:25,735 [ACK]
c4800 15:38:25,735 [STX]3|G[CR]P|2[CR]O|1|IA165HO332GWG6O^AD120000
0^B01:B02:B03^^^| | ^ ^^IEGFRT1^^AnD|||20150310150
539||||Q||||^NEGCONTROL|RocheNoCheck|||||||F[
CR]R|1|^ ^^IEGFRT1|Valid|||||F||RocheNoCheck|201
50310151714|20150310152620|123456_12345[CR]C|1|
I|F;M3,M7|G[CR]C|2|I|,|G[CR]R[ETB]7F[CR][LF]
HOST   15:38:25,860 [ACK]
c4800 15:38:25,860 [STX]4|2|^ ^^IEGFRT108|N/A|||||F||RocheNoCheck|2
0150310151714|20150310152620|123456_12345[CR]C|
1|I|F;M3,M7|G[CR]C|2|I|,|G[CR]P|3[CR]O|1|540555
35464^AD1200000^C01:C02:C03^^^| | ^ ^^IEGFRT1^^AnD
|||20150310150539|||N||||^P|RocheNoCheck|||||||
|||F[CR]R|1|^ ^^IEGFRT1|No|[ETB]F8[CR][LF]
HOST   15:38:25,985 [ACK]
c4800 15:38:25,985 [STX]5Mutation·Detected|||||F||RocheNoCheck|201
50310151714|20150310152620|123456_12345[CR]C|1|
I|F;M3,M7|G[CR]R|2|^ ^^IEGFRT108|N/A|||||F||Roch
eNoCheck|20150310151714|20150310152620|123456_1
2345[CR]C|1|I|F;M3,M7|G[CR]P|4[CR]O|1|540555354
65^AD1200000^D01:D02:D03^^[ETB]71[CR][LF]
HOST   15:38:26,110 [ACK]
c4800 15:38:26,110 [STX]6^|||^IEGFRT1^^AnD|||20150310150539|||N|
|||^P|RocheNoCheck|||||||F[CR]R|1|^ ^^IEGFRT1|
Mutation·Detected|||||F||RocheNoCheck|201503101
51714|20150310152620|123456_12345[CR]C|1|I|F;M3
,M7|G[CR]R|2|^ ^^IEGFRT101|Ex19Del|||||F||RocheN
oCheck|2015031015171|[ETB]13[CR][LF]
HOST   15:38:26,235 [ACK]
c4800 15:38:26,235 [STX]74|20150310152620|123456_12345[CR]C|1|I|F;
M3,M7|G[CR]R|3|^ ^^IEGFRT102|S768I|||||F||RocheN
oCheck|20150310151714|20150310152620|123456_123
45[CR]C|1|I|F;M3,M7|G[CR]R|4|^ ^^IEGFRT103|L858R
|||||F||RocheNoCheck|20150310151714|20150310152
620|123456_12345[CR]C|1|I|[ETB]49[CR][LF]
HOST   15:38:26,359 [ACK]
c4800 15:38:26,359 [STX]OF;M3,M7|G[CR]R|5|^ ^^IEGFRT104|T790M|||||F
```

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||RocheNoCheck|20150310151714|20150310152620|12
3456_12345[CR]C|1|I|F;M3,M7|G[CR]R|6|^__^IEGFRT1
06|G719X|||||F||RocheNoCheck|20150310151714|201
50310152620|123456_12345[CR]C|1|I|F;M3,M7|G[CR]
R|7|^__^IEGFRT107|Ex20Ins||[ETB]C1[CR] [LF]
HOST 15:38:26, 484 [ACK]
c4800 15:38:26, 484 [STX]1||||F||RocheNoCheck|20150310151714|2015031
0152620|123456_12345[CR]C|1|I|F;M3,M7|G[CR]P|5[
CR]O|1|54055535466^AD1200000^E01:E02:E03^__||^_
^IEGFRT1^__AnD|||20150310150539||||N||||^P|Roche
NoCheck||||||||F[CR]R|1|^__^IEGFRT1|Invalid|||||
|F||RocheNoCheck|201503[ETB]C8[CR] [LF]
HOST 15:38:26, 609 [ACK]
c4800 15:38:26, 609 [STX]210151714|20150310152620|123456_12345[CR]C
|1|I|F;M3,R812,M7|G[CR]R|2|^__^IEGFRT108|N/A|||
|F||RocheNoCheck|20150310151714|20150310152620|
123456_12345[CR]C|1|I|F;M3,R812,M7|G[CR]P|6[CR]
O|1|54055535467^AD1200000^F01:F02:F03^__||^__IE
GFR1^__AnD|||2015031015053[ETB]49[CR] [LF]
HOST 15:38:26, 734 [ACK]
c4800 15:38:26, 734 [STX]39||||N||||^P|RocheNoCheck||||||||F[CR]R|
1|^__^IEGFRT1|No ·Mutation ·Detected|||||F||RocheN
oCheck|20150310151714|20150310152620|123456_123
45[CR]C|1|I|F;M3,M7|G[CR]R|2|^__^IEGFRT108|N/A|||
|||F||RocheNoCheck|20150310151714|2015031015262
0|123456_12345[CR]C|1|I|[ETB]A4[CR] [LF]
HOST 15:38:26, 859 [ACK]
c4800 15:38:26, 859 [STX]4|F;M3,M7|G[CR]P|7[CR]O|1|54055535468^AD12
00000^G01:G02:G03^__||^__IEGFRT1^__AnD|||2015031
0150539||||N||||^P|RocheNoCheck||||||||F[CR]R|
1|^__^IEGFRT1|Mutation ·Detected|||||F||RocheNoCh
eck|20150310151714|20150310152620|123456_12345[[
CR]C|1|I|F;M3,M7|G[CR]R|2|[ETB]35[CR] [LF]
HOST 15:38:26, 983 [ACK]
c4800 15:38:26, 999 [STX]5^__^IEGFRT102|S768I|||||F||RocheNoCheck|20
150310151714|20150310152620|123456_12345[CR]C|1
|I|F;M3,M7|G[CR]R|3|^__^IEGFRT103|L858R|||||F||R
ocheNoCheck|20150310151714|20150310152620|12345
6_12345[CR]C|1|I|F;M3,M7|G[CR]R|4|^__^IEGFRT104|
T790M|||||F||RocheNoChe[ETB]23[CR] [LF]
HOST 15:38:27, 124 [ACK]
c4800 15:38:27, 124 [STX]6ck|20150310151714|20150310152620|123456_1
2345[CR]C|1|I|F;M3,M7|G[CR]R|5|^__^IEGFRT106|G71
9X|||||F||RocheNoCheck|20150310151714|201503101
52620|123456_12345[CR]C|1|I|F;M3,M7|G[CR]R|6|^_
^IEGFRT107|Ex20Ins|||||F||RocheNoCheck|20150310
151714|20150310152620|1[ETB]8E[CR] [LF]
HOST 15:38:27, 249 [ACK]
c4800 15:38:27, 249 [STX]723456_12345[CR]C|1|I|F;M3,M7|G[CR]P|8[CR]
O|1|54055535469^AD1200000^H01:H02:H03^__||^__IE
GFR1^__AnD|||20150310150539||||N||||^P|RocheNoC
heck||||||||F[CR]C|1|I|54055535466540555354675
40555354685405553546954055535470540555354715405
55354725405553547354055[ETB]04[CR] [LF]
HOST 15:38:27, 373 [ACK]
c4800 15:38:27, 373 [STX]05354745|G[CR]R|1|^__^IEGFRT1|Invalid|||||F
||RocheNoCheck|20150310151714|20150310152620|12
3456_12345[CR]C|1|I|F;M3,R812,M7|G[CR]R|2|^__^IE
GFR108|N/A|||||F||RocheNoCheck|20150310151714|

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20150310152620|123456_12345[CR]C|1|I|F;M3,R812,
M7|G[CR]L|1|N[CR][ETX]58[CR][LF]

HOST 15:38:27,498 [ACK]
c4800 15:38:27,498 [EOT]

EGFR Tissue P1 HL7 communication traces

Result upload

```
C4800 09:58:15,269 [VT]
C4800 09:58:15,269 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_
12345^M|""|LIS|LIS·Facility|20150311095800+0100
||OUL^R22^OUL_R22|83217317-8b6e-4034-ab24-cdf49
dc1e10c|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29
^THE[CR]
C4800 09:58:15,269 SPM|1|IA165HO332GWG60&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 09:58:15,269 SAC|||IA165HO332GWG60[CR]
C4800 09:58:15,269 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 09:58:15,269 OBR||"||IEGFRT1^IEGFRT1^99ROC||20150310150539[
CR]
C4800 09:58:15,269 ORC|SC||||CM[CR]
C4800 09:58:15,269 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50310151714^20150310152620||||"|||F||||RocheNo
Check||C4800^Roche~123456_12345^Roche|201503101
52620[CR]
C4800 09:58:15,269 OBX|2|ST|IEGFRT1^IEGFRT1^99ROC|1.1|Valid|||AnD^
99ROC|||F||||RocheNoCheck||C4800^Roche~123456
_12345^Roche|20150310152620[CR]
C4800 09:58:15,269 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200000^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 09:58:15,269 NTE|1||F;M3,M7[CR]
C4800 09:58:15,269 NTE|2||,[CR]
C4800 09:58:15,269 NTE|3||[CR]
C4800 09:58:15,269 OBX|3|ST|IEGFRT108^IEGFRT108^99ROC|1.2|N/A|||An
D^99ROC|||F||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150310152620[CR]
C4800 09:58:15,269 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200000^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 09:58:15,269 NTE|1||F;M3,M7[CR]
C4800 09:58:15,269 NTE|2||,[CR]
C4800 09:58:15,269 NTE|3||[CR]
C4800 09:58:15,269 SPM|2|IA165HO332GWG60&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 09:58:15,269 SAC|||IA165HO332GWG60[CR]
C4800 09:58:15,269 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 09:58:15,269 OBR||"||IEGFRT1^IEGFRT1^99ROC||20150310150539[
CR]
C4800 09:58:15,269 ORC|SC||||CM[CR]
C4800 09:58:15,269 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50310151714^20150310152620||||"|||F||||RocheNo
Check||C4800^Roche~123456_12345^Roche|201503101
52620[CR]
C4800 09:58:15,269 OBX|2|ST|IEGFRT1^IEGFRT1^99ROC|1.1|Valid|||AnD^
99ROC|||F||||RocheNoCheck||C4800^Roche~123456
_12345^Roche|20150310152620[CR]
C4800 09:58:15,269 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200000^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 09:58:15,269 NTE|1||F;M3,M7[CR]
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C4800 09:58:15,269 NTE|2||,[CR]
C4800 09:58:15,269 NTE|3||[CR]
C4800 09:58:15,269 OBX|3|ST|IEGFRT108^IEGFRT108^99ROC|1.2|N/A|||An
D^^99ROC|||F||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150310152620[CR]
C4800 09:58:15,269 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|AD1
200000^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 09:58:15,269 NTE|1||F;M3,M7[CR]
C4800 09:58:15,269 NTE|2||,[CR]
C4800 09:58:15,269 NTE|3||[CR]
C4800 09:58:15,269 [FS][CR]

*      09:58:16,613 ACK Result: ExMID = 83217317-8b6e-4034-ab24-cd
f49dc1e10c

HOST 09:58:16,613 [VT]
HOST 09:58:16,623 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311095816+0100
||ACK^R22^ACK|52515255-f2dc-446f-ac22-9cb8bdcc9
c26|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 09:58:16,633 MSA|AA|83217317-8b6e-4034-ab24-cdf49dc1e10c[CR]
HOST 09:58:16,643 [FS][CR]
```

HBV ASTM communication traces

Order download

```
c4800 15:32:59,904 [ENQ]
HOST   15:32:59,966 [ACK]
c4800 15:32:59,966 [STX]1H|\^&|||cobas·4800^1be94e74-596f-4817-821
                                         c-8c08d6468174^Laboperator^2.2.0.1509^1394.LIS2
                                         |||||LIS|TSREQ^REAL|P|1|20160726152818[CR]Q|1|^
                                         HBVLIS01[CR]L|1|N[CR] [ETX] 6B[CR] [LF]
HOST   15:33:00,076 [ACK]
c4800 15:33:00,076 [EOT]

*      15:33:02,271 TSDWN: SID = HBVLIS01

HOST   15:33:02,281 [ENQ]
c4800 15:33:02,291 [ACK]
HOST   15:33:02,301 [STX]1H|\^&|||ASTM32^e1339033-aa18-4986-9c44-72
                                         41295083e2^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
                                         00|TSDWN^REAL|P|1|20160726153300|[CR] [ETX]F7[CR]
                                         ] [LF]
c4800 15:33:02,311 [ACK]
HOST   15:33:02,321 [STX]2P|1[N][CR] [ETX]3F[CR] [LF]
c4800 15:33:02,321 [ACK]
HOST   15:33:02,336 [STX]3O|1|HBVLIS01||^^^0CHBV^^Full|||2.02E+13|||
                                         ||N|||2.02E+13|SERPLAS^P|nuer|||||||O[CR] [ETX]
                                         ]0F[CR] [LF]
c4800 15:33:02,338 [ACK]
HOST   15:33:02,348 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:33:02,348 [ACK]
HOST   15:33:02,358 [EOT]

c4800 15:33:02,608 [ENQ]
HOST   15:33:02,678 [ACK]
c4800 15:33:02,688 [STX]1H|\^&|||cobas·4800^adb81f12-eac5-478a-a52
                                         6-391d285caa8e^Laboperator^2.2.0.1509^1394.LIS2
                                         |||||LIS|TSREQ^REAL|P|1|20160726152818[CR]Q|1|^
                                         HBVLIS02[CR]L|1|N[CR] [ETX]C5[CR] [LF]
HOST   15:33:02,808 [ACK]
c4800 15:33:02,808 [EOT]

*      15:33:05,012 TSDWN: SID = HBVLIS02

HOST   15:33:05,043 [ENQ]
c4800 15:33:05,043 [ACK]
HOST   15:33:05,074 [STX]1H|\^&|||ASTM32^a843bf25-9eec-4b40-b135-2d
                                         a43b210918^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
                                         00|TSDWN^REAL|P|1|20160726153302|[CR] [ETX]03[CR]
                                         ] [LF]
c4800 15:33:05,076 [ACK]
HOST   15:33:05,086 [STX]2P|1[N][CR] [ETX]3F[CR] [LF]
c4800 15:33:05,086 [ACK]
HOST   15:33:05,096 [STX]3O|1|HBVLIS02||^^^0CHBV^^Full|||2.02E+13|||
                                         ||N|||2.02E+13|DILSERPLAS^P|nuer|||||||O[CR] [
                                         ETX]E9[CR] [LF]
c4800 15:33:05,126 [ACK]
HOST   15:33:05,136 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:33:05,136 [ACK]
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HOST 15:33:05,136 [EOT]

c4800 15:33:05,396 [ENQ]
HOST 15:33:05,476 [ACK]
c4800 15:33:05,486 [STX]1H|\^&|||cobas·4800^2ff246b8-80b0-4752-b7c
4-8e93617365d1^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20160726152818[CR]Q|1|^
HBVLIS03[CR]L|1|N[CR] [ETX]8B[CR] [LF]
HOST 15:33:05,616 [ACK]
c4800 15:33:05,626 [EOT]

* 15:33:07,850 TSDWN: SID = HBVLIS03

HOST 15:33:07,881 [ENQ]
c4800 15:33:07,881 [ACK]
HOST 15:33:07,897 [STX]1H|\^&|||ASTM32^c068d67f-3c12-4ea0-86e5-7a
b6bfa9c210^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20160726153305|[CR] [ETX]72[CR]
] [LF]
c4800 15:33:07,897 [ACK]
HOST 15:33:07,912 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 15:33:07,914 [ACK]
HOST 15:33:07,924 [STX]3O|1|HBVLIS03||^^^0CHBV^^Full|||2.02E+13|||
||N|||2.02E+13|SERPLAS^P|nuer|||||||O[CR] [ETX]
]11[CR] [LF]
c4800 15:33:07,924 [ACK]
HOST 15:33:07,944 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 15:33:07,944 [ACK]
HOST 15:33:07,944 [EOT]

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Result upload

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c4800 13:15:08,158 [ENQ]
HOST 13:15:08,704 [ACK]
c4800 13:15:08,704 [STX]1H|\^&|||cobas·4800·software^788af193-4cce
-47f8-af5e-f80f86f033cd^Laboperator^2.2.0.1509^
1394.LIS2|||||LIS|RSUPL^REAL|P|1|20150520131610
[CR]P|1[CR]O|1|0PHHXV0017G1B24^GD0609461^A01^^^
GG0203180||^^^0CHBV^^Full|||20150506080757|||||Q
||||^HPosCtrl|Lab[ETB]0A[CR] [LF]
HOST 13:15:08,828 [ACK]
c4800 13:15:08,828 [STX]2operator|||||||F[CR]R|1|^^^0CHBV|1.25E+
07·IU/mL|IU/mL||||F||Laboperator|20150506081919
|20150506110503|50549_30071[CR]C|1|I|F;M7|G[CR]
C|2|I|Ct:1·(MMx·1),19.00|G[CR]P|2[CR]O|1|0PLHXV
0017G1B24^GD0609461^B01^^^GG0203180||^^^0CHBV^^
Full|||20150506080757||||Q[ETB]04[CR] [LF]
HOST 13:15:08,953 [ACK]
c4800 13:15:08,953 [STX]3||||^LPosCtrl|Laboperator|||||||F[CR]R|
1|^^^0CHBV|1.31E+03·IU/mL|IU/mL||||F||Laboperat
or|20150506081919|20150506110503|50549_30071[CR
]C|1|I|F;M7|G[CR]C|2|I|Ct:1·(MMx·1),32.30|G[CR]
P|3[CR]O|1|0N1HXV0017G1B24^GD0609461^C01^^^GG02
03180||^^^0CHBV^^Full|||20[ETB]20[CR] [LF]
HOST 13:15:09,078 [ACK]
c4800 13:15:09,078 [STX]4150506080757||||Q||||^NEGCONTROL|Labopera
tor|||||||F[CR]R|1|^^^0CHBV|Target·Not·Detect
ed|||||F||Laboperator|20150506081919|2015050611
0503|50549_30071[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1|

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RDR00792^GD0609461^D01^^GG0203180||^^^0CHBV^^F
ull|||20150506080757|||[ETB]13[CR][LF]
HOST 13:15:09, 203 [ACK]
c4800 13:15:09, 218 [STX]5|N||||DILSERPLAS^P|Laboperator|||||||F|[CR]R|1|^/^0CHBV|Invalid|||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;R4801,M7|G[CR]P|5[CR]O|1|RDR00791^GD0609461^E01^^GG0203180||^^^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|L[ETB]B5[CR][LF]
HOST 13:15:09, 343 [ACK]
c4800 13:15:09, 359 [STX]6aboperator|||||||F[CR]R|1|^/^0CHBV|Target ·Not ·Detected|||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;M7|G[C]R]P|6[CR]O|1|RDR00790^GD0609461^F01^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator||||[ETB]9B[CR][LF]
HOST 13:15:09, 484 [ACK]
c4800 13:15:09, 484 [STX]7|||||F[CR]R|1|^/^0CHBV|Invalid|||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;R4801,M7|G[CR]P|7[CR]O|1|RDR00790^GD0609461^G01^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|[ETB]C2[CR][LF]
HOST 13:15:09, 608 [ACK]
c4800 13:15:09, 608 [STX]02.67E+05 ·IU/mL|IU/mL||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|8[CR]O|1|RDR00788^GD0609461^H01^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|6.95E+04 ·IU/mL[ETB]A1[CR][LF]
HOST 13:15:09, 733 [ACK]
c4800 13:15:09, 733 [STX]1|IU/mL||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|9[CR]O|1|RDR00787^GD0609461^A02^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|9.02E+04 ·IU/mL|IU/mL||||F||L[ETB]C7[CR][LF]
HOST 13:15:09, 858 [ACK]
c4800 13:15:09, 858 [STX]2aboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|10[CR]O|1|RDR00786^GD0609461^B02^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|Failed||||F||Laboperator|20150506081919|[ETB]E6[CR][LF]
HOST 13:15:09, 983 [ACK]
c4800 13:15:09, 983 [STX]320150506110503|50549_30071[CR]C|1|I|F;x4,M7|G[CR]P|11[CR]O|1|RDR00785^GD0609461^C02^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|Failed||||F||Laboperator|20150506081919|20150506110503|50549_30[ETB]AC[CR][LF]
HOST 13:15:10, 108 [ACK]
c4800 13:15:10, 123 [STX]4071[CR]C|1|I|F;x3,M7|G[CR]P|12[CR]O|1|RDR00784^GD0609461^D02^^GG0203180|||^0CHBV^^Full|||20150506080757||||N||||DILSERPLAS^P|Laboperator|||||||F[CR]R|1|^/^0CHBV|Target ·Not ·Detected|||||F||Laboperator|20150506081919|20150506110503|50549_30071[CR]C|1|I|[ETB]36[CR][LF]
HOST 13:15:10, 248 [ACK]

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c4800 13:15:10,264 [STX]5F;M7|G[CR]P|13[CR]O|1|RDR00783^GD0609461^
E02^^GG0203180||^^^0CHBV^^Full|||2015050608075
7||||N||||DILSERPLAS^P|Laboperator|||||||||F[CR
]R|1|^^^0CHBV|Invalid||||F||Laboperator|201505
06081919|20150506110503|50549_30071[CR]C|1|I|F;
R4801,M7|G[CR]P|14[CR]O|1|RDR[ETB]36[CR] [LF]
HOST 13:15:10,388 [ACK]
c4800 13:15:10,404 [STX]600782^GD0609461^F02^^GG0203180||^^^0CHBV
^^Full|||20150506080757||||N||||SERPLAS^P|Labop
erator||||||||F[CR]R|1|^^^0CHBV|1.48E+05·IU/mL
|IU/mL||||F||Laboperator|20150506081919|201505
6110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|15[CR]
O|1|RDR00781^GD0609461^ [ETB]58[CR] [LF]
HOST 13:15:10,529 [ACK]
c4800 13:15:10,529 [STX]7G02^^GG0203180||^^^0CHBV^^Full|||201505
6080757||||N||||SERPLAS^P|Laboperator||||||||F
[CR]R|1|^^^0CHBV|5.06E+04·IU/mL|IU/mL||||F||Lab
operator|20150506081919|20150506110503|50549_30
071[CR]C|1|I|F;M7|G[CR]P|16[CR]O|1|RDR00780^GD0
609461^H02^^GG0203180|[ETB]D1[CR] [LF]
HOST 13:15:10,654 [ACK]
c4800 13:15:10,654 [STX]0|^^^0CHBV^^Full|||20150506080757||||N|||
SERPLAS^P|Laboperator||||||||F[CR]R|1|^^^0CHBV
|5.27E+04·IU/mL|IU/mL||||F||Laboperator|2015050
6081919|20150506110503|50549_30071[CR]C|1|I|F;M
7|G[CR]P|17[CR]O|1|RDR00779^GD0609461^A03^^GG0
203180||^^^0CHBV^^Full|[ETB]59[CR] [LF]
HOST 13:15:10,778 [ACK]
c4800 13:15:10,778 [STX]1|||20150506080757||||N||||SERPLAS^P|Labope
rator||||||||F[CR]R|1|^^^0CHBV|Target·Not·Dete
cted|||||F||Laboperator|20150506081919|20150506
110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|18[CR]O
|1|RDR00778^GD0609461^B03^^GG0203180||^^^0CHBV
^^Full|||20150506080757[ETB]9B[CR] [LF]
HOST 13:15:10,903 [ACK]
c4800 13:15:10,903 [STX]2|||N||||SERPLAS^P|Laboperator||||||||F[
CR]R|1|^^^0CHBV|Invalid||||F||Laboperator|2015
0506081919|20150506110503|50549_30071[CR]C|1|I|
F;R4801,M7|G[CR]P|19[CR]O|1|RDR00777^GD0609461^
C03^^GG0203180||^^^0CHBV^^Full|||2015050608075
7||||N||||SERPLAS^P|Lab[ETB]70[CR] [LF]
HOST 13:15:11,028 [ACK]
c4800 13:15:11,028 [STX]3operator||||||||F[CR]R|1|^^^0CHBV|1.57E+
05·IU/mL|IU/mL||||F||Laboperator|20150506081919
|20150506110503|50549_30071[CR]C|1|I|F;M7|G[CR]
P|20[CR]O|1|RDR00776^GD0609461^D03^^GG0203180|
|^^^0CHBV^^Full|||20150506080757||||N||||SERPLA
S^P|Laboperator|||||||[ETB]EE[CR] [LF]
HOST 13:15:11,153 [ACK]
c4800 13:15:11,153 [STX]4|F[CR]R|1|^^^0CHBV|4.86E+04·IU/mL|IU/mL|||
||F||Laboperator|20150506081919|20150506110503|
50549_30071[CR]C|1|I|F;M7|G[CR]P|21[CR]O|1|RDR0
0775^GD0609461^E03^^GG0203180||^^^0CHBV^^Full|
||20150506080757||||N||||SERPLAS^P|Laboperator|
|||||||F[CR]R|1|^^^0CHBV|[ETB]DB[CR] [LF]
HOST 13:15:11,278 [ACK]
c4800 13:15:11,293 [STX]56.14E+04·IU/mL|IU/mL||||F||Laboperator|20
150506081919|20150506110503|50549_30071[CR]C|1|
I|F;M7|G[CR]P|22[CR]O|1|RDR00774^GD0609461^F03^

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^^GG0203180||^/^0CHBV^^Full|||20150506080757|||
|N||||SERPLAS^P|Laboperator|||||||F[CR]R|1|^/^
^0CHBV|1.73E+05 ·IU/mL|I[ETB]AC[CR] [LF]
HOST 13:15:11,418 [ACK]
c4800 13:15:11,434 [STX]6U/mL|||F||Laboperator|20150506081919|201
50506110503|50549_30071[CR]C|1|I|F;M7|G[CR]P|23
[CR]O|1|RDR00773^GD0609461^G03^^GG0203180||^/^
0CHBV^^Full|||20150506080757|||N||||SERPLAS^P|
Laboperator|||||||F[CR]R|1|^/^0CHBV|4.43E+04 ·
IU/mL|IU/mL|||F||Labop[ETB]FE[CR] [LF]
HOST 13:15:11,558 [ACK]
c4800 13:15:11,574 [STX]7erator|20150506081919|20150506110503|5054
9_30071[CR]C|1|I|F;M7|G[CR]P|24[CR]O|1|RDR00772
^GD0609461^H03^^GG0203180||^/^0CHBV^^Full|||20
150506080757|||N||||SERPLAS^P|Laboperator|||||
|||||F[CR]R|1|^/^0CHBV|7.57E+04 ·IU/mL|IU/mL|||F
||Laboperator|201505060[ETB]7B[CR] [LF]
HOST 13:15:11,683 [ACK]
c4800 13:15:11,683 [STX]081919|20150506110503|50549_30071[CR]C|1|I
|F;M7|G[CR]L|1|N[CR] [ETX]38[CR] [LF]
HOST 13:15:11,792 [ACK]
c4800 13:15:11,808 [EOT]

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HBV HL7 communication traces

Order download

```
c4800 16:41:40,850 [VT]
c4800 16:41:40,850 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130163728+0100||QBP^Q11^QBP_Q
    11|818fc28b-bc2d-4c10-a242-989669554abb|P|2.5.1
    |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
c4800 16:41:40,850 QPD|WOS^Work·Order·Step^IHE_LAW|67828cfab-bee6-45
    98-9e32-bb39e59cccd75|A0085273927[CR]
c4800 16:41:40,850 RCP|I||R^HL70394[CR]
c4800 16:41:40,850 [FS] [CR]

*      16:41:41,115 ACK Inquiry: ExMID = 818fc28b-bc2d-4c10-a242-9
    89669554abb
HOST   16:41:41,115 [VT]
HOST   16:41:41,115 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130164141+0100||RSP^K11
    ^RSP_K11|3eee9570-bbdd-4061-b2dd-b442553712ce|P
    |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST   16:41:41,135 MSA|AA|818fc28b-bc2d-4c10-a242-989669554abb[CR]
HOST   16:41:41,145 QAK|67828cfab-bee6-4598-9e32-bb39e59cccd75|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST   16:41:41,160 QPD|WOS^Work·Order·Step^IHE_LAW|67828cfab-bee6-4
    598-9e32-bb39e59cccd75|A0085273927[CR]
HOST   16:41:41,172 [FS] [CR]

*      16:41:42,042 Order: SID^MID = A0085273927^2097fafb-bad4-4a3
    1-bbaf-37289c365c3b
HOST   16:41:42,052 [VT]
HOST   16:41:42,052 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130164142+0100||OML^O33
    ^OML_O33|2097fafb-bad4-4a31-bbaf-37289c365c3b|P
    |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST   16:41:42,062 SPM|1|A0085273927&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
HOST   16:41:42,072 SAC|||A0085273927[CR]
HOST   16:41:42,082 ORC|NW|||||||2.02E+13[CR]
HOST   16:41:42,092 OBR||12345||0CHBV^0CHBV^99ROC[CR]
HOST   16:41:42,108 [FS] [CR]

c4800 16:41:42,340 [VT]
c4800 16:41:42,340 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130163729+0100||ORI^O34^ORI_O
    34|afe49504-2be1-4503-85a7-7800bd92d288|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
c4800 16:41:42,340 MSA|AA|2097fafb-bad4-4a31-bbaf-37289c365c3b[CR]
c4800 16:41:42,340 SPM|1|A0085273927&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
c4800 16:41:42,340 SAC|||A0085273927[CR]
c4800 16:41:42,340 ORC|OK|12345|||SC[CR]
c4800 16:41:42,340 [FS] [CR]
```

Result upload

```
C4800 12:57:24,289 [VT]
C4800 12:57:24,289 MSH|^~\&|cobas·4800·software·2.2.0.1509^50549_3
```

0071^M|""|LIS|LIS · Facility|20150520125826+0200|
 |OUL^R22^OUL_R22|2d830b0f-9809-4282-9821-935593
 bff481|P|2.5.1|||ER|AL| |UNICODE · UTF-8|||LAB-29^
 IHE[CR]

C4800 12:57:24,289 SPM|1|OPHHXV0017G1B24&ROCHE||"|||||||Q^^HL7036
 9 [CR]

C4800 12:57:24,289 SAC|||OPHHXV0017G1B24[CR]

C4800 12:57:24,289 INV|HPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]

C4800 12:57:24,289 OBR||"|||OCHBV^OCHBV^99ROC||20150506080757[CR]

C4800 12:57:24,289 ORC|SC||||CM[CR]

C4800 12:57:24,289 OBX|1|DR|RunTimeRange^Run · Execution · Time · Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50506081919^20150506110503||||"|||F|||||Laboper
 ator||C4800^Roche~50549_30071^Roche|20150506110
 503[CR]

C4800 12:57:24,289 OBX|2|ST|OCHBV^OCHBV^99ROC|1.1|1.25E+07 · IU/mL|U
 /mL^^UCUM| |Full^^99ROC|||F|||||Laboperator||C48
 00^Roche~50549_30071^Roche|20150506110503[CR]

C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
 609461^^99ROC|A01^^99ROC[CR]

C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
 203180^^99ROC[CR]

C4800 12:57:24,289 NTE|1||F;M7[CR]

C4800 12:57:24,289 NTE|2||Ct:1 · (MMx · 1), 19.00[CR]

C4800 12:57:24,289 NTE|3||[CR]

C4800 12:57:24,289 SPM|2|OPLHXV0017G1B24&ROCHE||"|||||||Q^^HL7036
 9 [CR]

C4800 12:57:24,289 SAC|||OPLHXV0017G1B24[CR]

C4800 12:57:24,289 INV|LPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]

C4800 12:57:24,289 OBR||"|||OCHBV^OCHBV^99ROC||20150506080757[CR]

C4800 12:57:24,289 ORC|SC||||CM[CR]

C4800 12:57:24,289 OBX|1|DR|RunTimeRange^Run · Execution · Time · Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50506081919^20150506110503||||"|||F|||||Laboper
 ator||C4800^Roche~50549_30071^Roche|20150506110
 503[CR]

C4800 12:57:24,289 OBX|2|ST|OCHBV^OCHBV^99ROC|1.1|1.31E+03 · IU/mL|U
 /mL^^UCUM| |Full^^99ROC|||F|||||Laboperator||C48
 00^Roche~50549_30071^Roche|20150506110503[CR]

C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
 609461^^99ROC|B01^^99ROC[CR]

C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
 203180^^99ROC[CR]

C4800 12:57:24,289 NTE|1||F;M7[CR]

C4800 12:57:24,289 NTE|2||Ct:1 · (MMx · 1), 32.30[CR]

C4800 12:57:24,289 NTE|3||[CR]

C4800 12:57:24,289 SPM|3|ON1HXV0017G1B24&ROCHE||"|||||||Q^^HL7036
 9 [CR]

C4800 12:57:24,289 SAC|||ON1HXV0017G1B24[CR]

C4800 12:57:24,289 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
 R]

C4800 12:57:24,289 OBR||"|||OCHBV^OCHBV^99ROC||20150506080757[CR]

C4800 12:57:24,289 ORC|SC||||CM[CR]

C4800 12:57:24,289 OBX|1|DR|RunTimeRange^Run · Execution · Time · Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50506081919^20150506110503||||"|||F|||||Laboper
 ator||C4800^Roche~50549_30071^Roche|20150506110
 503[CR]

C4800 12:57:24,289 OBX|2|ST|OCHBV^OCHBV^99ROC|1.1|Target · Not · Detec

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ted|||Full^^99ROC|||F||||Laboperator||C4800^Ro  
che~50549_30071^Roche|20150506110503[CR]  
C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO  
609461^^99ROC|C01^^99ROC[CR]  
C4800 12:57:24,289 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GGO  
203180^^99ROC[CR]  
C4800 12:57:24,289 NTE|1||F;M7[CR]  
C4800 12:57:24,289 NTE|2||[CR]  
C4800 12:57:24,289 NTE|3||[CR]  
C4800 12:57:24,289 [FS] [CR]  
  
*      12:57:26,060 ACK Result: ExMID = 2d830b0f-9809-4282-9821-93  
5593bff481  
  
HOST   12:57:26,070 [VT]  
HOST   12:57:26,070 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2  
.2.0.1437^SN1234^M|LAB·Name|20150520125726+0200  
||ACK^R22^ACK|13108bcd-069f-46c8-9f05-3d5e54bcd  
3ee|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]  
HOST   12:57:26,090 MSA|AA|2d830b0f-9809-4282-9821-935593bff481[CR]  
HOST   12:57:26,100 [FS] [CR]
```

HCV ASTM communication traces

Order download

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HOST 14:29:16,727 [ENQ]
c4800 14:29:16,742 [ACK]
HOST 14:29:16,758 [STX]1H|\^&|||ASTM32^24f34399-85b8-4b35-b2a9-5c
31fc14e649^INSTALL^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161026142916[CR][ETX]38[CR]
[LF]
c4800 14:29:16,760 [ACK]
HOST 14:29:16,770 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:29:16,770 [ACK]
HOST 14:29:16,780 [STX]3O|1|RDR09458173|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR][ETX]25[CR][LF]
c4800 14:29:16,780 [ACK]
HOST 14:29:16,790 [STX]4O|2|RDR09458174|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR][ETX]28[CR][LF]
c4800 14:29:16,790 [ACK]
HOST 14:29:16,800 [STX]5O|3|RDR09458175|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|DILSERPLAS^P|NUER|||||||
|||O[CR][ETX]04[CR][LF]
c4800 14:29:16,800 [ACK]
HOST 14:29:16,810 [STX]6O|4|RDR09458176|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR][ETX]2E[CR][LF]
c4800 14:29:16,810 [ACK]
HOST 14:29:16,820 [STX]7O|5|RDR09458177|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|DILSERPLAS^P|NUER|||||||
|||O[CR][ETX]0A[CR][LF]
c4800 14:29:16,820 [ACK]
HOST 14:29:16,830 [STX]8O|6|RDR09458178|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR][ETX]2C[CR][LF]
c4800 14:29:16,830 [ACK]
HOST 14:29:16,840 [STX]1O|7|RDR09458179|||^ODHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR][ETX]2F[CR][LF]
c4800 14:29:16,840 [ACK]
HOST 14:29:16,850 [STX]2L|1|N[CR][ETX]05[CR][LF]
c4800 14:29:16,850 [ACK]
HOST 14:29:16,850 [EOT]

c4800 14:29:17,150 [ENQ]
HOST 14:29:17,210 [ACK]
c4800 14:29:17,210 [STX]1H|\^&|||cobas·4800·software^8f432612-dcfe
-4bb4-a726-bb6b55a3d266^Unknown^2.2.0.1509^1394
.LIS2|||||LIS|RSUPL^REAL|P|1|20161026142739[CR]
P|1|[CR]O|1|RDR09458173|||^ODHCV^^Full|||201610
26142739||||N|||SERPLAS^P|NUER|||||||X[CR]O|
2|RDR09458174|||^OD[ETB]A0[CR][LF]
HOST 14:29:17,330 [ACK]
c4800 14:29:17,340 [STX]2HCV^^Full|||20161026142739||||N|||SERPLA
S^P|NUER|||||||X[CR]O|3|RDR09458175|||^ODHCV
^^Full|||20161026142739||||N|||DILSERPLAS^P|NU
ER|||||||X[CR]O|4|RDR09458176|||^ODHCV^^Full

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||||20161026142739|||N|||SERPLAS^P|NUER|||||||
||X[CR]O|5|RDR094581[ETB]78[CR] [LF]
HOST 14:29:17,450 [ACK]
c4800 14:29:17,460 [STX]377|||^0DHCV^^Full|||20161026142739|||N|
|||DILSERPLAS^P|NUER|||||||X[CR]O|6|RDR094581
78|||^0DHCV^^Full|||20161026142739|||N|||SER
PLAS^P|NUER|||||||X[CR]O|7|RDR09458179|||^0D
HCV^^Full|||20161026142739|||N|||SERPLAS^P|NU
ER|||||||X[CR]L|1|[ETB]4F[CR] [LF]
HOST 14:29:17,620 [ACK]
c4800 14:29:17,620 [STX]4N[CR] [ETX]92[CR] [LF]
HOST 14:29:17,730 [ACK]
c4800 14:29:17,730 [EOT]

c4800 14:30:23,369 [ENQ]
HOST 14:30:23,494 [ACK]
c4800 14:30:23,494 [STX]1H|\^&|||cobas·4800^4c42e85f-85e9-4724-96c
a-598c53925853^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20161026142845[CR]Q|1|^
RDR09458173[CR]L|1|N[CR] [ETX]D1[CR] [LF]
HOST 14:30:23,806 [ACK]
c4800 14:30:23,806 [EOT]

*      14:30:26,020 TSDWN: SID = RDR09458173

HOST 14:30:26,051 [ENQ]
c4800 14:30:26,067 [ACK]
HOST 14:30:26,082 [STX]1H|\^&|||ASTM32^9980ad58-d01f-4c3a-9d8c-51
e67e009089^INSTALL^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161026143023|[CR] [ETX]DE[CR
] [LF]
c4800 14:30:26,084 [ACK]
HOST 14:30:26,094 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 14:30:26,094 [ACK]
HOST 14:30:26,104 [STX]30|1|RDR09458173|||^0DHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR] [ETX]25[CR] [LF]
c4800 14:30:26,104 [ACK]
HOST 14:30:26,114 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 14:30:26,114 [ACK]
HOST 14:30:26,114 [EOT]

c4800 14:30:26,444 [ENQ]
HOST 14:30:26,564 [ACK]
c4800 14:30:26,574 [STX]1H|\^&|||cobas·4800^2b7ac39e-6345-4fba-930
b-be3bbfd10afd^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20161026142845[CR]Q|1|^
RDR09458174[CR]L|1|N[CR] [ETX]7E[CR] [LF]
HOST 14:30:26,684 [ACK]
c4800 14:30:26,694 [EOT]

*      14:30:28,912 TSDWN: SID = RDR09458174

HOST 14:30:28,943 [ENQ]
c4800 14:30:28,943 [ACK]
HOST 14:30:28,975 [STX]1H|\^&|||ASTM32^4a56371e-6cc7-4b5e-ab4f-9b
34bc8f2d98^INSTALL^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161026143026|[CR] [ETX]9C[CR
] [LF]

```

```
c4800 14:30:28,977 [ACK]
HOST 14:30:28,987 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 14:30:28,987 [ACK]
HOST 14:30:28,997 [STX]3O|1|RDR09458174|||^0DHCV^^Full|||2.01405
E+13||||N|||2.01405E+13|SERPLAS^P|NUER|||||||
O[CR] [ETX]26[CR] [LF]
c4800 14:30:28,997 [ACK]
HOST 14:30:29,007 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 14:30:29,007 [ACK]
HOST 14:30:29,007 [EOT]
```

Result upload

```
c4800 09:12:04,427 [ENQ]
HOST 09:12:04,458 [ACK]
c4800 09:12:04,458 [STX]1H|\^&|||cobas·4800·software^9aebca00-be57-
4d1d-8b11-5227f82f3f12^Laboperator^2.2.0.1509^13
94.LIS2||||LIS|RSUPL^REAL|P|1|20150506091231[CR]
]P|1[CR]O|1|0PHHXV0016G1K15^CD0500085^A01^^^EG01
00295|||^0DHCV^^Full|||20150505153212||||Q||||^
HPosCtrl|Lab[ETB]AD[CR] [LF]
HOST 09:12:04,583 [ACK]
c4800 09:12:04,583 [STX]2operator|||||||P[CR]R|1|^0DHCV|1.29E+0
5·IU/mL|IU/mL||||P||Laboperator|20150505161934|2
0150505174635|123456_12345[CR]C|1|I|F;NONE|G[CR]
C|2|I|Ct:3·(MMx·1),28.88|G[CR]P|2[CR]O|1|0PLHXV0
016G1K15^CD0500085^B01^^^EG0100295|||^0DHCV^^Fu
11|||20150505153212|||[ETB]BE[CR] [LF]
HOST 09:12:04,708 [ACK]
c4800 09:12:04,708 [STX]3||Q||||^LPosCtrl|Laboperator|||||||P[CR]
R|1|^0DHCV|9.26E+02·IU/mL|IU/mL||||P||Labopera
tor|20150505161934|20150505174635|123456_12345|[C
R]C|1|I|F;NONE|G[CR]C|2|I|Ct:3·(MMx·1),35.90|G[C
R]P|3[CR]O|1|0N1HXV0016G1K15^CD0500085^C01^^^EG0
100295|||^0DHCV^^Full[ETB]3A[CR] [LF]
HOST 09:12:04,833 [ACK]
c4800 09:12:04,833 [STX]41||||20150505153212||||Q||||^NEGCONTROL|Lab
operator|||||||P[CR]R|1|^0DHCV|Target·Not·De
tected|||||P||Laboperator|20150505161934|2015050
5174635|123456_12345[CR]C|1|I|F;NONE|G[CR]L|1|N[
CR] [ETX]CC[CR] [LF]
HOST 09:12:04,958 [ACK]
c4800 09:12:04,958 [EOT]
```

HCV HL7 communication traces

Order download

```
c4800 16:32:33,886 [VT]
c4800 16:32:33,886 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130162821+0100||QBP^Q11^QBP_Q
    11|80187f0b-f8f3-4563-861a-21cf354813ef|P|2.5.1
    |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
c4800 16:32:33,886 QPD|WOS^Work·Order·Step^IHE_LAW|7eddc010-e0cb-4d
    79-ad65-29acab3cff6c|A0036585420[CR]
c4800 16:32:33,886 RCP|I||R^HL70394[CR]
c4800 16:32:33,886 [FS] [CR]

*      16:32:34,097 ACK Inquiry: ExMID = 80187f0b-f8f3-4563-861a-2
        1cf354813ef
HOST   16:32:34,107 [VT]
HOST   16:32:34,107 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130163234+0100||RSP^K11
    ^RSP_K11|f1759178-240a-4961-a04f-7e44d2fd9c4c|P
    |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST   16:32:34,127 MSA|AA|80187f0b-f8f3-4563-861a-21cf354813ef[CR]
HOST   16:32:34,142 QAK|7eddc010-e0cb-4d79-ad65-29acab3cff6c|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST   16:32:34,154 QPD|WOS^Work·Order·Step^IHE_LAW|7eddc010-e0cb-4
    d79-ad65-29acab3cff6c|A0036585420[CR]
HOST   16:32:34,164 [FS] [CR]

*      16:32:35,054 Order: SID^MID = A0036585420^f1de332e-1b89-4f3
        5-a3ae-fb392b22de28
HOST   16:32:35,054 [VT]
HOST   16:32:35,064 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130163235+0100||OML^O33
    ^OML_O33|f1de332e-1b89-4f35-a3ae-fb392b22de28|P
    |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST   16:32:35,074 SPM|1|A0036585420&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
HOST   16:32:35,084 SAC|||A0036585420[CR]
HOST   16:32:35,094 ORC|NW|||||||2.01E+13[CR]
HOST   16:32:35,110 OBR||12345||0DHCV^0DHCV^99ROC[CR]
HOST   16:32:35,122 [FS] [CR]

c4800 16:32:35,362 [VT]
c4800 16:32:35,362 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161130162822+0100||ORI^O34^ORI_O
    34|1eb1103d-ff4d-4951-b620-2ff49eb67509|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
c4800 16:32:35,362 MSA|AA|f1de332e-1b89-4f35-a3ae-fb392b22de28[CR]
c4800 16:32:35,362 SPM|1|A0036585420&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
c4800 16:32:35,362 SAC|||A0036585420[CR]
c4800 16:32:35,362 ORC|OK|12345|||SC[CR]
c4800 16:32:35,362 [FS] [CR]
```

Result upload

```
C4800 12:56:04,803 [VT]
C4800 12:56:04,803 MSH|^~\&|cobas·4800·software·2.2.0.1509^50549_3
```

```

0071^M|""|LIS|LIS·Facility|20150520125706+0200|
|OUL^R22^OUL_R22|d497474e-fd65-46f0-acab6-4c2b62
8cf43a|P|2.5.1||||ER|AL|UNICODE·UTF-8||||LAB-29^
IHE[CR]
C4800 12:56:04,803 SPM|1|OPHHXV0016G1C02&ROCHE||"|||||||Q^^HL7036
9 [CR]
C4800 12:56:04,803 SAC|||OPHHXV0016G1C02[CR]
C4800 12:56:04,803 INV|HPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 12:56:04,803 OBR||"|||ODHCV^ODHCV^99ROC||20150505134132[CR]
C4800 12:56:04,803 ORC|SC||||CM[CR]
C4800 12:56:04,803 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50505141134^20150505171509||||"|||F|||||RocheNo
Check||C4800^Roche~50549_30071^Roche|2015050517
1509[CR]
C4800 12:56:04,803 OBX|2|ST|ODHCV^ODHCV^99ROC|1.1|2.28E+07·IU/mL|U
/mL^^UCUM||Full^^99ROC|||F|||||Laboperator||C48
00^Roche~50549_30071^Roche|20150505171509[CR]
C4800 12:56:04,803 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
609462^^99ROC|A01^^99ROC[CR]
C4800 12:56:04,803 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
203135^^99ROC[CR]
C4800 12:56:04,803 NTE|1||F;M3,M7[CR]
C4800 12:56:04,803 NTE|2||Ct:3·(MMx·1),20.52[CR]
C4800 12:56:04,803 NTE|3||[CR]
C4800 12:56:04,803 SPM|2|OPHXV0016G1C02&ROCHE||"|||||||Q^^HL7036
9 [CR]
C4800 12:56:04,803 SAC|||OPHXV0016G1C02[CR]
C4800 12:56:04,803 INV|LPosCtrl1^^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 12:56:04,803 OBR||"|||ODHCV^ODHCV^99ROC||20150505134132[CR]
C4800 12:56:04,803 ORC|SC||||CM[CR]
C4800 12:56:04,803 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50505141134^20150505171509||||"|||F|||||RocheNo
Check||C4800^Roche~50549_30071^Roche|2015050517
1509[CR]
C4800 12:56:04,803 OBX|2|ST|ODHCV^ODHCV^99ROC|1.1|1.93E+03·IU/mL|U
/mL^^UCUM||Full^^99ROC|||F|||||Laboperator||C48
00^Roche~50549_30071^Roche|20150505171509[CR]
C4800 12:56:04,803 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
609462^^99ROC|B01^^99ROC[CR]
C4800 12:56:04,803 INV||"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
203135^^99ROC[CR]
C4800 12:56:04,803 NTE|1||F;M3,M7[CR]
C4800 12:56:04,803 NTE|2||Ct:3·(MMx·1),33.86[CR]
C4800 12:56:04,803 NTE|3||[CR]
C4800 12:56:04,803 [FS] [CR]

```

* 12:56:06,561 ACK Result: ExMID = d497474e-fd65-46f0-acab6-4c2b628cf43a

```

HOST 12:56:06,571 [VT]
HOST 12:56:06,571 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150520125606+0200
||ACK^R22^ACK|a70d3f11-2a41-464f-92e6-552a05fb6
fca|P|2.5.1|||||UNICODE·UTF-8||||LAB-29^IHE[CR]
HOST 12:56:06,608 MSA|AA|d497474e-fd65-46f0-acab6-4c2b628cf43a[CR]
HOST 12:56:06,618 [FS] [CR]

```

HCV GT ASTM communication traces

Order download

```
c4800 10:25:10,261 [ENQ]
HOST   10:25:10,386 [ACK]
c4800 10:25:10,386 [STX]1H|\^&|||cobas·4800^2c861adc-f674-4bbc-ab3
e-898168c03687^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20161122102056[CR]Q|1|^
A0040413033[CR]L|1|N[CR] [ETX]41[CR] [LF]
HOST   10:25:10,495 [ACK]
c4800 10:25:10,495 [EOT]

*      10:25:12,705 TSDWN: SID = A0040413033

HOST   10:25:12,736 [ENQ]
c4800 10:25:12,752 [ACK]
HOST   10:25:12,767 [STX]1H|\^&|||ASTM32^b7e21e02-2b7a-47b9-846c-63
bd370bd7c8^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161122102510|[CR] [ETX]36[CR]
] [LF]
c4800 10:25:12,769 [ACK]
HOST   10:25:12,779 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 10:25:12,779 [ACK]
HOST   10:25:12,789 [STX]3O|1|A0040413033|||^0EHCVGT^^Full|||2.01E
+13||||N|||2.01E+13|SERPLAS^P|BDI|||||||O[CR]
[ETX]CA[CR] [LF]
c4800 10:25:12,789 [ACK]
HOST   10:25:12,799 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 10:25:12,799 [ACK]
HOST   10:25:12,799 [EOT]

c4800 10:25:13,189 [ENQ]
HOST   10:25:13,259 [ACK]
c4800 10:25:13,269 [STX]1H|\^&|||cobas·4800^365ae304-0a8f-4a4a-82b
7-d348a5108f7d^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20161122102056[CR]Q|1|^
A0049156124[CR]L|1|N[CR] [ETX]0D[CR] [LF]
HOST   10:25:13,379 [ACK]
c4800 10:25:13,389 [EOT]

*      10:25:15,592 TSDWN: SID = A0049156124

HOST   10:25:15,607 [ENQ]
c4800 10:25:15,607 [ACK]
HOST   10:25:15,623 [STX]1H|\^&|||ASTM32^6fa91f31-85de-40ce-b492-05
6846e24a0e^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161122102513|[CR] [ETX]0B[CR]
] [LF]
c4800 10:25:15,623 [ACK]
HOST   10:25:15,638 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 10:25:15,638 [ACK]
HOST   10:25:15,654 [STX]3O|1|A0049156124|||^0EHCVGT^^Full|||2.01E
+13||||N|||2.01E+13|SERPLAS^P|BDI|||||||O[CR]
[ETX]D8[CR] [LF]
c4800 10:25:15,654 [ACK]
HOST   10:25:15,670 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 10:25:15,672 [ACK]
```

```

HOST 10:25:15,672 [EOT]

c4800 10:25:15,952 [ENQ]
HOST 10:25:16,012 [ACK]
c4800 10:25:16,012 [STX]1H|\^&|||cobas·4800^394e22cc-95c8-427e-a96
1-a115493916bc^Laboperator^2.2.0.1509^1394.LIS2
|||||LIS|TSREQ^REAL|P|1|20161122102056[CR]Q|1|^
A0017120718[CR]L|1|N[CR] [ETX]B6[CR] [LF]
HOST 10:25:16,112 [ACK]
c4800 10:25:16,122 [EOT]

* 10:25:18,300 TSDWN: SID = A0017120718

HOST 10:25:18,315 [ENQ]
c4800 10:25:18,315 [ACK]
HOST 10:25:18,331 [STX]1H|\^&|||ASTM32^4de5e17d-d12c-4f9f-9c98-d2
8274300bef^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20161122102516|[CR] [ETX]7A[CR]
] [LF]
c4800 10:25:18,331 [ACK]
HOST 10:25:18,362 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 10:25:18,364 [ACK]
HOST 10:25:18,374 [STX]3O|1|A0017120718|||^0EHCVGT^^Full|||2.01E
+13||||N|||2.01E+13|SERPLAS^P|BDI|||||||O[CR]
[ETX]D3[CR] [LF]
c4800 10:25:18,374 [ACK]
HOST 10:25:18,394 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 10:25:18,394 [ACK]
HOST 10:25:18,394 [EOT]

```

Result upload

```

c4800 11:02:53,974 [ENQ]
HOST 11:02:54,473 [ACK]
c4800 11:02:54,473 [STX]1H|\^&|||cobas·4800·software^d9171f33-1bf8-
424c-bf2f-e4e015b17072^RocheCheck^2.2.0.1509^139
4.LIS2|||||LIS|RSUPL^REAL|P|1|20150507110320[CR]
P|1[CR]O|1|EPCHXV0016G1K83^GD0609482^A01:B01:C01
^^^GG0203193|||^0EHCVGT^^Full|||20150506132516|
|||Q||||^POS[ETB]78[CR] [LF]
HOST 11:02:54,598 [ACK]
c4800 11:02:54,598 [STX]2CONTROL|Laboperator|||||||F[CR]R|1|^0E
HCVGT|Valid|||||F||Laboperator|20150506132912|20
150506163529|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|
I|MMx1Ct:1·(MMx·1),32.06;MMx2Ct:5·(MMx·2),33.36;
MMx3Ct:0·(MMx·3),29.20|G[CR]P|2[CR]O|1|0N1HXV001
6G1K83^GD0609482^D01:[ETB]F2[CR] [LF]
HOST 11:02:54,723 [ACK]
c4800 11:02:54,723 [STX]3E01:F01^^^GG0203193|||^0EHCVGT^^Full|||20
150506132516||||Q|||^NEGCONTROL|Laboperator|||||
|||||F[CR]R|1|^0EHCVGT|Valid|||||F||Laboperato
r|20150506132912|20150506163529|50549_30071[CR]C
|1|I|F;M7|G[CR]P|3[CR]O|1|RDR00766^GD0609482^G01
:H01:A02^^^GG02031[ETB]50[CR] [LF]
HOST 11:02:54,847 [ACK]
c4800 11:02:54,847 [STX]493|||^0EHCVGT^^Full|||20150506132516||||N
||||SERPLAS^P|Laboperator|||||||F[CR]R|1|^0E
HCVGT|Invalid|||||F||Laboperator|20150506132912|
20150506163529|50549_30071[CR]C|1|I|F;R4805,M7|G

```

```

[CR]P|4[CR]O|1|RDR00767^GD0609482^B02:C02:D02^^^
GG0203193||^^^0EHC[ETB]39[CR][LF]
HOST 11:02:54,972 [ACK]
c4800 11:02:54,972 [STX]5VGT^^Full|||20150506132516||||N|||SERPLAS
^P|Laboperator|||||||F[CR]R|1|^^^0EHCVGT|Indet
erminate||||F||Laboperator|20150506132912|20150
506163529|50549_30071[CR]C|1|I|F;R4806,M7|G[CR]P
|5[CR]O|1|RDR00768^GD0609482^E02:F02:G02^^^GG020
3193||^^^0EHCVGT^^[ETB]F7[CR][LF]
HOST 11:02:55,097 [ACK]
c4800 11:02:55,097 [STX]6Full|||20150506132516||||N|||SERPLAS^P|La
boperator|||||||F[CR]R|1|^^^0EHCVGT|Indetermin
ate|||||F||Laboperator|20150506132912|2015050616
3529|50549_30071[CR]C|1|I|F;R4806,M7|G[CR]P|6[CR
]O|1|RDR00769^GD0609482^H02:A03:B03^^^GG0203193|
|^^^0EHCVGT^^Full|[ETB]57[CR][LF]
HOST 11:02:55,222 [ACK]
c4800 11:02:55,222 [STX]7|||20150506132516||||N|||SERPLAS^P|Laboper
ator|||||||F[CR]R|1|^^^0EHCVGT|Indeterminate|||
|||F||Laboperator|20150506132912|20150506163529|
50549_30071[CR]C|1|I|F;R4806,M7|G[CR]P|7[CR]O|1|
RDR00770^GD0609482^C03:D03:E03^^^GG0203193||^^^0
EHCVGT^^Full|||201[ETB]CF[CR][LF]
HOST 11:02:55,347 [ACK]
c4800 11:02:55,347 [STX]050506132516||||N|||SERPLAS^P|Laboperator|
|||||||F[CR]R|1|^^^0EHCVGT|Failed|||||F||Labope
rator|20150506132912|20150506163529|50549_30071[
CR]C|1|I|F;X4,M7|G[CR]P|8[CR]O|1|RDR00771^GD0609
482^F03:G03^^^GG0203193||^^^0EHCVGT^^Full|||
20150506132516||||[ETB]CE[CR][LF]
HOST 11:02:55,471 [ACK]
c4800 11:02:55,471 [STX]1N||||SERPLAS^P|Laboperator|||||||F[CR]R|
1|^^^0EHCVGT|Failed|||||F||Laboperator|201505061
32912|20150506163529|50549_30071[CR]C|1|I|F;X3,X
4,M7|G[CR]L|1|N[CR][ETX]05[CR][LF]
HOST 11:02:55,581 [ACK]
c4800 11:02:55,596 [EOT]

```

HCV GT HL7 communication traces

Order download

```
c4800 10:22:39,470 [VT]
c4800 10:22:39,470 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161201101826+0100||QBP^Q11^QBP_Q
    11|ea658bb5-a5d1-4966-9f1c-ae3d837dc105|P|2.5.1
    |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
c4800 10:22:39,470 QPD|WOS^Work·Order·Step^IHELAW|dd55a076-e748-40
    05-af47-2a14d2ca0ec7|A0094974291[CR]
c4800 10:22:39,470 RCP|I||R^HL70394[CR]
c4800 10:22:39,470 [FS] [CR]

*      10:22:39,686 ACK Inquiry: ExMID = ea658bb5-a5d1-4966-9f1c-a
    e3d837dc105
HOST   10:22:39,696 [VT]
HOST   10:22:39,706 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161201102239+0100||RSP^K11
    ^RSP_K11|2b427a4c-a5a7-49bf-8696-2866806485c2|P
    |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST   10:22:39,732 MSA|AA|ea658bb5-a5d1-4966-9f1c-ae3d837dc105[CR]
HOST   10:22:39,744 QAK|dd55a076-e748-4005-af47-2a14d2ca0ec7|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST   10:22:39,754 QPD|WOS^Work·Order·Step^IHE_LAW|dd55a076-e748-4
    005-af47-2a14d2ca0ec7|A0094974291[CR]
HOST   10:22:39,764 [FS] [CR]

*      10:22:40,644 Order: SID^MID = A0094974291^2f9b1677-e9bb-4fd
    7-94ba-6c9040ec4ac1
HOST   10:22:40,644 [VT]
HOST   10:22:40,654 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161201102240+0100||OML^O33
    ^OML_O33|2f9b1677-e9bb-4fd7-94ba-6c9040ec4ac1|P
    |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST   10:22:40,664 SPM|1|A0094974291&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
HOST   10:22:40,674 SAC|||A0094974291[CR]
HOST   10:22:40,684 ORC|NW|||||||2.02E+13[CR]
HOST   10:22:40,772 OBR||12345||0EHCVGT^0EHCVGT^99ROC[CR]
HOST   10:22:40,792 [FS] [CR]

c4800 10:22:41,142 [VT]
c4800 10:22:41,142 MSH|^~\&|cobas·4800·software·2.2.0.1509|""|LIS|
    LIS·Facility|20161201101828+0100||ORI^O34^ORI_O
    34|b1c240eb-79a4-464b-b27b-7d7edddf08b3|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
c4800 10:22:41,142 MSA|AA|2f9b1677-e9bb-4fd7-94ba-6c9040ec4ac1[CR]
c4800 10:22:41,142 SPM|1|A0094974291&ROCHE||SERPLAS^^99ROC||||||P
    ^^HL70369[CR]
c4800 10:22:41,142 SAC|||A0094974291[CR]
c4800 10:22:41,142 ORC|OK|12345|||SC[CR]
c4800 10:22:41,142 [FS] [CR]
```

Result upload

```
C4800 12:58:49,908 [VT]
C4800 12:58:49,908 MSH|^~\&|cobas·4800·software·2.2.0.1509^50549_3
```

```

0071^M|""|LIS|LIS·Facility|20150520125952+0200|
|OUL^R22^OUL_R22|95823a07-3473-4499-a183-befcfb7
0705d3|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
IHE[CR]
C4800 12:58:49,908 SPM|1|EPCHXV0016G1K83&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 12:58:49,908 SAC|||EPCHXV0016G1K83[CR]
C4800 12:58:49,908 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 12:58:49,908 OBR||"||0EHCVGT^0EHCVGT^99ROC||20150506132516[
CR]
C4800 12:58:49,908 ORC|SC||||CM[CR]
C4800 12:58:49,908 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50506132912^20150506163529||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150506163
529[CR]
C4800 12:58:49,908 OBX|2|ST|0EHCVGT^0EHCVGT^99ROC|1.1|Valid|||Full
^^99ROC|||F|||||Laboperator||C4800^Roche~50549_
30071^Roche|20150506163529[CR]
C4800 12:58:49,908 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
609482^^99ROC|A01:B01:C01^^99ROC[CR]
C4800 12:58:49,908 INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
203193^^99ROC[CR]
C4800 12:58:49,908 NTE|1||F;M7[CR]
C4800 12:58:49,908 NTE|2||MMx1Ct:1·(MMx·1),32.06;MMx2Ct:5·(MMx·2),
33.36;MMx3Ct:0·(MMx·3),29.20[CR]
C4800 12:58:49,908 NTE|3||[CR]
C4800 12:58:49,908 SPM|2|0N1HXV0016G1K83&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 12:58:49,908 SAC|||0N1HXV0016G1K83[CR]
C4800 12:58:49,908 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 12:58:49,908 OBR||"||0EHCVGT^0EHCVGT^99ROC||20150506132516[
CR]
C4800 12:58:49,908 ORC|SC||||CM[CR]
C4800 12:58:49,908 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50506132912^20150506163529||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150506163
529[CR]
C4800 12:58:49,908 OBX|2|ST|0EHCVGT^0EHCVGT^99ROC|1.1|Valid|||Full
^^99ROC|||F|||||Laboperator||C4800^Roche~50549_
30071^Roche|20150506163529[CR]
C4800 12:58:49,908 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|GDO
609482^^99ROC|D01:E01:F01^^99ROC[CR]
C4800 12:58:49,908 INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|GG0
203193^^99ROC[CR]
C4800 12:58:49,908 NTE|1||F;M7[CR]
C4800 12:58:49,908 NTE|2||[CR]
C4800 12:58:49,908 NTE|3||[CR]
C4800 12:58:49,908 [FS] [CR]

*      12:58:50,548 ACK Result: ExMID = 95823a07-3473-4499-a183-be
          fcb70705d3

```

```

HOST 12:58:50,558 [VT]
HOST 12:58:50,558 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
          .2.0.1437^SN1234^M|LAB·Name|20150520125850+0200

```

```
||ACK^R22^ACK|a0659444-4871-4642-be17-a72567208  
f0c|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]  
HOST 12:58:50,578 MSA|AA|95823a07-3473-4499-a183-befcb70705d3[CR]  
HOST 12:58:50,590 [FS] [CR]
```

HIV-1 ASTM communication traces

Order download

```
c4800 14:21:39,197 [ENQ]
HOST   14:21:39,243 [ACK]
c4800 14:21:39,243 [STX]1H|\^&|||cobas·4800^8fff9329-6f44-40d4-860
                           2-2162e7dcd6a6^Laboperator^2.2.0.1509^1394.LIS2
                           |||||LIS|TSREQ^REAL|P|1|20161109141514[CR]Q|1|^
                           HIVLIS01[CR]L|1|N[CR] [ETX]E9[CR] [LF]
HOST   14:21:39,353 [ACK]
c4800 14:21:39,353 [EOT]

*      14:21:41,548 TSDWN: SID = HIVLIS01

HOST   14:21:41,558 [ENQ]
c4800 14:21:41,558 [ACK]
HOST   14:21:41,578 [STX]1H|\^&|||ASTM32^ba08b102-053c-4e77-969d-a4
                           f7e25ecc75^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20161109142139|[CR] [ETX]49[CR]
                           ] [LF]
c4800 14:21:41,578 [ACK]
HOST   14:21:41,604 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 14:21:41,606 [ACK]
HOST   14:21:41,616 [STX]3O|1|HIVLIS01||^^^0BHIV1^^Full|||2.02E+13|
                           ||IN|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX]6
                           3[CR] [LF]
c4800 14:21:41,616 [ACK]
HOST   14:21:41,626 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 14:21:41,626 [ACK]
HOST   14:21:41,626 [EOT]

c4800 14:21:41,906 [ENQ]
HOST   14:21:41,966 [ACK]
c4800 14:21:41,966 [STX]1H|\^&|||cobas·4800^038131cd-a47c-45ce-8d1
                           7-370f8c4ce2a8^Laboperator^2.2.0.1509^1394.LIS2
                           |||||LIS|TSREQ^REAL|P|1|20161109141514[CR]Q|1|^
                           HIVLIS02[CR]L|1|N[CR] [ETX]37[CR] [LF]
HOST   14:21:42,076 [ACK]
c4800 14:21:42,086 [EOT]

*      14:21:44,279 TSDWN: SID = HIVLIS02

HOST   14:21:44,295 [ENQ]
c4800 14:21:44,295 [ACK]
HOST   14:21:44,311 [STX]1H|\^&|||ASTM32^589828ac-5440-487a-8f50-3c
                           b9427ace64^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20161109142142|[CR] [ETX]C1[CR]
                           ] [LF]
c4800 14:21:44,311 [ACK]
HOST   14:21:44,326 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 14:21:44,326 [ACK]
HOST   14:21:44,342 [STX]3O|1|HIVLIS02||^^^0BHIV1^^Full|||2.02E+13|
                           ||IN|||2.02E+13|DILPLAS^P|nuer|||||||O[CR] [ET
                           X]3D[CR] [LF]
c4800 14:21:44,344 [ACK]
HOST   14:21:44,354 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 14:21:44,354 [ACK]
```

```

HOST 14:21:44,354 [EOT]

c4800 14:21:44,604 [ENQ]
HOST 14:21:44,694 [ACK]
c4800 14:21:44,694 [STX]1H|\^&|||cobas·4800^820bdc0e-f182-44f6-8fd
          0-9e1d6b7a635d^Laboperator^2.2.0.1509^1394.LIS2
          |||||LIS|TSREQ^REAL|P|1|20161109141514[CR]Q|1|^
          HIVLIS03[CR]L|1|N[CR] [ETX] 6F[CR] [LF]
HOST 14:21:44,804 [ACK]
c4800 14:21:44,804 [EOT]

*      14:21:47,007 TSDWN: SID = HIVLIS03

HOST 14:21:47,023 [ENQ]
c4800 14:21:47,023 [ACK]
HOST 14:21:47,039 [STX]1H|\^&|||ASTM32^d67f2b71-d2bd-41bf-bb03-9f
          546eacaleb^RDRUSER^7.7.6^1394.LIS2|||||cobas·48
          00|TSDWN^REAL|P|1|20161109142144|[CR] [ETX] 25[CR]
          ] [LF]
c4800 14:21:47,039 [ACK]
HOST 14:21:47,070 [STX]2P|1[CR] [ETX] 3F[CR] [LF]
c4800 14:21:47,072 [ACK]
HOST 14:21:47,082 [STX]3O|1|HIVLIS03||^^^0BHIV1^^Full|||2.02E+13|
          |||N|||2.02E+13|PLAS^P|nuer|||||||O[CR] [ETX] 6
          5[CR] [LF]
c4800 14:21:47,082 [ACK]
HOST 14:21:47,102 [STX]4L|1|N[CR] [ETX] 07[CR] [LF]
c4800 14:21:47,102 [ACK]
HOST 14:21:47,102 [EOT]

```

Result upload

HIV-1 test results can be reported using two different types of measurement unit: cp/mL and IU/mL. In the example below, cp/mL has been used.

```

c4800 11:06:58,218 [ENQ]
HOST 11:06:58,280 [ACK]
c4800 11:06:58,296 [STX]1H|\^&|||cobas·4800·software^4d5b78b4-e17d-
          488c-9a9f-e786e1909dd2^RocheCheck^2.2.0.1509^139
          4.LIS2|||||LIS|RSUPL^REAL|P|1|20150507110724[CR]
          P|1[CR]O|1|OPHHXV0016G1I02^GD0609477^A01^^GG020
          3186||^^^0BHIV1^^Full|||20150505090025||||Q|||H
          HPosCtrl|Lab[ETB]48[CR] [LF]
HOST 11:06:58,421 [ACK]
c4800 11:06:58,421 [STX]2operator|||||||F[CR]R|1|^^^0BHIV1|2.52E+
          05·cp/mL|cp/mL||||F||Laboperator|20150505091210|
          20150505121332|50549_30071[CR]C|1|I|F;M7|G[CR]C|
          2|I|Ct:0·(MMx·1),25.79|G[CR]P|2[CR]O|1|0PLHXV001
          6G1I02^GD0609477^B01^^GG0203186||^^^0BHIV1^^Ful
          1|||20150505090025|||[ETB]OE[CR] [LF]
HOST 11:06:58,545 [ACK]
c4800 11:06:58,545 [STX]3|Q||||^LPosCtrl|Laboperator|||||||F[CR]R
          |1|^^^0BHIV1|3.89E+02·cp/mL|cp/mL||||F||Labopera
          tor|20150505091210|20150505121332|50549_30071[CR]
          ]C|1|I|F;M7|G[CR]C|2|I|Ct:0·(MMx·1),35.41|G[CR]P
          |3[CR]O|1|ON1HXV0016G1I02^GD0609477^C01^^GG0203
          186||^^^0BHIV1^^Full|[ETB]7D[CR] [LF]
HOST 11:06:58,670 [ACK]
c4800 11:06:58,670 [STX]4||20150505090025||||Q|||NEGCONTROL|Labop

```

```

erator|||||F[CR]R|1|^__0BHIV1|Target ·Not ·Det
ected|||||F||Laboperator|20150505091210|20150505
121332|50549_30071[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1
|RDR0010314^GD0609477^D01^__GG0203186||^__0BHIV1
^__Full|||201505050[ETB]A4[CR][LF]
HOST 11:06:58,795 [ACK]
c4800 11:06:58,795 [STX]590025||||N||||DILPLAS^P|Laboperator|||||
||F[CR]R|1|^__0BHIV1|Invalid||||F||Laboperator|
20150505091210|20150505121332|50549_30071[CR]C|1
|I|F;R4801,M7|G[CR]P|5[CR]O|1|RDR0010315^GD06094
77^E01^__GG0203186||^__0BHIV1^__Full|||2015050509
0025||||N||||DILPL[ETB]04[CR][LF]
HOST 11:06:58,920 [ACK]
c4800 11:06:58,920 [STX]6AS^P|Laboperator|||||||F[CR]R|1|^__0BHIV
1|Target ·Not ·Detected||||F||Laboperator|2015050
5091210|20150505121332|50549_30071[CR]C|1|I|F;M7
|G[CR]P|6[CR]O|1|RDR0010316^GD0609477^F01^__GG02
03186||^__0BHIV1^__Full|||20150505090025||||N||||DILPLAS^P|Labopera[ETB]31[CR][LF]
HOST 11:06:59,045 [ACK]
c4800 11:06:59,045 [STX]7tor|||||||F[CR]R|1|^__0BHIV1|Invalid|||
|F||Laboperator|20150505091210|20150505121332|50
549_30071[CR]C|1|I|F;R4801,M7|G[CR]P|7[CR]O|1|R
D R0010317^GD0609477^G01^__GG0203186||^__0BHIV1^__F
ull|||20150505090025||||N||||DILPLAS^P|Laboperat
or|||||||F[CR]R|1|^__ETB]46[CR][LF]
HOST 11:06:59,169 [ACK]
c4800 11:06:59,169 [STX]0^__0BHIV1|5.00E+03 ·cp/mL|cp/mL||||F||Labope
rator|20150505091210|20150505121332|50549_30071[
CR]C|1|I|F;M7|G[CR]P|8[CR]O|1|RDR0010318^GD06094
77^H01^__GG0203186||^__0BHIV1^__Full|||2015050509
0025||||N||||DILPLAS^P|Laboperator|||||||F[CR]
R|1|^__0BHIV1|2.43[ETB]08[CR][LF]
HOST 11:06:59,294 [ACK]
c4800 11:06:59,294 [STX]1E+03 ·cp/mL|cp/mL||||F||Laboperator|2015050
5091210|20150505121332|50549_30071[CR]C|1|I|F;M7
|G[CR]P|9[CR]O|1|RDR0010319^GD0609477^A02^__GG02
03186||^__0BHIV1^__Full|||20150505090025||||N||||DILPLAS^P|Laboperato
r|||||||F[CR]R|1|^__0BHIV1|1.95E+03 ·cp/mL|cp[ETB]83[CR][LF]
HOST 11:06:59,419 [ACK]
c4800 11:06:59,419 [STX]2/mL||||F||Laboperator|20150505091210|20150
505121332|50549_30071[CR]C|1|I|F;M7|G[CR]P|10[CR]
]O|1|RDR0010320^GD0609477^B02^__GG0203186||^__0B
HIV1^__Full|||20150505090025||||N||||DILPLAS^P|La
boperator|||||||F[CR]R|1|^__0BHIV1|Failed||||F||Laboperato
r|201[ETB]57[CR][LF]
HOST 11:06:59,544 [ACK]
c4800 11:06:59,544 [STX]350505091210|20150505121332|50549_30071[CR]
C|1|I|F;X4,M7|G[CR]P|11[CR]O|1|RDR0010321^GD0609
477^C02^__GG0203186||^__0BHIV1^__Full|||201505050
90025||||N||||DILPLAS^P|Laboperator|||||||F[CR]
R|1|^__0BHIV1|Failed||||F||Laboperator|2015050
5091210|2015050512[ETB]10[CR][LF]
HOST 11:06:59,669 [ACK]
c4800 11:06:59,669 [STX]41332|50549_30071[CR]C|1|I|F;X3,M7|G[CR]P|1
2[CR]O|1|RDR0010322^GD0609477^D02^__GG0203186||^
__0BHIV1^__Full|||20150505090025||||N||||DILPLAS^
P|Laboperator|||||||F[CR]R|1|^__0BHIV1|Invalid

```

```

|||||F||Laboperator|20150505091210|2015050512133
2|50549_30071[CR]C|1|[ETB]17[CR][LF]
HOST 11:06:59,793 [ACK]
c4800 11:06:59,793 [STX]5I|F;R4801,M7|G[CR]P|13[CR]O|1|RDR0010323^G
D0609477^E02^^^GG0203186||^^^OBHIV1^^Full|||2015
0505090025|||N||||DILPLAS^P|Laboperator|||||||
|F[CR]R|1|^__^OBHIV1|5.99E+03·cp/mL|cp/mL||||F||L
aboperator|20150505091210|20150505121332|50549_3
0071[CR]C|1|I|F;M7|[ETB]D1[CR][LF]
HOST 11:06:59,918 [ACK]
c4800 11:06:59,918 [STX]6|G[CR]P|14[CR]O|1|RDR0010324^GD0609477^F02
^^^GG0203186||^^^OBHIV1^^Full|||20150505090025|||
||N||||PLAS^P|Laboperator|||||||F[CR]R|1|^__^OB
HIV1|1.75E+03·cp/mL|cp/mL||||F||Laboperator|2015
0505091210|20150505121332|50549_30071[CR]C|1|I|F
;M7|G[CR]P|15[CR]O|1|RDR[ETB]4C[CR][LF]
HOST 11:07:00,043 [ACK]
c4800 11:07:00,043 [STX]70010325^GD0609477^G02^^^GG0203186||^^^OBH
IV1^^Full|||20150505090025|||N||||PLAS^P|Laboper
ator|||||||F[CR]R|1|^__^OBHIV1|1.97E+03·cp/mL|c
p/mL||||F||Laboperator|20150505091210|2015050512
1332|50549_30071[CR]C|1|I|F;M7|G[CR]P|16[CR]O|1|
RDR0010326^GD06094[ETB]2E[CR][LF]
HOST 11:07:00,168 [ACK]
c4800 11:07:00,168 [STX]077^H02^^^GG0203186||^^^OBHIV1^^Full|||2015
0505090025|||N||||PLAS^P|Laboperator|||||||F[
CR]R|1|^__^OBHIV1|Invalid||||F||Laboperator|2015
0505091210|20150505121332|50549_30071[CR]C|1|I|F
;R4801,M7|G[CR]P|17[CR]O|1|RDR0010327^GD0609477^
A03^^^GG0203186||^|[ETB]8F[CR][LF]
HOST 11:07:00,293 [ACK]
c4800 11:07:00,308 [STX]1^^^OBHIV1^^Full|||20150505090025|||N|||PL
AS^P|Laboperator|||||||F[CR]R|1|^__^OBHIV1|6.12
E+03·cp/mL|cp/mL||||F||Laboperator|2015050509121
0|20150505121332|50549_30071[CR]C|1|I|F;M7|G[CR]
P|18[CR]O|1|RDR0010328^GD0609477^B03^^^GG0203186
||^__^OBHIV1^^Full|[ETB]EA[CR][LF]
HOST 11:07:00,433 [ACK]
c4800 11:07:00,449 [STX]2|||20150505090025|||N|||PLAS^P|Laboperato
r|||||||F[CR]R|1|^__^OBHIV1|2.20E+03·cp/mL|cp/m
L||||F||Laboperator|20150505091210|2015050512133
2|50549_30071[CR]C|1|I|F;M7|G[CR]P|19[CR]O|1|RDR
0010329^GD0609477^C03^^^GG0203186||^__^OBHIV1^^Fu
ll|||2015050509002[ETB]5D[CR][LF]
HOST 11:07:00,573 [ACK]
c4800 11:07:00,573 [STX]35|||N|||PLAS^P|Laboperator|||||||F[CR]
R|1|^__^OBHIV1|3.19E+03·cp/mL|cp/mL||||F||Laboper
ator|20150505091210|20150505121332|50549_30071[CR
]C|1|I|F;M7|G[CR]P|20[CR]O|1|RDR0010330^GD06094
77^D03^^^GG0203186||^__^OBHIV1^^Full|||2015050509
0025|||N|||PLAS^P[ETB]C4[CR][LF]
HOST 11:07:00,698 [ACK]
c4800 11:07:00,698 [STX]4P|Laboperator|||||||F[CR]R|1|^__^OBHIV1|I
nvalid||||F||Laboperator|20150505091210|2015050
5121332|50549_30071[CR]C|1|I|F;R4801,M7|G[CR]P|2
1[CR]O|1|RDR0010331^GD0609477^E03^^^GG0203186||^
__^OBHIV1^^Full|||20150505090025|||N|||PLAS^P|L
aboperator|||||||[ETB]DC[CR][LF]
HOST 11:07:00,823 [ACK]

```

```

c4800 11:07:00,839 [STX]5|F[CR]R|1|^/^0BHIV1|6.83E+03·cp/mL|cp/mL|||F||Laboperator|20150505091210|20150505121332|50549_30071[CR]C|1|I|F;M7|G[CR]P|22[CR]O|1|RDR0010332^GD0609477^F03^^GG0203186|||^0BHIV1^^Full|||20150505090025||||N||||PLAS^P|Laboperator|||||F[CR]R|1|^/^0BHIV[ETB]9C[CR][LF]
HOST 11:07:00,963 [ACK]
c4800 11:07:00,963 [STX]61|2.04E+03·cp/mL|cp/mL||||F||Laboperator|20150505091210|20150505121332|50549_30071[CR]C|1|I|F;M7|G[CR]P|23[CR]O|1|RDR0010333^GD0609477^G03^^GG0203186|||^0BHIV1^^Full|||20150505090025||||N||||PLAS^P|Laboperator|||||||F[CR]R|1|^/^0BHIV1|3.16E+03·cp/m[ETB]AF[CR][LF]
HOST 11:07:01,088 [ACK]
c4800 11:07:01,088 [STX]7L|cp/mL||||F||Laboperator|20150505091210|20150505121332|50549_30071[CR]C|1|I|F;M7|G[CR]P|24[CR]O|1|RDR0010334^GD0609477^H03^^GG0203186|||^0BHIV1^^Full|||20150505090025||||N||||PLAS^P|Laboperator|||||||F[CR]R|1|^/^0BHIV1|Invalid|||F||Laboperator|2[ETB]50[CR][LF]
HOST 11:07:01,213 [ACK]
c4800 11:07:01,213 [STX]00150505091210|20150505121332|50549_30071[C|R]C|1|I|F;R4801,M7|G[CR]L|1|N[CR][ETX]05[CR][LF]
HOST 11:07:01,322 [ACK]
c4800 11:07:01,338 [EOT]

```

HIV-1 HL7 communication traces

Order download

```
c4800 16:38:54,985 [VT]
c4800 16:38:54,985 MSH|^~\&|cobas·4800·software·2.2.0.1509||"||LIS|
    LIS·Facility|20161130163442+0100||QBP^Q11^QBP_Q
    11|f1489c57-a3e0-4b3e-9acc-76c1b1d640fe|P|2.5.1
    |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
c4800 16:38:54,985 QPD|WOS^Work·Order·Step^IHE_LAW|574c470e-422e-4d
    f0-b2c9-55ff71ddffe1|A0085273927[CR]
c4800 16:38:54,985 RCP|I||R^HL70394[CR]
c4800 16:38:54,985 [FS] [CR]

*      16:38:55,244 ACK Inquiry: ExMID = f1489c57-a3e0-4b3e-9acc-7
    6c1b1d640fe
HOST   16:38:55,244 [VT]
HOST   16:38:55,244 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130163855+0100||RSP^K11
    ^RSP_K11|b989ff58-2c44-4a0f-bb8a-cddd3f7bbb43|P
    |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST   16:38:55,264 MSA|AA|f1489c57-a3e0-4b3e-9acc-76c1b1d640fe[CR]
HOST   16:38:55,274 QAK|574c470e-422e-4df0-b2c9-55ff71ddffe1|OK|WOS
    ^Work·Order·Step^IHE_LAW[CR]
HOST   16:38:55,286 QPD|WOS^Work·Order·Step^IHE_LAW|574c470e-422e-4
    df0-b2c9-55ff71ddffe1|A0085273927[CR]
HOST   16:38:55,296 [FS] [CR]

*      16:38:56,166 Order: SID^MID = A0085273927^7ff21722-6300-442
    3-a44b-a7397da153fb
HOST   16:38:56,176 [VT]
HOST   16:38:56,176 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437|LAB·Name|20161130163856+0100||OML^O33
    ^OML_O33|7ff21722-6300-4423-a44b-a7397da153fb|P
    |2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST   16:38:56,186 SPM|1|A0085273927&ROCHE||PLAS^^99ROC||||||P^H
    L70369[CR]
HOST   16:38:56,196 SAC|||A0085273927[CR]
HOST   16:38:56,206 ORC|NW|||||||2.02E+13[CR]
HOST   16:38:56,216 OBR||12345||0BHIV1^0BHIV1^99ROC[CR]
HOST   16:38:56,228 [FS] [CR]

c4800 16:38:56,468 [VT]
c4800 16:38:56,468 MSH|^~\&|cobas·4800·software·2.2.0.1509||"||LIS|
    LIS·Facility|20161130163443+0100||ORI^O34^ORI_O
    34|69b5ce93-3e43-4185-afb0-8f548b545b43|P|2.5.1
    |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
c4800 16:38:56,468 MSA|AA|7ff21722-6300-4423-a44b-a7397da153fb[CR]
c4800 16:38:56,468 SPM|1|A0085273927&ROCHE||PLAS^^99ROC||||||P^H
    L70369[CR]
c4800 16:38:56,468 SAC|||A0085273927[CR]
c4800 16:38:56,468 ORC|OK|12345|||SC[CR]
c4800 16:38:56,468 [FS] [CR]
```

Result upload

HIV-1 test results can be reported using two different types of measurement unit: cp/mL and IU/mL. In the example below, cp/mL has been used.

```
C4800 11:21:14,288 [VT]
C4800 11:21:14,288 MSH|^~\&|cobas·4800·software·2.2.0.1509^50549_3
0071^M|""|LIS|LIS·Facility|20150520112215+0200|
|OUL^R22^OUL_R22|1cffd4d7-e27d-4399-b10c-12d25f
0b326c|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
IHE[CR]
C4800 11:21:14,288 SPM|1|OPHHXV0016G1I02&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 11:21:14,288 SAC|||OPHHXV0016G1I02[CR]
C4800 11:21:14,288 INV|HPosCtrl1^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 11:21:14,288 OBR||"|||OBHIV1^OBHIV1^99ROC||20150505090025[CR]
]
C4800 11:21:14,288 ORC|SC||||CM[CR]
C4800 11:21:14,288 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50505091210^20150505121332||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150505121
332[CR]
C4800 11:21:14,288 OBX|2|ST|OBHIV1^OBHIV1^99ROC|1.1|2.52E+05·cp/mL
|1/mL^^UCUM||Full^99ROC|||F|||||Laboperator||C
4800^Roche~50549_30071^Roche|20150505121332[CR]
C4800 11:21:14,288 INV|"||OK^^HL70383|OT^^HL70384|MwpId^99ROC|GDO
609477^99ROC|A01^99ROC[CR]
C4800 11:21:14,288 INV|"||OK^^HL70383|OT^^HL70384|DwpId^99ROC|GG0
203186^99ROC[CR]
C4800 11:21:14,288 NTE|1||F;M7[CR]
C4800 11:21:14,288 NTE|2||Ct:0·(MMx·1),25.79[CR]
C4800 11:21:14,288 NTE|3||[CR]
C4800 11:21:14,288 SPM|2|OPHXV0016G1I02&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 11:21:14,288 SAC|||OPHXV0016G1I02[CR]
C4800 11:21:14,288 INV|LPosCtrl1^99ROC|OK^^HL70383|CO^^HL70384[CR]
C4800 11:21:14,288 OBR||"|||OBHIV1^OBHIV1^99ROC||20150505090025[CR]
]
C4800 11:21:14,288 ORC|SC||||CM[CR]
C4800 11:21:14,288 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50505091210^20150505121332||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150505121
332[CR]
C4800 11:21:14,288 OBX|2|ST|OBHIV1^OBHIV1^99ROC|1.1|3.89E+02·cp/mL
|1/mL^^UCUM||Full^99ROC|||F|||||Laboperator||C
4800^Roche~50549_30071^Roche|20150505121332[CR]
C4800 11:21:14,288 INV|"||OK^^HL70383|OT^^HL70384|MwpId^99ROC|GDO
609477^99ROC|B01^99ROC[CR]
C4800 11:21:14,288 INV|"||OK^^HL70383|OT^^HL70384|DwpId^99ROC|GG0
203186^99ROC[CR]
C4800 11:21:14,288 NTE|1||F;M7[CR]
C4800 11:21:14,288 NTE|2||Ct:0·(MMx·1),35.41[CR]
C4800 11:21:14,288 NTE|3||[CR]
C4800 11:21:14,288 [FS][CR]

* 11:21:16,049 ACK Result: ExMID = 1cffd4d7-e27d-4399-b10c-12
d25f0b326c
```

```
HOST 11:21:16,059 [VT]
HOST 11:21:16,059 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437^SN1234^M|LAB·Name|20150520112116+0200
      ||ACK^R22^ACK|776a28b3-b1b1-4f7c-82d5-c93920317
      93b|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 11:21:16,079 MSA|AA|1cffd4d7-e27d-4399-b10c-12d25f0b326c[CR]
HOST 11:21:16,089 [FS] [CR]
```

HPV ASTM communication traces

Order download

```
c4800 14:31:07,490 [ENQ]
HOST   14:31:07,552 [ACK]
c4800 14:31:07,552 [STX]1H|\^&|||cobas·4800^36fe0ca5-0d93-437e-9aa
                           0-f123bfe30917^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141125143021[CR]Q|1|^H
                           PVdata001[CR]L|1|N[CR][ETX]61[CR][LF]
HOST   14:31:07,661 [ACK]
c4800 14:31:07,661 [EOT]

*      14:31:09,884 TSDWN: SID = HPVdata001

HOST   14:31:09,916 [ENQ]
c4800 14:31:09,916 [ACK]
HOST   14:31:09,931 [STX]1H|\^&|||ASTM32^3355a60c-fc13-4faa-a655-b5
                           7f41d396c4^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141125143107|[CR][ETX]26[CR]
                           ][LF]
c4800 14:31:09,931 [ACK]
HOST   14:31:09,947 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:31:09,947 [ACK]
HOST   14:31:09,962 [STX]3O|1|HPVdata001||^^^02HPVPAN^^Full|||20141
                           121141243||||N|||20141121141243|PCYT^P|schreudt
                           |||||||||O[CR][ETX]F3[CR][LF]
c4800 14:31:09,964 [ACK]
HOST   14:31:09,974 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:31:09,974 [ACK]
HOST   14:31:09,974 [EOT]

c4800 14:31:11,792 [ENQ]
HOST   14:31:11,854 [ACK]
c4800 14:31:11,854 [STX]1H|\^&|||cobas·4800^ecc62686-2584-4d2e-9af
                           5-4648150da946^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141125143021[CR]Q|1|^H
                           PVdata002[CR]L|1|N[CR][ETX]EC[CR][LF]
HOST   14:31:11,979 [ACK]
c4800 14:31:11,979 [EOT]

*      14:31:14,181 TSDWN: SID = HPVdata002

HOST   14:31:14,212 [ENQ]
c4800 14:31:14,212 [ACK]
HOST   14:31:14,244 [STX]1H|\^&|||ASTM32^f0809513-49aa-48fb-b252-d1
                           38012ab2dc^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141125143112|[CR][ETX]E5[CR]
                           ][LF]
c4800 14:31:14,248 [ACK]
HOST   14:31:14,252 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:31:14,254 [ACK]
HOST   14:31:14,264 [STX]3O|1|HPVdata002||^^^02HPVPAN^^Full|||20141
                           121141243||||N|||20141121141243|PCYT^P|schreudt
                           |||||||||O[CR][ETX]F4[CR][LF]
c4800 14:31:14,264 [ACK]
HOST   14:31:14,274 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:31:14,274 [ACK]
```

HOST 14:31:14,274 [EOT]

Result upload

```
c4800 12:13:47,153 [ENQ]
HOST 12:13:47,215 [ACK]
c4800 12:13:47,231 [STX]1H|\^&|||cobas·4800·software^fa807f65-23e2
-4fad-b290-836a1aab5489^Laboperator^2.2.0.1442^
1394.LIS2||||LIS|RSUP|^REAL|P|1|20141103121403
[CR]P|1[CR]O|1|2H1S014734F02P0^CD0508576^A01^^^
AA6000442||^^^02HPV^^Full|||20131001102739||||Q
||||^POSCONTROL|L[ETB]61[CR][LF]
HOST 12:13:47,356 [ACK]
c4800 12:13:47,356 [STX]2aboperator|||||||P[CR]R|1|^^^02HPVOHR|V
alid|||||P||Laboperator|20131001103552|20131001
150423|508_25318[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:0·
(MMx·1),38.3;Ct:1·(MMx·1),37.4;Ct:3·(MMx·1),39.
5;Ct:5·(MMx·1),37.9|G[CR]R|2|^^^02HPV16|Valid|||
||||P||Laboperator|20131[ETB]62[CR][LF]
HOST 12:13:47,480 [ACK]
c4800 12:13:47,480 [STX]3001103552|20131001150423|508_25318[CR]C|1
|I|F;M7|G[CR]C|2|I|Ct:0·(MMx·1),38.3;Ct:1·(MMx·
1),37.4;Ct:3·(MMx·1),39.5;Ct:5·(MMx·1),37.9|G[C
R]R|3|^^^02HPV18|Valid|||||P||Laboperator|20131
001103552|20131001150423|508_25318[CR]C|1|I|F;M
7|G[CR]C|2|I|Ct:0·(MMx·1),[ETB]77[CR][LF]
HOST 12:13:47,605 [ACK]
c4800 12:13:47,605 [STX]438.3;Ct:1·(MMx·1),37.4;Ct:3·(MMx·1),39.5;
Ct:5·(MMx·1),37.9|G[CR]P|2[CR]O|1|ONCR100197E0W
DW^CD0508576^B01^^^AA6000442||^^^02HPV^^Full|||
20131001102739||||Q||||^NEGCONTROL|Laboperator|
|||||||P[CR]R|1|^^^02HPVOHR|Valid|||||P||Labop
erator|2013100110355[ETB]78[CR][LF]
HOST 12:13:47,730 [ACK]
c4800 12:13:47,730 [STX]52|20131001150423|508_25318[CR]C|1|I|F;M7|
G[CR]C|2|I|Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct
:3·(MMx·1),---;Ct:5·(MMx·1),---|G[CR]R|2|^^^02H
PV16|Valid|||||P||Laboperator|20131001103552|20
131001150423|508_25318[CR]C|1|I|F;M7|G[CR]C|2|I
|Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:3·(MMx·1),
---;Ct:5·(MMx·1),---|G[CR]P|3[CR]O|1|RDR0007272^CD05085[ETB]81[CR][LF]
HOST 12:13:47,855 [ACK]
c4800 12:13:47,855 [STX]6x·1),---;Ct:3·(MMx·1),---;Ct:5·(MMx·1),---
|G[CR]R|3|^^^02HPV18|Valid|||||P||Laboperator|
20131001103552|20131001150423|508_25318[CR]C|1
|I|F;M7|G[CR]C|2|I|Ct:0·(MMx·1),---;Ct:1·(MMx·1)
,---;Ct:3·(MMx·1),---;Ct:5·(MMx·1),---|G[CR]P|3
[CR]O|1|RDR0007272^CD05085[ETB]81[CR][LF]
HOST 12:13:47,980 [ACK]
c4800 12:13:47,980 [STX]776^C01^^^AA6000442||^^^02HPVGEN^^Full|||2
0131001102739||||N||||PCYT^P|Laboperator|||||||
||P[CR]R|1|^^^02HPVOHR|POS·Other·HR·HPV|||||P|||
Laboperator|20131001103552|20131001150423|508_2
5318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|POS·HPV1
6|||||P||Laboperator[ETB]EB[CR][LF]
HOST 12:13:48,104 [ACK]
c4800 12:13:48,104 [STX]0|20131001103552|20131001150423|508_25318[
CR]C|1|I|F;M7|G[CR]R|3|^^^02HPV18|Invalid·HPV18
|||||P||Laboperator|20131001103552|201310011504
23|508_25318[CR]C|1|I|F;M7|G[CR]P|4[CR]O|1|RDR0
```

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007273^CD0508576^D01^^AA6000442||^^^02HPVGEN^^
Full|||20131001102739||||N[ETB]88[CR][LF]
HOST 12:13:48,229 [ACK]
c4800 12:13:48,229 [STX]1||||PCYT^P|Laboperator|||||||P[CR]C|1|I
|73|G[CR]R|1|^__02HPVOHR|POS ·Other ·HR ·HPV|||||P
||Laboperator|20131001103552|20131001150423|508
_25318[CR]C|1|I|F;M7|G[CR]R|2|^__02HPV16|Invali
d ·HPV16|||||P||Laboperator|20131001103552|20131
001150423|508_25318[CR]C|1[ETB]9E[CR][LF]
HOST 12:13:48,354 [ACK]
c4800 12:13:48,354 [STX]2|I|F;M7|G[CR]R|3|^__02HPV18|POS ·HPV18|||
|P||Laboperator|20131001103552|20131001150423|5
08_25318[CR]C|1|I|F;M7|G[CR]P|5[CR]O|1|RDR00072
74^CD0508576^E01^^AA6000442|||^02HPVGEN^^Full
|||20131001102739||||N||||PCYT^P|Laboperator|||
|||||P[CR]C|1|I|74|G[CR]R|1|[ETB]4E[CR][LF]
HOST 12:13:48,479 [ACK]
c4800 12:13:48,479 [STX]3^__02HPVOHR|POS ·Other ·HR ·HPV|||||P||Labop
erator|20131001103552|20131001150423|508_25318[
CR]C|1|I|F;M7|G[CR]R|2|^__02HPV16|Invalid ·HPV16
|||||P||Laboperator|20131001103552|201310011504
23|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^__02HPV18|
Invalid ·HPV18|||||P||La[ETB]AD[CR][LF]
HOST 12:13:48,604 [ACK]
c4800 12:13:48,604 [STX]4boperator|20131001103552|20131001150423|5
08_25318[CR]C|1|I|F;M7|G[CR]P|6[CR]O|1|RDR00072
75^CD0508576^F01^^AA6000442|||^02HPVGEN^^Full
|||20131001102739||||N||||PCYT^P|Laboperator|||
|||||P[CR]C|1|I|75|G[CR]R|1|^__02HPVOHR|Invali
d ·Other ·HR ·HPV|||||P||Labo[ETB]5A[CR][LF]
HOST 12:13:48,728 [ACK]
c4800 12:13:48,728 [STX]5operator|20131001103552|20131001150423|508
_25318[CR]C|1|I|F;M7|G[CR]R|2|^__02HPV16|POS ·HP
V16|||||P||Laboperator|20131001103552|201310011
50423|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^__02HPV
18|POS ·HPV18|||||P||Laboperator|20131001103552|
20131001150423|508_2531[ETB]A0[CR][LF]
HOST 12:13:48,853 [ACK]
c4800 12:13:48,853 [STX]68[CR]C|1|I|F;M7|G[CR]P|7[CR]O|1|RDR000727
6^CD0508576^G01^^AA6000442|||^02HPVGEN^^Full|
|||20131001102739||||N||||PCYT^P|Laboperator|||
|||||P[CR]C|1|I|76|G[CR]R|1|^__02HPVOHR|Invalid
·Other ·HR ·HPV|||||P||Laboperator|20131001103552
|20131001150423|508_25318[CR][ETB]D4[CR][LF]
HOST 12:13:49,009 [ACK]
c4800 12:13:49,009 [STX]7C|1|I|F;M7|G[CR]R|2|^__02HPV16|POS ·HPV16|
||||P||Laboperator|20131001103552|2013100115042
3|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^__02HPV18|I
nvalid ·HPV18|||||P||Laboperator|20131001103552|
20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|8
[CR]O|1|RDR0007277^CD0508576^ [ETB]60[CR][LF]
HOST 12:13:49,150 [ACK]
c4800 12:13:49,150 [STX]OH01^^AA6000442|||^02HPVGEN^^Full|||2013
1001102739||||N||||PCYT^P|Laboperator|||||||||P
[CR]C|1|I|77|G[CR]R|1|^__02HPVOHR|Invalid ·Other
·HR ·HPV|||||P||Laboperator|20131001103552|20131
001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^__0
2HPV16|Invalid ·HPV16|||[ETB]7C[CR][LF]
HOST 12:13:49,290 [ACK]

```

c4800 12:13:49,290 [STX]1||P||Laboperator|20131001103552|20131001103552|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^02HPV18|POS·HPV18||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|9[CR]O|1|RDR0007278^CD0508576^A02^^AA6000442||^02HPVGEN^^Full|||20131001[ETB]D2[CR] [LF]

HOST 12:13:49,430 [ACK]

c4800 12:13:49,430 [STX]21102739||||N||||PCYT^P|Laboperator|||||||P[CR]C|1|I|78|G[CR]R|1|^02HPVOHR|Invalid·Other·HR·HPV||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^02HPV16|Invalid·HPV16||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|10[CR]O|1|RDR0006239^CD0508576^B02^^AA600442||^02HPVGEN^^Full|||20131001102739||||N||||PCYT^P|Laboperator|||||[ETB]F7[CR] [LF]

HOST 12:13:49,571 [ACK]

c4800 12:13:49,571 [STX]323|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^02HPV18|Invalid·HPV18||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|10[CR]O|1|RDR0006239^CD0508576^B02^^AA600442||^02HPVGEN^^Full|||20131001102739||||N||||PCYT^P|Laboperator|||||[ETB]F7[CR] [LF]

HOST 12:13:49,711 [ACK]

c4800 12:13:49,711 [STX]4||||P[CR]C|1|I|39Soap|G[CR]R|1|^02HPVOHR|Failed|||||X||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;X3,M7|G[CR]R|2|^02HPV16|Failed|||||X||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;X3,M7|G[CR]R|3|^02HPV18|Failed||||[ETB]80[CR] [LF]

HOST 12:13:49,852 [ACK]

c4800 12:13:49,852 [STX]5||X||Laboperator|20131001103552|20131001103552|508_25318[CR]C|1|I|F;X3,M7|G[CR]P|11[CR]O|1|RDR0007287^CD0508576^C02^^AA6000442||^02HPVPAN^^Full|||20131001102739||||N||||PCYT^P|Laboperator||||||||P[CR]C|1|I|87empty|G[CR]R|1|^02HPVHR|Failed|||||X||Lab|[ETB]49[CR] [LF]

HOST 12:13:49,992 [ACK]

c4800 12:13:49,992 [STX]6operator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;X4,M7|G[CR]P|12[CR]O|1|RDR0007288^CD0508576^D02^^AA6000442||^02HPVPAN^^Full|||20131001102739||||N||||PCYT^P|Laboperator||||||||P[CR]R|1|^02HPVHR|POS·HR·HPV||||P||Laboperator|20131001103|[ETB]C9[CR] [LF]

HOST 12:13:50,132 [ACK]

c4800 12:13:50,132 [STX]7552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|13[CR]O|1|RDR0007289^CD0508576^E02^^AA6000442||^02HPVPAN^^Full|||20131001102739||||N||||PCYT^P|Laboperator||||||||F[CR]R|1|^02HPVHR|POS·HR·HPV||||F||Laboperator|20131001103552|20131001150423|508_|[ETB]44[CR] [LF]

HOST 12:13:50,273 [ACK]

c4800 12:13:50,273 [STX]025318[CR]C|1|I|F;M7|G[CR]P|14[CR]O|1|RDR0007279^CD0508576^F02^^AA6000442||^02HPVGEN^^Full|||20131001102739||||N||||SPATH^P|Laboperator||||||||P[CR]C|1|I|79|G[CR]R|1|^02HPVOHR|POS·Other·HR·HPV||||P||Laboperator|20131001103552|20131001150423|508_25318[ETB]F3[CR] [LF]

HOST 12:13:50,413 [ACK]

c4800 12:13:50,413 [STX]18[CR]C|1|I|F;M7|G[CR]R|2|^02HPV16|POS·HPV16||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^02HP

V18|POS·HPV18|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|15[CR]O|1|RDR0007280^CD0508576^G[ETB]39[CR][LF]

HOST 12:13:50,554 [ACK]

c4800 12:13:50,554 [STX]202^^^AA6000442||^^^02HPVGEN^^Full|||20131001102739||||N||||SPATH^P|Laboperator|||||||||P[CR]C|1|I|80|G[CR]R|1|^^^02HPVOHR|POS·Other·HR·HPV|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|POS·HPV16|||||P||Lab[ETB]16[CR][LF]

HOST 12:13:50,694 [ACK]

c4800 12:13:50,694 [STX]3operator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^^^02HPV18|NEG·HPV18|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|16[CR]O|1|RDR0007281^CD0508576^H02^^^AA6000442||^^^02HPVGEN^^Full|||20131001102739[ETB]03[CR][LF]

HOST 12:13:50,834 [ACK]

c4800 12:13:50,834 [STX]4||||N||||SPATH^P|Laboperator|||||||||P[CR]R|1|^^^02HPVOHR|POS·Other·HR·HPV|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|NEG·HPV16|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[ETB]D0[CR][LF]

HOST 12:13:50,990 [ACK]

c4800 12:13:50,990 [STX]5[CR]R|3|^^^02HPV18|POS·HPV18|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|17[CR]O|1|RDR0007282^CD0508576^A03^^^AA6000442||^^^02HPVGEN^^Full|||20131001102739||||N||||SPATH^P|Laboperator|||||||||P[CR]R|1|^^^02HPVOHR|POS·Ot[ETB]F0[CR][LF]

HOST 12:13:51,131 [ACK]

c4800 12:13:51,131 [STX]6her·HR·HPV|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|NEG·HPV16|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^^^02HPV18|NEG·HPV18|||||P||Laboperator|20131001103552|2[ETB]E2[CR][LF]

HOST 12:13:51,271 [ACK]

c4800 12:13:51,271 [STX]70131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|18[CR]O|1|RDR0007283^CD0508576^B03^^^AA6000442||^^^02HPVGEN^^Full|||20131001102739||||N||||SPATH^P|Laboperator|||||||||P[CR]R|1|^^^02HPVOHR|NEG·Other·HR·HPV|||||P||Laboperator|20131001103552|20131001150423|5[ETB]D8[CR][LF]

HOST 12:13:51,412 [ACK]

c4800 12:13:51,412 [STX]008_25318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|POS·HPV16|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|3|^^^02HPV18|POS·HPV18|||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|19[CR]O|1|RDR0007284^CD05[ETB]23[CR][LF]

HOST 12:13:51,552 [ACK]

c4800 12:13:51,552 [STX]108576^C03^^^AA6000442||^^^02HPVGEN^^Full|||20131001102739||||N||||SPATH^P|Laboperator|||||||||F[CR]R|1|^^^02HPVOHR|NEG·Other·HR·HPV|||||F||Laboperator|20131001103552|20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2|^^^02HPV16|POS·HPV16|||||F||Laboper[ETB]D8[CR][LF]

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HOST 12:13:51,692 [ACK]
c4800 12:13:51,692 [STX]2ator|20131001103552|20131001150423|508_25
318[CR]C|1|I|F;M7|G[CR]R|3|^__^02HPV18|NEG·HPV18
|||||F||Laboperator|20131001103552|201310011504
23|508_25318[CR]C|1|I|F;M7|G[CR]P|20[CR]O|1|RDR
0007285^CD0508576^D03^__AA6000442||^__^02HPVGEN^
^Full|||20131001102739||||[ETB]2E[CR][LF]
HOST 12:13:51,833 [ACK]
c4800 12:13:51,833 [STX]3N||||SPATH^P|Laboperator|||||||P[CR]R|1
|^__^02HPVOHR|NEG·Other·HR·HPV||||P||Laboperato
r|20131001103552|20131001150423|508_25318[CR]C|
1|I|F;M7|G[CR]R|2|^__^02HPV16|NEG·HPV16||||P||L
aboperator|20131001103552|20131001150423|508_25
318[CR]C|1|I|F;M7|G[CR]R|3[ETB]D5[CR][LF]
HOST 12:13:51,973 [ACK]
c4800 12:13:51,973 [STX]4|^__^02HPV18|POS·HPV18||||P||Laboperator|
20131001103552|20131001150423|508_25318[CR]C|1|
I|F;M7|G[CR]P|21[CR]O|1|RDR0007286^CD0508576^E0
3^__^AA6000442||^__^02HPVGEN^__Full|||201310011027
39||||N||||SPATH^P|Laboperator|||||||P[CR]R|1
|^__^02HPVOHR|NEG·Other·[ETB]2B[CR][LF]
HOST 12:13:52,114 [ACK]
c4800 12:13:52,114 [STX]5HR·HPV||||P||Laboperator|20131001103552|
20131001150423|508_25318[CR]C|1|I|F;M7|G[CR]R|2
|^__^02HPV16|NEG·HPV16||||P||Laboperator|201310
01103552|20131001150423|508_25318[CR]C|1|I|F;M7
|G[CR]R|3|^__^02HPV18|NEG·HPV18||||P||Laboperat
or|20131001103552|20131[ETB]47[CR][LF]
HOST 12:13:52,254 [ACK]
c4800 12:13:52,254 [STX]6001150423|508_25318[CR]C|1|I|F;M7|G[CR]P|
22[CR]O|1|RDR0007290^CD0508576^F03^__^AA6000442|
|^__^02HPVPAN^__Full|||20131001102739|||N||||SPA
TH^P|Laboperator|||||||P[CR]R|1|^__^02HPVHR|PO
S·HR·HPV||||P||Laboperator|20131001103552|2013
1001150423|508_25318[CR]C|[ETB]51[CR][LF]
HOST 12:13:52,394 [ACK]
c4800 12:13:52,394 [STX]71|I|F;M7|G[CR]P|23[CR]O|1|RDR0007291^CD05
08576^G03^__^AA6000442||^__^02HPVPAN^__Full|||2013
1001102739|||N||||SPATH^P|Laboperator|||||||P[CR]R|1|^__^02HPVHR|PO
S·HR·HPV||||P||Laboperator|20131001103552|20131001150423|508_25318[CR]C
|1|I|F;M7|G[CR]P|24[CR]O|1|RD[ETB]E2[CR][LF]
HOST 12:13:52,535 [ACK]
c4800 12:13:52,535 [STX]0R0007292^CD0508576^H03^__^AA6000442||^__^02
HPVPAN^__Full|||20131001102739|||N||||SPATH^P|L
aboperator|||||||P[CR]R|1|^__^02HPVHR|POS·HR·H
PV||||P||Laboperator|20131001103552|2013100115
0423|508_25318[CR]C|1|I|F;M7|G[CR]L|1|N[CR][ETX
]B9[CR][LF]
HOST 12:13:52,675 [ACK]
c4800 12:13:52,675 [EOT]

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HPV HL7 communication traces

Order download

```
C4800 10:38:19,073 [VT]
C4800 10:38:19,073 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
LIS·Facility|20150312103804+0100||QBP^Q11^QBP_Q
11|a706a172-f7b0-45e1-9a16-5a73ab8a36bd|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:38:19,073 QPD|WOS^Work·Order·Step^IHE_LAW|86f6a115-3658-49
06-80dd-fd576ba8ed10|HPV01[CR]
C4800 10:38:19,073 RCP|I||R^^HL70394[CR]
C4800 10:38:19,073 [FS] [CR]

*      10:38:19,329 ACK Inquiry: ExMID = a706a172-f7b0-45e1-9a16-5
a73ab8a36bd

HOST  10:38:19,329 [VT]
HOST  10:38:19,339 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312103819+0100||RSP^K11
^KRSP_K11|e4a009ae-baea-4422-87c7-44504ceb84de|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST  10:38:19,361 MSA|AA|a706a172-f7b0-45e1-9a16-5a73ab8a36bd[CR]
HOST  10:38:19,371 QAK|86f6a115-3658-4906-80dd-fd576ba8ed10|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST  10:38:19,381 QPD|WOS^Work·Order·Step^IHE_LAW|86f6a115-3658-4
906-80dd-fd576ba8ed10|HPV01[CR]
HOST  10:38:19,391 [FS] [CR]

*      10:38:20,301 Order: SID^MID = HPV01^a3e9fec5-47df-4c87-a907
-7e152e752ee5

HOST  10:38:20,301 [VT]
HOST  10:38:20,311 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150312103820+0100||OML^O33
^OML_O33|a3e9fec5-47df-4c87-a907-7e152e752ee5|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST  10:38:20,320 SPM|1|HPV01&ROCHE||SPATH^^99ROC|||||P^^HL7036
9[CR]
HOST  10:38:20,331 SAC|||HPV01[CR]
HOST  10:38:20,341 ORC|NW|||||||20150223091846[CR]
HOST  10:38:20,351 OBR||12345||02HPVPAN^02HPVPAN^99ROC[CR]
HOST  10:38:20,361 [FS] [CR]

C4800 10:38:22,383 [VT]
C4800 10:38:22,383 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
LIS·Facility|20150312103808+0100||ORL^O34^ORL_O
34|ed6733a8-c4e8-458d-b281-b9f04189d90a|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:38:22,383 MSA|AA|a3e9fec5-47df-4c87-a907-7e152e752ee5[CR]
C4800 10:38:22,383 SPM|1|HPV01&ROCHE||SPATH^^99ROC|||||P^^HL7036
9[CR]
C4800 10:38:22,383 SAC|||HPV01[CR]
C4800 10:38:22,383 ORC|OK|12345|||SC[CR]
C4800 10:38:22,383 [FS] [CR]

C4800 10:38:22,606 [VT]
```

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C4800 10:38:22,606 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
      LIS·Facility|20150312103804+0100||QBP^Q11^QBP_Q
      11|5aa45d8a-56e9-40a7-8a6b-9f624b214027|P|2.5.1
      |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:38:22,606 QPD|WOS^Work·Order·Step^IHELAW|47a19524-b78d-45
      67-bcdb-531f121fce39|HPV02[CR]
C4800 10:38:22,606 RCP|I||R^HL70394[CR]
C4800 10:38:22,606 [FS] [CR]

*     10:38:22,851 ACK Inquiry: ExMID = 5aa45d8a-56e9-40a7-8a6b-9
      f624b214027

HOST 10:38:22,855 [VT]
HOST 10:38:22,858 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437|LAB·Name|20150312103822+0100||RSP^K11
      ^RSP_K11|0e85627a-12a7-4126-845b-54dcfe9e5c9e|P
      |2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:38:22,868 MSA|AA|5aa45d8a-56e9-40a7-8a6b-9f624b214027[CR]
HOST 10:38:22,878 QAK|47a19524-b78d-4567-bcd8-531f121fce39|OK|WOS
      ^Work·Order·Step^IHE_LAW[CR]
HOST 10:38:22,888 QPD|WOS^Work·Order·Step^IHE_LAW|47a19524-b78d-4
      567-bcd8-531f121fce39|HPV02[CR]
HOST 10:38:22,898 [FS] [CR]

*     10:38:23,798 Order: SID^MID = HPV02^bbea6105-6540-4700-ace5
      224e40459bc9

-
HOST 10:38:23,808 [VT]
HOST 10:38:23,808 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437|LAB·Name|20150312103823+0100||OML^O33
      ^OML_O33|bbea6105-6540-4700-ace5-224e40459bc9|P
      |2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:38:23,824 SPM|1|HPV02&ROCHE||PCYT^^99ROC|||||P^HL70369
      [CR]
HOST 10:38:23,836 SAC|||HPV02[CR]
HOST 10:38:23,846 ORC|NW|||||||20150223091846[CR]
HOST 10:38:23,856 OBR||12345||02HPVPAN^02HPVPAN^99ROC[CR]
HOST 10:38:23,866 [FS] [CR]

C4800 10:38:25,944 [VT]
C4800 10:38:25,944 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
      LIS·Facility|20150312103811+0100||ORL^O34^ORL_O
      34|aaaf9b97e-2f7d-4cd8-8671-a7c6c8cd3853|P|2.5.1
      |||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:38:25,944 MSA|AA|bbea6105-6540-4700-ace5-224e40459bc9[CR]
C4800 10:38:25,944 SPM|1|HPV02&ROCHE||PCYT^^99ROC|||||P^HL70369
      [CR]
C4800 10:38:25,944 SAC|||HPV02[CR]
C4800 10:38:25,944 ORC|OK|12345|||SC[CR]
C4800 10:38:25,944 [FS] [CR]

C4800 10:38:26,163 [VT]
C4800 10:38:26,163 MSH|^~\&|cobas·4800·software·2.2.0.1507||"||LIS|
      LIS·Facility|20150312103804+0100||QBP^Q11^QBP_Q
      11|874bfd00-092c-4df0-9a52-8e84c15b9cd3|P|2.5.1
      |||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:38:26,163 QPD|WOS^Work·Order·Step^IHELAW|031a8d18-ff3a-4e
      96-b562-23853bf9f273|HPV03[CR]
C4800 10:38:26,163 RCP|I||R^HL70394[CR]

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C4800 10:38:26,163 [FS] [CR]

C4800 10:38:33,061 [VT]

C4800 10:38:33,061 MSH|^~\&|cobas·4800·software·2.2.0.1507|""|LIS|
LIS·Facility|20150312103818+0100||ORL^O34^ORL_O
34|0e8d952b-1af9-4451-8bfa-50d450064850|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]

C4800 10:38:33,061 MSA|AA|77a0959e-6e47-41dc-8385-5cb555669e53[CR]

C4800 10:38:33,061 SPM|1|HPV04&ROCHE||PCYT^^99ROC|||||P^^HL70369
[CR]

C4800 10:38:33,061 SAC|||HPV04[CR]

C4800 10:38:33,061 ORC|OK|12345|||SC[CR]

C4800 10:38:33,061 [FS] [CR]

Result upload

C4800 10:57:31,601 [VT]

C4800 10:57:31,601 MSH|^~\&|cobas·4800·software·2.2.0.1507^50549_3
0071^M|""|LIS|LIS·Facility|20150311105715+0100|
|OUL^R22^OUL_R22|ea601d35-9edd-416b-9bd9-72a66e
81f301|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29^
IHE[CR]

C4800 10:57:31,601 SPM|1|2H1M015776N01C9&ROCHE||""|||||Q^^HL7036
9[CR]

C4800 10:57:31,601 SAC|||2H1M015776N01C9[CR]

C4800 10:57:31,601 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]

C4800 10:57:31,601 OBR||""||02HPV^02HPV^99ROC||20150306144642[CR]

C4800 10:57:31,601 ORC|SC||||CM[CR]

C4800 10:57:31,601 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50306150150^20150306194807||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150306194
807[CR]

C4800 10:57:31,601 OBX|2|ST|02HPVOHR^02HPVOHR^99ROC|1.1|Valid|||Fu
ll^99ROC|||P||||RocheNoCheck||C4800^Roche~505
49_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|A01^^99ROC[CR]

C4800 10:57:31,601 INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),36.8;Ct:1·(MMx·1),38.1;Ct:3
·(MMx·1),39.2;Ct:5·(MMx·1),37.5[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,601 OBX|3|ST|02HPV16^02HPV16^99ROC|1.2|Valid|||Full
^99ROC|||P||||RocheNoCheck||C4800^Roche~50549
_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|A01^^99ROC[CR]

C4800 10:57:31,601 INV|"||OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),36.8;Ct:1·(MMx·1),38.1;Ct:3
·(MMx·1),39.2;Ct:5·(MMx·1),37.5[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,601 OBX|4|ST|02HPV18^02HPV18^99ROC|1.3|Valid|||Full
^99ROC|||P||||RocheNoCheck||C4800^Roche~50549
_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|A01^^99ROC[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),36.8;Ct:1·(MMx·1),38.1;Ct:3
·(MMx·1),39.2;Ct:5·(MMx·1),37.5[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,601 SPM|2|ONCS015333F01VS&ROCHE|""|||||Q^^HL7036
9[CR]

C4800 10:57:31,601 SAC|||ONCS015333F01VS[CR]

C4800 10:57:31,601 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]

C4800 10:57:31,601 OBR||""||02HPV^02HPV^99ROC||20150306144642[CR]

C4800 10:57:31,601 ORC|SC||||CM[CR]

C4800 10:57:31,601 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50306150150^20150306194807||||"|||F|||||Laboper
ator||C4800^Roche~50549_30071^Roche|20150306194
807[CR]

C4800 10:57:31,601 OBX|2|ST|02HPVOHR^02HPVOHR^99ROC|1.1|Valid|||Fu
ll^99ROC|||P||||RocheNoCheck||C4800^Roche~505
49_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|B01^^99ROC[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:3·(MMx·1),---;Ct:5·(MMx·1),---[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,601 OBX|3|ST|02HPV16^02HPV16^99ROC|1.2|Valid|||Full
^99ROC|||P||||RocheNoCheck||C4800^Roche~50549
_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|B01^^99ROC[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:3·(MMx·1),---;Ct:5·(MMx·1),---[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,601 OBX|4|ST|02HPV18^02HPV18^99ROC|1.3|Valid|||Full
^99ROC|||P||||RocheNoCheck||C4800^Roche~50549
_30071^Roche|20150306194807[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
504177^^99ROC|B01^^99ROC[CR]

C4800 10:57:31,601 INV|""|OK^^HL70383|OT^^HL70384|DwpId^^99ROC|AA5
100089^^99ROC[CR]

C4800 10:57:31,601 NTE|1||F;M7[CR]

C4800 10:57:31,601 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:3·(MMx·1),---;Ct:5·(MMx·1),---[CR]

C4800 10:57:31,601 NTE|3||[CR]

C4800 10:57:31,617 [FS] [CR]

* 10:57:48,297 ACK Result: ExMID = ea601d35-9edd-416b-9bd9-72
a66e81f301

HOST 10:57:48,307 [VT]

```
HOST 10:57:48,307 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
      .2.0.1437^SN1234^M|LAB·Name|20150311105748+0100
      ||ACK^R22^ACK|9ddcf7fb-5fa2-4862-a522-5da3fffc5c
      f65|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 10:57:48,332 MSA|AA|ea601d35-9edd-416b-9bd9-72a66e81f301[CR]
HOST 10:57:48,344 [FS] [CR]
```

HSV 1 and 2 ASTM communication traces

Order download

```
c4800 14:51:17,024 [ENQ]
HOST   14:51:17,149 [ACK]
c4800 14:51:17,149 [STX]1H|\^&|||cobas·4800^b78576e7-fcf0-4a4f-8ab
                           a-f7c46dc45ee0^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141125145031[CR]Q|1|^H
                           SVdata001[CR]L|1|N[CR][ETX]3C[CR][LF]
HOST   14:51:17,258 [ACK]
c4800 14:51:17,258 [EOT]

*      14:51:19,460 TSDWN: SID = HSVdata001

HOST   14:51:19,492 [ENQ]
c4800 14:51:19,492 [ACK]
HOST   14:51:19,507 [STX]1H|\^&|||ASTM32^e6258bef-9444-445e-ad9b-9f
                           29d7acfb8f^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141125145117|[CR][ETX]DC[CR]
                           ][LF]
c4800 14:51:19,507 [ACK]
HOST   14:51:19,523 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:51:19,525 [ACK]
HOST   14:51:19,535 [STX]3O|1|HSVdata001||^^^05HSV12^^Full|||201411
                           24162142||||N|||20141124162142|ASWAB^P|beffab|||
                           |||||O[CR][ETX]AA[CR][LF]
c4800 14:51:19,565 [ACK]
HOST   14:51:19,585 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:51:19,585 [ACK]
HOST   14:51:19,585 [EOT]

c4800 14:51:21,452 [ENQ]
HOST   14:51:21,561 [ACK]
c4800 14:51:21,576 [STX]1H|\^&|||cobas·4800^75287a03-f333-436b-bc5
                           2-ed1dd5014d36^RocheCheck^2.2.0.1442^1394.LIS2|
                           ||||LIS|TSREQ^REAL|P|1|20141125145031[CR]Q|1|^H
                           SVdata002[CR]L|1|N[CR][ETX]04[CR][LF]
HOST   14:51:21,686 [ACK]
c4800 14:51:21,701 [EOT]

*      14:51:23,911 TSDWN: SID = HSVdata002

HOST   14:51:23,942 [ENQ]
c4800 14:51:23,942 [ACK]
HOST   14:51:23,973 [STX]1H|\^&|||ASTM32^0460d38f-b668-4dea-90be-26
                           5e7c34c301^INSTALL^7.6.5^1394.LIS2|||||cobas·48
                           00|TSDWN^REAL|P|1|20141125145121|[CR][ETX]F7[CR]
                           ][LF]
c4800 14:51:23,975 [ACK]
HOST   14:51:23,985 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:51:23,985 [ACK]
HOST   14:51:23,995 [STX]3O|1|HSVdata002||^^^05HSV12^^Full|||201411
                           24162142||||N|||20141124162142|ASWAB^P|beffab|||
                           |||||O[CR][ETX]AB[CR][LF]
c4800 14:51:23,995 [ACK]
HOST   14:51:24,005 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:51:24,005 [ACK]
```

HOST 14:51:24,005 [EOT]

Result upload

```
c4800 15:06:51,874 [ENQ]
HOST 15:06:51,936 [ACK]
c4800 15:06:51,936 [STX]1H|^\&|||cobas·4800·software^cd0ef32c-72f0
-4090-a74d-f9241effd068^RocheCheck^2.2.0.1442^1
394.LIS2||||LIS|RSUPL^REAL|P|1|20141120150606[CR]P|1[CR]O|1|5PC121HPCBZ0033^CD0509019^A01^^^A
A5100087||^05HSV12^^Full|||20131115101723|||
Q||||^POSCONTROL|[ETB]43[CR][LF]
HOST 15:06:52,061 [ACK]
c4800 15:06:52,061 [STX]2Laboperator|||||||P[CR]R|1|^05HSV1|Va
lid|||||P||Laboperator|20131115102939|201311151
32911|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:0
·(MMx·1),37.2;Ct:1·(MMx·1),37.1;Ct:5·(MMx·1),39
.7|G[CR]R|2|^05HSV2|Valid|||||P||Laboperator|
20131115102939|20131115[ETB]EB[CR][LF]
HOST 15:06:52,186 [ACK]
c4800 15:06:52,186 [STX]3132911|50549_30071[CR]C|1|I|F;M7|G[CR]C|2
|I|Ct:0·(MMx·1),37.2;Ct:1·(MMx·1),37.1;Ct:5·(MM
x·1),39.7|G[CR]P|2[CR]O|1|0NC121025BZ7034^CD050
9019^B01^^^AA5100087||^05HSV12^^Full|||201311
15101723|||Q||||^NEGCONTROL|Laboperator|||||||
||P[CR]R|1|^05HSV1|Valid[ETB]E4[CR][LF]
HOST 15:06:52,310 [ACK]
c4800 15:06:52,310 [STX]4|||||P||Laboperator|20131115102939|201311
15132911|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|C
t:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),3
9.6|G[CR]R|2|^05HSV2|Valid|||||P||Laboperator|
20131115102939|20131115132911|50549_30071[CR]C
|1|I|F;M7|G[CR]C|2|I|Ct:0·[ETB]3F[CR][LF]
HOST 15:06:52,435 [ACK]
c4800 15:06:52,435 [STX]5(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1)
,39.6|G[CR]P|3[CR]O|1|RDR0008226^CD0509019^C01^
^^AA5100087||^05HSV12^^Full|||20131115101723|
||IN||||ASWAB^P|Laboperator|||||||P[CR]R|1|^
^05HSV1|Invalid·HSV-1|||||P||Laboperator|201311
15102939|20131115132[ETB]D9[CR][LF]
HOST 15:06:52,560 [ACK]
c4800 15:06:52,560 [STX]6911|50549_30071[CR]C|1|I|F;M7|G[CR]R|2|^
^05HSV2|POS·HSV-2|||||P||Laboperator|2013111510
2939|20131115132911|50549_30071[CR]C|1|I|F;M7|G
[CR]P|4[CR]O|1|RDR0008227^CD0509019^D01^^^AA510
0087||^05HSV12^^Full|||20131115101723|||N|||
|ASWAB^P|Laboperator|||||[ETB]04[CR][LF]
HOST 15:06:52,685 [ACK]
c4800 15:06:52,685 [STX]7||||P[CR]R|1|^05HSV1|Invalid·HSV-1|||||P
||Laboperator|20131115102939|20131115132911|505
49_30071[CR]C|1|I|F;M7|G[CR]R|2|^05HSV2|Inval
id·HSV-2|||||P||Laboperator|20131115102939|2013
1115132911|50549_30071[CR]C|1|I|F;M7|G[CR]P|5[C
R]O|1|RDR0007803^CD0509019^E0[ETB]E6[CR][LF]
HOST 15:06:52,810 [ACK]
c4800 15:06:52,810 [STX]01^^^AA5100087||^05HSV12^^Full|||2013111
5101723|||N||||ASWAB^P|Laboperator|||||||P[CR]C|1|I|soap|G[CR]R|1|^05HSV1|Failed|||||X||L
aboperator|20131115102939|20131115132911|50549_
```

30071[CR]C|1|I|F;X4,M7|G[CR]R|2|^/^05HSV2|Failed|||X||Laboperator|20[ETB]9E[CR][LF]

HOST 15:06:52,934 [ACK]

c4800 15:06:52,934 [STX]1131115102939|20131115132911|50549_30071[C
R]C|1|I|F;X4,M7|G[CR]P|6[CR]O|1|RDR0008228^CD05
09019^F01^/^AA5100087||^/^05HSV12^/^Full|||20131
15101723|||N|||ASWAB^P|Laboperator|||||P|[CR]R|1|^/^05HSV1|POS·HSV-1||||P||Laboperator|
20131115102939|20131115[ETB]6D[CR][LF]

HOST 15:06:53,059 [ACK]

c4800 15:06:53,059 [STX]2132911|50549_30071[CR]C|1|I|F;M7|G[CR]R|2
|^/^05HSV2|POS·HSV-2||||P||Laboperator|2013111
5102939|20131115132911|50549_30071[CR]C|1|I|F;M
7|G[CR]P|7[CR]O|1|RDR0008229^CD0509019^G01^/^AA
5100087||^/^05HSV12^/^Full|||20131115101723|||N
|||ASWAB^P|Laboperator|||[ETB]2A[CR][LF]

HOST 15:06:53,184 [ACK]

c4800 15:06:53,184 [STX]3|||||P[CR]R|1|^/^05HSV1|POS·HSV-1||||P|
|Laboperator|20131115102939|20131115132911|5054
9_30071[CR]C|1|I|F;M7|G[CR]R|2|^/^05HSV2|NEG·HS
V-2||||P||Laboperator|20131115102939|201311151
32911|50549_30071[CR]C|1|I|F;M7|G[CR]P|8[CR]O|1
|RDR0008235^CD0509019^H01^/^A[ETB]26[CR][LF]

HOST 15:06:53,309 [ACK]

c4800 15:06:53,309 [STX]4A5100087||^/^05HSV12^/^Full|||201311151017
23|||N|||ASWAB^P|Laboperator|||||P[CR]R|1
|^/^05HSV1|NEG·HSV-1||||P||Laboperator|2013111
5102939|20131115132911|50549_30071[CR]C|1|I|F;M
7|G[CR]R|2|^/^05HSV2|POS·HSV-2||||P||Laboperat
or|20131115102939|20[ETB]FD[CR][LF]

HOST 15:06:53,434 [ACK]

c4800 15:06:53,434 [STX]5131115132911|50549_30071[CR]C|1|I|F;M7|G[
CR]P|9[CR]O|1|RDR0008231^CD0509019^A02^/^AA5100
087||^/^05HSV12^/^Full|||20131115101723|||N|||
ASWAB^P|Laboperator|||||P[CR]R|1|^/^05HSV1|
NEG·HSV-1||||P||Laboperator|20131115102939|201
31115132911|50549_30071[ETB]66[CR][LF]

HOST 15:06:53,558 [ACK]

c4800 15:06:53,558 [STX]6[CR]C|1|I|F;M7|G[CR]R|2|^/^05HSV2|NEG·HSV
-2||||P||Laboperator|20131115102939|2013111513
2911|50549_30071[CR]C|1|I|F;M7|G[CR]P|10[CR]O|1
|RDR0008232^CD0509019^B02^/^AA5100087||^/^05HSV
12^/^Full|||20131115101723|||N|||ASWAB^P|Labop
erator|||||P[CR]C|1|I|emp[ETB]E0[CR][LF]

HOST 15:06:53,683 [ACK]

c4800 15:06:53,683 [STX]7ty|G[CR]R|1|^/^05HSV1|Failed|||X||Labop
erator|20131115102939|20131115132911|50549_3007
1[CR]C|1|I|F;X4,M7|G[CR]R|2|^/^05HSV2|Failed|||
|X||Laboperator|20131115102939|20131115132911|
50549_30071[CR]C|1|I|F;X4,M7|G[CR]P|11[CR]O|1|R
DR0008233^CD0509019^C02^/^AA5[ETB]9B[CR][LF]

HOST 15:06:53,824 [ACK]

c4800 15:06:53,824 [STX]0100087||^/^05HSV12^/^Full|||20131115101723
|||N|||ASWAB^P|Laboperator|||||P[CR]R|1|^
/^05HSV1|POS·HSV-1||||P||Laboperator|201311151
02939|20131115132911|50549_30071[CR]C|1|I|F;M7|
G[CR]R|2|^/^05HSV2|POS·HSV-2||||P||Laboperator
|20131115102939|2013[ETB]FF[CR][LF]

HOST 15:06:53,964 [ACK]

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c4800 15:06:53,964 [STX]11115132911|50549_30071[CR]C|1|I|F;M7|G[CR]
]P|12[CR]O|1|RDR0008234^CD0509019^D02^^AA51000
87|||^05HSV12^^Full|||20131115101723||||N||||A
SWAB^P|Laboperator|||||||P[CR]R|1|^05HSV1|P
OS·HSV-1||||P||Laboperator|20131115102939|2013
11115132911|50549_30071[CR] [ETB]53[CR] [LF]
HOST 15:06:54,104 [ACK]
c4800 15:06:54,104 [STX]2C|1|I|F;M7|G[CR]R|2|^05HSV2|Invalid·HSV
-2|||||P||Laboperator|20131115102939|2013111513
2911|50549_30071[CR]C|1|I|F;M7|G[CR]P|13[CR]O|1
|RDR0008230^CD0509019^E02^^AA5100087|||^05HSV
12^^Full|||20131115101723||||N||||ASWAB^P|Labop
erator|||||||P[CR]R|1|^05HSV2| [ETB]84[CR] [LF]
HOST 15:06:54,245 [ACK]
c4800 15:06:54,245 [STX]3|^05HSV1|Invalid·HSV-1|||||P||Laboperator|
20131115102939|20131115132911|50549_30071[CR]C|
1|I|F;M7|G[CR]R|2|^05HSV2|POS·HSV-2|||||P||La
boperator|20131115102939|20131115132911|50549_3
0071[CR]C|1|I|F;M7|G[CR]P|14[CR]O|1|RDR0008236^
CD0509019^F02^^AA5100087|[ETB]E6[CR] [LF]
HOST 15:06:54,385 [ACK]
c4800 15:06:54,385 [STX]4|^05HSV12^^Full|||20131115101723||||N|||
||ASWAB^P|Laboperator|||||||P[CR]R|1|^05HSV
1|Invalid·HSV-1|||||P||Laboperator|201311151029
39|20131115132911|50549_30071[CR]C|1|I|F;M7|G[C
R]R|2|^05HSV2|Invalid·HSV-2|||||P||Laboperato
r|20131115102939|201[ETB]CE[CR] [LF]
HOST 15:06:54,526 [ACK]
c4800 15:06:54,526 [STX]531115132911|50549_30071[CR]C|1|I|F;M7|G[C
R]P|15[CR]O|1|RDR0007804^CD0509019^G02^^AA5100
087|||^05HSV12^^Full|||20131115101723||||N|||||
ASWAB^P|Laboperator|||||||P[CR]C|1|I|soap|G[C
R]R|1|^05HSV1|Failed|||||X||Laboperator|20131
115102939|20131115132911|5[ETB]F9[CR] [LF]
HOST 15:06:54,666 [ACK]
c4800 15:06:54,666 [STX]60549_30071[CR]C|1|I|F;X3,M7|G[CR]R|2|^05HSV2
|Failed|||||X||Laboperator|20131115102939|
20131115132911|50549_30071[CR]C|1|I|F;X3,M7|G[C
R]P|16[CR]O|1|RDR0008237^CD0509019^H02^^AA5100
087|||^05HSV12^^Full|||20131115101723||||N|||||
ASWAB^P|Laboperator|||||||[ETB]C6[CR] [LF]
HOST 15:06:54,806 [ACK]
c4800 15:06:54,806 [STX]7|||P[CR]R|1|^05HSV1|POS·HSV-1|||||P||Lab
operator|20131115102939|20131115132911|50549_30
071[CR]C|1|I|F;M7|G[CR]R|2|^05HSV2|POS·HSV-2|
|||||P||Laboperator|20131115102939|2013111513291
1|50549_30071[CR]C|1|I|F;M7|G[CR]P|17[CR]O|1|R
D0008238^CD0509019^A03^^AA51[ETB]27[CR] [LF]
HOST 15:06:54,947 [ACK]
c4800 15:06:54,947 [STX]000087|||^05HSV12^^Full|||20131115101723|
||||N||||ASWAB^P|Laboperator|||||||P[CR]R|1|^05HSV1|POS·HSV-1|||||P||Laboperator|20131115102939|20131115132911|50549_30071[CR]C|1|I|F;M7|G[CR]R|2|^05HSV2|NEG·HSV-2|||||P||Laboperator|20131115102939|20131[ETB]E7[CR] [LF]
HOST 15:06:55,087 [ACK]
c4800 15:06:55,087 [STX]11115132911|50549_30071[CR]C|1|I|F;M7|G[CR]
P|18[CR]O|1|RDR0008244^CD0509019^B03^^AA510008
7|||^05HSV12^^Full|||20131115101723||||N||||AS

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WAB^P|Laboperator|||||||P[CR]R|1|^~~~05HSV1|NE
G·HSV-1|||||P||Laboperator|20131115102939|20131
115132911|50549_30071[CR]C[ETB]53[CR] [LF]

HOST 15:06:55,228 [ACK]
c4800 15:06:55,228 [STX]2|1|I|F;M7|G[CR]R|2|^~~~05HSV2|POS·HSV-2|||
||P||Laboperator|20131115102939|20131115132911|
50549_30071[CR]C|1|I|F;M7|G[CR]P|19[CR]O|1|RDR0
008240^CD0509019^C03~~~AA5100087|||^~~~05HSV12~~~F
ull|||20131115101723||||N||||ASWAB^P|Laboperato
r|||||||P[CR]R|1|^~~~05HS[ETB]D0[CR] [LF]

HOST 15:06:55,368 [ACK]
c4800 15:06:55,368 [STX]3V1|NEG·HSV-1|||||P||Laboperator|201311151
02939|20131115132911|50549_30071[CR]C|1|I|F;M7|
G[CR]R|2|^~~~05HSV2|NEG·HSV-2|||||P||Laboperator
|20131115102939|20131115132911|50549_30071[CR]C
|1|I|F;M7|G[CR]P|20[CR]O|1|RDR0008241^CD0509019
^D03~~~AA5100087|||^~~~05HSV[ETB]67[CR] [LF]

HOST 15:06:55,508 [ACK]
c4800 15:06:55,508 [STX]412~~~Full|||20131115101723||||N||||ASWAB^P
|Laboperator|||||||P[CR]C|1|I|empty|G[CR]R|1|
^~~~05HSV1|Failed|||||X||Laboperator|20131115102
939|20131115132911|50549_30071[CR]C|1|I|F;X4,M7
|G[CR]R|2|^~~~05HSV2|Failed|||||X||Laboperator|2
0131115102939|201311151[ETB]23[CR] [LF]

HOST 15:06:55,649 [ACK]
c4800 15:06:55,649 [STX]532911|50549_30071[CR]C|1|I|F;X4,M7|G[CR]P
|21[CR]O|1|RDR0008242^CD0509019^E03~~~AA5100087
|||^~~~05HSV12~~~Full|||20131115101723||||N||||ASW
AB^P|Laboperator|||||||P[CR]R|1|^~~~05HSV1|POS
·HSV-1|||||P||Laboperator|20131115102939|201311
15132911|50549_30071[CR]C| [ETB]D6[CR] [LF]

HOST 15:06:55,789 [ACK]
c4800 15:06:55,789 [STX]61|I|F;M7|G[CR]R|2|^~~~05HSV2|POS·HSV-2|||
||P||Laboperator|20131115102939|20131115132911|5
0549_30071[CR]C|1|I|F;M7|G[CR]P|22[CR]O|1|RDR00
08243^CD0509019^F03~~~AA5100087|||^~~~05HSV12~~~Fu
ll|||20131115101723||||N||||ASWAB^P|Laboperator
|||||||P[CR]R|1|^~~~05HSV[ETB]AE[CR] [LF]

HOST 15:06:55,930 [ACK]
c4800 15:06:55,930 [STX]71|POS·HSV-1|||||P||Laboperator|2013111510
2939|20131115132911|50549_30071[CR]C|1|I|F;M7|G
[CR]R|2|^~~~05HSV2|Invalid·HSV-2|||||P||Labopera
tor|20131115102939|20131115132911|50549_30071[CR]
C|1|I|F;M7|G[CR]P|23[CR]O|1|RDR0008239^CD0509
019^G03~~~AA5100087|||^~~~05[ETB]36[CR] [LF]

HOST 15:06:56,070 [ACK]
c4800 15:06:56,070 [STX]0HSV12~~~Full|||20131115101723||||N||||ASWA
B^P|Laboperator|||||||P[CR]R|1|^~~~05HSV1|Inva
lid·HSV-1|||||P||Laboperator|20131115102939|201
31115132911|50549_30071[CR]C|1|I|F;M7|G[CR]R|2|
^~~~05HSV2|POS·HSV-2|||||P||Laboperator|20131115
102939|2013111513291[ETB]F5[CR] [LF]

HOST 15:06:56,210 [ACK]
c4800 15:06:56,210 [STX]11|50549_30071[CR]C|1|I|F;M7|G[CR]P|24[CR]
O|1|RDR0008245^CD0509019^H03~~~AA5100087|||^~~~05
HSV12~~~Full|||20131115101723||||N||||ASWAB^P|La
boperator|||||||P[CR]R|1|^~~~05HSV1|Invalid·HS
V-1|||||P||Laboperator|20131115102939|201311151
32911|50549_30071[CR]C|1|I[ETB]1F[CR] [LF]

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HOST 15:06:56,351 [ACK]
c4800 15:06:56,351 [STX]2|F;M7|G[CR]R|2|^^^05HSV2|Invalid·HSV-2|||
||P||Laboperator|20131115102939|20131115132911|
50549_30071[CR]C|1|I|F;M7|G[CR]L|1|N[CR] [ETX]C3
[CR] [LF]
HOST 15:06:56,476 [ACK]
c4800 15:06:56,476 [EOT]
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HSV 1 and 2 HL7 communication traces

Order download

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C4800 10:24:35,995 [VT]
C4800 10:24:35,995 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316102420+0100||QBP^Q11^QBP_Q
11|f7fc79c1-5cbb-44f0-ac37-71648eb61e8a|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:24:35,995 QPD|WOS^Work·Order·Step^IHELAW|6b3fe2dc-e481-44
70-8d06-9d1c2ffe5fcfd|HSV12_01[CR]
C4800 10:24:35,995 RCP|I||R^^HL70394[CR]
C4800 10:24:35,995 [FS] [CR]

*      10:24:36,285 ACK Inquiry: ExMID = f7fc79c1-5cbb-44f0-ac37-7
1648eb61e8a

HOST 10:24:36,295 [VT]
HOST 10:24:36,295 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316102436+0100||RSP^K11
^RSP_K11|889fd500-b613-4f19-a9fe-8ea61e5e4b73|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:24:36,319 MSA|AA|f7fc79c1-5cbb-44f0-ac37-71648eb61e8a[CR]
HOST 10:24:36,331 QAK|6b3fe2dc-e481-4470-8d06-9d1c2ffe5fcfd|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:24:36,341 QPD|WOS^Work·Order·Step^IHE_LAW|6b3fe2dc-e481-4
470-8d06-9d1c2ffe5fcfd|HSV12_01[CR]
HOST 10:24:36,351 [FS] [CR]

*      10:24:37,251 Order: SID^MID = HSV12_01^1b3e572c-1cf9-4366-b
0cb-8c57eee1e4c6

HOST 10:24:37,261 [VT]
HOST 10:24:37,261 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316102437+0100||OML^O33
^OML_O33|1b3e572c-1cf9-4366-b0cb-8c57eee1e4c6|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:24:37,276 SPM|1|HSV12_01&ROCHE||ASWAB^^99ROC||||||P^HL7
0369[CR]
HOST 10:24:37,291 SAC|||HSV12_01[CR]
HOST 10:24:37,301 ORC|NW|||||||20150312135913[CR]
HOST 10:24:37,311 OBR||12345||05HSV12^05HSV12^99ROC[CR]
HOST 10:24:37,321 [FS] [CR]

C4800 10:24:39,576 [VT]
C4800 10:24:39,576 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316102423+0100||ORL^O34^ORL_O
34|f0a59cd8-c3e5-4df9-a548-959d916c0a75|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:24:39,576 MSA|AA|1b3e572c-1cf9-4366-b0cb-8c57eee1e4c6[CR]
C4800 10:24:39,576 SPM|1|HSV12_01&ROCHE||ASWAB^^99ROC||||||P^HL7
0369[CR]
C4800 10:24:39,576 SAC|||HSV12_01[CR]
C4800 10:24:39,576 ORC|OK|12345|||SC[CR]
C4800 10:24:39,576 [FS] [CR]

C4800 10:24:39,789 [VT]
C4800 10:24:39,789 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
```

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LIS·Facility|20150316102420+0100||QBP^Q11^QBP_Q
11|0b472f24-432e-4daf-90b6-8d1d32e2095b|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:24:39,789 QPD|WOS^Work·Order·Step^IHELAW|5d70b458-e744-4a
15-a669-42717bbe7fbc|HSV12_02[CR]
C4800 10:24:39,789 RCP|I||R^HL70394[CR]
C4800 10:24:39,789 [FS] [CR]

*      10:24:39,911 ACK Inquiry: ExMID = 0b472f24-432e-4daf-90b6-8
d1d32e2095b

HOST 10:24:39,911 [VT]
HOST 10:24:39,921 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316102439+0100||RSP^K11
^RSP_K11|e5f79cf2-7f8d-403f-a8a3-c9159b4afb10|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 10:24:39,931 MSA|AA|0b472f24-432e-4daf-90b6-8d1d32e2095b[CR]
HOST 10:24:39,943 QAK|5d70b458-e744-4a15-a669-42717bbe7fbc|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 10:24:39,953 QPD|WOS^Work·Order·Step^IHE_LAW|5d70b458-e744-4
a15-a669-42717bbe7fbc|HSV12_02[CR]
HOST 10:24:39,963 [FS] [CR]

*      10:24:40,993 Order: SID^MID = HSV12_02^ae1dfc8c-dea7-4e53-b
9f2-105c565fd453

HOST 10:24:41,003 [VT]
HOST 10:24:41,003 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316102440+0100||OML^O33
^OML_O33|ae1dfc8c-dea7-4e53-b9f2-105c565fd453|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 10:24:41,023 SPM|1|HSV12_02&ROCHE||ASWAB^^99ROC||||||P^HL7
0369[CR]
HOST 10:24:41,035 SAC|||HSV12_02[CR]
HOST 10:24:41,045 ORC|NW|||||||20150312135913[CR]
HOST 10:24:41,055 OBR||12345||05HSV12^05HSV12^99ROC[CR]
HOST 10:24:41,065 [FS] [CR]

C4800 10:24:43,018 [VT]
C4800 10:24:43,018 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316102427+0100||ORL^O34^ORL_O
34|f050b772-9ec0-49ea-8ea2-2b9ac038e9a9|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 10:24:43,018 MSA|AA|ae1dfc8c-dea7-4e53-b9f2-105c565fd453[CR]
C4800 10:24:43,018 SPM|1|HSV12_02&ROCHE||ASWAB^^99ROC||||||P^HL7
0369[CR]
C4800 10:24:43,018 SAC|||HSV12_02[CR]
C4800 10:24:43,018 ORC|OK|12345|||SC[CR]
C4800 10:24:43,018 [FS] [CR]

C4800 10:24:43,225 [VT]
C4800 10:24:43,225 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316102420+0100||QBP^Q11^QBP_Q
11|8319afdd-ca4c-4c48-89d7-251cb4ae98e6|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 10:24:43,225 QPD|WOS^Work·Order·Step^IHELAW|6829c849-05f3-4a
0d-80a9-70a5a86e0dd0|HSV12_03[CR]
C4800 10:24:43,225 RCP|I||R^HL70394[CR]
C4800 10:24:43,225 [FS] [CR]

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* 10:24:43,577 ACK Inquiry: ExMID = 8319afdd-ca4c-4c48-89d7-251cb4ae98e6

HOST 10:24:43,595 [VT]

HOST 10:24:43,595 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2·2.0.1437|LAB·Name|20150316102443+0100||RSP^K11^RSP_K11|09c16edc-4322-4006-8436-b5b1de97ec64|P|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]

HOST 10:24:43,615 MSA|AA|8319afdd-ca4c-4c48-89d7-251cb4ae98e6[CR]

HOST 10:24:43,625 QAK|6829c849-05f3-4a0d-80a9-70a5a86e0dd0|OK|WOS^Work·Order·Step^IHE_LAW[CR]

HOST 10:24:43,635 QPD|WOS^Work·Order·Step^IHE_LAW|6829c849-05f3-4a0d-80a9-70a5a86e0dd0|HSV12_03[CR]

HOST 10:24:43,645 [FS] [CR]

* 10:24:44,455 Order: SID^MID = HSV12_03^bf4fd2bb-2406-4041-a216-3175c71eff94

HOST 10:24:44,455 [VT]

HOST 10:24:44,455 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2·2.0.1437|LAB·Name|20150316102444+0100||OML^O33^OML_O33|bf4fd2bb-2406-4041-a216-3175c71eff94|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]

HOST 10:24:44,482 SPM|1|HSV12_03&ROCHE||ASWAB^^99ROC||||||P^^HL70369[CR]

HOST 10:24:44,492 SAC|||HSV12_03[CR]

HOST 10:24:44,502 ORC|NW|||||||20150312135913[CR]

HOST 10:24:44,512 OBR||12345||05HSV12^05HSV12^99ROC[CR]

HOST 10:24:44,522 [FS] [CR]

C4800 10:24:46,799 [VT]

C4800 10:24:46,799 MSH|^~\&|cobas·4800·software·2.2.0.1507|"||LIS|LIS.Facility|20150316102430+0100||ORL^O34^ORL_O34|639857ea-0336-410d-a4fb-10f4845b1292|P|2.5.1|||||UNICODE·UTF-8|||LAB-28^IHE[CR]

C4800 10:24:46,799 MSA|AA|bf4fd2bb-2406-4041-a216-3175c71eff94[CR]

C4800 10:24:46,799 SPM|1|HSV12_03&ROCHE||ASWAB^^99ROC||||||P^^HL70369[CR]

C4800 10:24:46,799 SAC|||HSV12_03[CR]

C4800 10:24:46,799 ORC|OK|12345|||SC[CR]

C4800 10:24:46,799 [FS] [CR]

Result upload

C4800 11:37:01,868 [VT]

C4800 11:37:01,868 MSH|^~\&|cobas·4800·software·2.2.0.1507^123456_12345^M|"||LIS|LIS.Facility|20150311113647+0100||OUL^R22^OUL_R22|a97015a8-5d6e-46af-bbdd-ca56d2326c6b|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29^IHE[CR]

C4800 11:37:01,868 SPM|1|5PC121HPCBZ0079&ROCHE||"||||||Q^^HL70369[CR]

C4800 11:37:01,868 SAC|||5PC121HPCBZ0079[CR]

C4800 11:37:01,868 INV|POSCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[CR]

C4800 11:37:01,868 OBR||"||05HSV12^05HSV12^99ROC||20150227100218[CR]

C4800 11:37:01,868 ORC|SC||||CM[CR]

C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20150227100709^20150227101059||||"|||F|||||RocheCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|Valid|||AnD^^99ROC|||P|||||RocheNoCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2503804^^99ROC|A01^^99ROC[CR]

C4800 11:37:01,868 NTE|1||F;M4,M7[CR]

C4800 11:37:01,868 NTE|2||Ct:0·(MMx·1),36.2;Ct:1·(MMx·1),39.3;Ct:5·(MMx·1),39.6[CR]

C4800 11:37:01,868 NTE|3|||[CR]

C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|Valid|||AnD^^99ROC|||P|||||RocheNoCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2503804^^99ROC|A01^^99ROC[CR]

C4800 11:37:01,868 NTE|1||F;M4,M7[CR]

C4800 11:37:01,868 NTE|2||Ct:0·(MMx·1),36.2;Ct:1·(MMx·1),39.3;Ct:5·(MMx·1),39.6[CR]

C4800 11:37:01,868 NTE|3|||[CR]

C4800 11:37:01,868 SPM|2|ONC542348BZ0004&ROCHE|||||||||Q^^HL70369[CR]

C4800 11:37:01,868 SAC|||ONC542348BZ0004[CR]

C4800 11:37:01,868 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[CR]

C4800 11:37:01,868 OBR||"|||05HSV12^05HSV12^99ROC||20150227100218[CR]

C4800 11:37:01,868 ORC|SC||||CM[CR]

C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20150227100709^20150227101059||||"|||F|||||RocheCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|Valid|||AnD^^99ROC|||P|||||RocheNoCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2503804^^99ROC|B01^^99ROC[CR]

C4800 11:37:01,868 NTE|1||F;M4,M7[CR]

C4800 11:37:01,868 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),39.6[CR]

C4800 11:37:01,868 NTE|3|||[CR]

C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|Valid|||AnD^^99ROC|||P|||||RocheNoCheck||C4800^Roche~123456_12345^Roche|20150227101059[CR]

C4800 11:37:01,868 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2503804^^99ROC|B01^^99ROC[CR]

C4800 11:37:01,868 NTE|1||F;M4,M7[CR]

C4800 11:37:01,868 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),39.6[CR]

C4800 11:37:01,868 NTE|3|||[CR]

C4800 11:37:01,868 SPM|3|54055535411&ROCHE|||||||||P^^HL70369[CR]

C4800 11:37:01,868 SAC|||54055535411[CR]

C4800 11:37:01,868 OBR||"|||05HSV12^05HSV12^99ROC||20150227100218[CR]

C4800 11:37:01,868 ORC|SC||||CM[CR]
 C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run ·Execution ·Time ·Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50227100709^20150227101059||||"|||F|||||RocheCh
 eck||C4800^Roche~123456_12345^Roche|20150227101
 059[CR]
 C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|POS ·HSV-1|||An
 D^99ROC|||P|||||RocheNoCheck||C4800^Roche~1234
 56_12345^Roche|20150227101059[CR]
 C4800 11:37:01,868 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|FD2
 503804^99ROC|C01^99ROC[CR]
 C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
 C4800 11:37:01,868 NTE|2|||[CR]
 C4800 11:37:01,868 NTE|3|||[CR]
 C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|POS ·HSV-2|||An
 D^99ROC|||P|||||RocheNoCheck||C4800^Roche~1234
 56_12345^Roche|20150227101059[CR]
 C4800 11:37:01,868 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|FD2
 503804^99ROC|C01^99ROC[CR]
 C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
 C4800 11:37:01,868 NTE|2|||[CR]
 C4800 11:37:01,868 SPM|4|54055535415&ROCHE||"|||||P^HL70369[CR]
]
 C4800 11:37:01,868 SAC|||54055535415[CR]
 C4800 11:37:01,868 OBR||"||05HSV12^05HSV12^99ROC||20150227100218[
 CR]
 C4800 11:37:01,868 ORC|SC||||CM[CR]
 C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run ·Execution ·Time ·Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50227100709^20150227101059||||"|||F|||||RocheCh
 eck||C4800^Roche~123456_12345^Roche|20150227101
 059[CR]
 C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|POS ·HSV-1|||An
 D^99ROC|||P|||||RocheNoCheck||C4800^Roche~1234
 56_12345^Roche|20150227101059[CR]
 C4800 11:37:01,868 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|FD2
 503804^99ROC|D01^99ROC[CR]
 C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
 C4800 11:37:01,868 NTE|2|||[CR]
 C4800 11:37:01,868 NTE|3|||[CR]
 C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|NEG ·HSV-2|||An
 D^99ROC|||P|||||RocheNoCheck||C4800^Roche~1234
 56_12345^Roche|20150227101059[CR]
 C4800 11:37:01,868 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|FD2
 503804^99ROC|D01^99ROC[CR]
 C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
 C4800 11:37:01,868 NTE|2|||[CR]
 C4800 11:37:01,868 NTE|3|||[CR]
 C4800 11:37:01,868 SPM|5|54055535419&ROCHE||"|||||P^HL70369[CR]
]
 C4800 11:37:01,868 SAC|||54055535419[CR]
 C4800 11:37:01,868 OBR||"||05HSV12^05HSV12^99ROC||20150227100218[
 CR]
 C4800 11:37:01,868 ORC|SC||||CM[CR]
 C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run ·Execution ·Time ·Range^
 99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
 50227100709^20150227101059||||"|||F|||||RocheCh
 eck||C4800^Roche~123456_12345^Roche|20150227101

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059[CR]
C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|POS·HSV-1|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|E01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|Invalid·HSV-2|
||AnD^^99ROC|||P||||RocheNoCheck||C4800^Roche~
123456_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|E01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 SPM|6|54055535423&ROCHE||"||||||P^^HL70369[CR
]
C4800 11:37:01,868 SAC|||54055535423[CR]
C4800 11:37:01,868 OBR||"||05HSV12^05HSV12^99ROC||20150227100218[
CR]
C4800 11:37:01,868 ORC|SC||||CM[CR]
C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50227100709^20150227101059|||""|||F||||RocheCh
eck||C4800^Roche~123456_12345^Roche|20150227101
059[CR]
C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|NEG·HSV-1|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|F01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|POS·HSV-2|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|F01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 SPM|7|54055535427&ROCHE||"||||||P^^HL70369[CR
]
C4800 11:37:01,868 SAC|||54055535427[CR]
C4800 11:37:01,868 OBR||"||05HSV12^05HSV12^99ROC||20150227100218[
CR]
C4800 11:37:01,868 ORC|SC||||CM[CR]
C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50227100709^20150227101059|||""|||F||||RocheCh
eck||C4800^Roche~123456_12345^Roche|20150227101
059[CR]
C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|NEG·HSV-1|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2

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503804^^99ROC|G01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|NEG·HSV-2|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|G01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 SPM|8|54055535431&ROCHE||"||||||P^^HL70369[CR]
]
C4800 11:37:01,868 SAC|||54055535431[CR]
C4800 11:37:01,868 OBR||"|||05HSV12^05HSV12^99ROC||20150227100218[
CR]
C4800 11:37:01,868 ORC|SC||||CM[CR]
C4800 11:37:01,868 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
50227100709^20150227101059||||"|||F|||||RocheCh
eck||C4800^Roche~123456_12345^Roche|20150227101
059[CR]
C4800 11:37:01,868 OBX|2|ST|05HSV1^05HSV1^99ROC|1.1|NEG·HSV-1|||An
D^^99ROC|||P||||RocheNoCheck||C4800^Roche~1234
56_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|H01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 OBX|3|ST|05HSV2^05HSV2^99ROC|1.2|Invalid·HSV-2|
||AnD^^99ROC|||P||||RocheNoCheck||C4800^Roche~
123456_12345^Roche|20150227101059[CR]
C4800 11:37:01,868 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
503804^^99ROC|H01^^99ROC[CR]
C4800 11:37:01,868 NTE|1||F;M4,M7[CR]
C4800 11:37:01,868 NTE|2||[CR]
C4800 11:37:01,868 NTE|3||[CR]
C4800 11:37:01,868 [FS] [CR]

*      11:37:02,770 ACK Result: ExMID = a97015a8-5d6e-46af-bbdd-ca
56d2326c6b

HOST   11:37:02,780 [VT]
HOST   11:37:02,780 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311113702+0100
||ACK^R22^ACK|60028278-8900-4ebb-8084-e737cce0f
336|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   11:37:02,800 MSA|AA|a97015a8-5d6e-46af-bbdd-ca56d2326c6b[CR]
HOST   11:37:02,812 [FS] [CR]

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KRAS P1 ASTM communication traces

Result upload

```
c4800 13:37:32,935 [ENQ]
HOST   13:37:33,028 [ACK]
c4800 13:37:33,028 [STX]1H|^&|||cobas·4800·software^14222a96-606a
-4419-9996-99f510a2ce94^RocheNoCheck^2.2.0.1503
^1394.LIS2||||LIS|RSUPL^REAL|P|1|2014120913364
1[CR]P|1[CR]O|1|7A13456788G3214^CD0508564^A01:A
02^^^|||^07KRAS^^AnD|||20130913144814||||Q|||
^MUTCONTROL|Labop[ETB]9A[CR][LF]
HOST   13:37:33,153 [ACK]
c4800 13:37:33,153 [STX]2erator|||||||P[CR]R|1|^07KRAS|Invalid
|||||P||Laboperator|20130913152020|201309131711
02|25754_26010[CR]C|1|I|F;R277,M7|G[CR]C|2|I|,|G[CR]R|2|^07KRAS03|N/A||||P||Laboperator|201
30913152020|20130913171102|25754_26010[CR]C|1|I|F;R277,M7|G[CR]C|2|I|,|G[CR]P|2[ETB]82[CR][LF]
HOST   13:37:33,278 [ACK]
c4800 13:37:33,278 [STX]3[CR]O|1|7A13456788G3214^CD0508564^B01:B02
^^^|||^07KRAS^^AnD|||20130913144814||||Q|||^N
EGCONTROL|Laboperator|||||||P[CR]R|1|^07KRA
S|Invalid||||P||Laboperator|20130913152020|201
30913171102|25754_26010[CR]C|1|I|F;R266,R267,M7
|G[CR]C|2|I|,|G[CR]R|2|^07KRAS[ETB]1A[CR][LF]
HOST   13:37:33,403 [ACK]
c4800 13:37:33,403 [STX]407KRAS03|N/A||||P||Laboperator|201309131
52020|20130913171102|25754_26010[CR]C|1|I|F;R26
6,R267,M7|G[CR]C|2|I|,|G[CR]P|3[CR]O|1|7A134567
88G3214^CD0508564^C01:C02^^^|||^07KRAS^^AnD|||
20130913144814||||Q|||^CALIBRATOR|Laboperator|
|||||||P[CR]R|1|^07KRAS[ETB]60[CR][LF]
HOST   13:37:33,528 [ACK]
c4800 13:37:33,528 [STX]5|Valid||||P||Laboperator|20130913152020|
20130913171102|25754_26010[CR]C|1|I|F;M7|G[CR]C
|2|I|,|G[CR]R|2|^07KRAS03|N/A||||P||Labopera
tor|20130913152020|20130913171102|25754_26010[C
R]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]P|4[CR]O|1|01·2·
WT^CD0508564^D01:D02^^^|||^07KR[ETB]68[CR][LF]
HOST   13:37:33,652 [ACK]
c4800 13:37:33,652 [STX]6AS^^AnD|||20130913144814||||N||||^P|Labop
erator|||||||P[CR]R|1|^07KRAS|Invalid||||P||Laboper
ator|20130913152020|20130913171102|257
54_26010[CR]C|1|I|F;R266,R267,R277,M7|G[CR]R|2|
^07KRAS03|N/A||||P||Laboperator|201309131520
20|20130913171102|25[ETB]02[CR][LF]
HOST   13:37:33,777 [ACK]
c4800 13:37:33,777 [STX]7754_26010[CR]C|1|I|F;R266,R267,R277,M7|G[
CR]P|5[CR]O|1|02·2mut^CD0508564^E01:E02^^^|||^
07KRAS^^AnD|||20130913144814||||N||||^P|Laboper
ator|||||||P[CR]R|1|^07KRAS|Invalid||||P||Laboper
ator|20130913152020|20130913171102|25754
_26010[CR]C|1|I|F;R266,R26[R]277,M7|G[CR]P|6[CR]
HOST   13:37:33,902 [ACK]
c4800 13:37:33,902 [STX]07,R277,M7|G[CR]R|2|^07KRAS03|N/A||||P||Laboper
ator|20130913152020|20130913171102|2575
4_26010[CR]C|1|I|F;R266,R267,R277,M7|G[CR]P|6[CR]
```

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R]O|1|03·2buff^CD0508564^F01:F02^^^||^/^07KRAS^
^And|||20130913144814||||N||||^P|Laboperator|||
||||||P[CR]R|1|^/^07KRAS|I[ETB]14[CR][LF]
HOST 13:37:34,042 [ACK]
c4800 13:37:34,042 [STX]1invalid|||||P||Laboperator|20130913152020|
20130913171102|25754_26010[CR]C|1|I|F;R266,R267
,R277,M7|G[CR]R|2|^/^07KRAS03|N/A|||||P||Labope
rator|20130913152020|20130913171102|25754_26010
[CR]C|1|I|F;R266,R267,R277,M7|G[CR]P|7[CR]O|1|0
4·1WT·1buff^CD0508564^G01:[ETB]CE[CR][LF]
HOST 13:37:34,167 [ACK]
c4800 13:37:34,167 [STX]2G02^^^||^/^07KRAS^AnD|||20130913144814|||
||N||||^P|Laboperator||||||||P[CR]R|1|^/^07KRA
S|Invalid|||||P||Laboperator|20130913152020|201
30913171102|25754_26010[CR]C|1|I|F;R266,R267,R2
77,M7|G[CR]R|2|^/^07KRAS03|N/A|||||P||Laboperat
or|20130913152020|20[ETB]97[CR][LF]
HOST 13:37:34,292 [ACK]
c4800 13:37:34,292 [STX]3130913171102|25754_26010[CR]C|1|I|F;R266,
R267,R277,M7|G[CR]P|8[CR]O|1|05·2spec^CD0508564
^H01:H02^^^||^/^07KRAS^AnD|||20130913144814|||
|N||||^P|Laboperator||||||||P[CR]R|1|^/^07KRAS
|Invalid|||||P||Laboperator|20130913152020|2013
0913171102|25754_26010[CR][ETB]4A[CR][LF]
HOST 13:37:34,417 [ACK]
c4800 13:37:34,417 [STX]4C|1|I|F;R266,R267,R277,M7|G[CR]R|2|^/^07K
RAS03|N/A|||||P||Laboperator|20130913152020|201
30913171102|25754_26010[CR]C|1|I|F;R266,R267,R2
77,M7|G[CR]L|1|N[CR][ETX]17[CR][LF]
HOST 13:37:34,526 [ACK]
c4800 13:37:34,542 [EOT]

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KRAS P1 HL7 communication traces

Result upload

```
C4800 10:31:47,360 [VT]
C4800 10:31:47,360 MSH|^~\&|cobas·4800·software·2.2.0.1507^25754_2
6010^M|""|LIS|LIS·Facility|20150311103133+0100|
|OUL^R22^OUL_R22|156ae7b1-9fa9-434c-b7ab-88969c
0fe724|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
THE[CR]
C4800 10:31:47,360 SPM|1|7A19872342J5412&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 10:31:47,360 SAC|||7A19872342J5412[CR]
C4800 10:31:47,360 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:31:47,360 OBR||"|||07KRAS^07KRAS^99ROC||20130916090435[CR
]
C4800 10:31:47,360 ORC|SC||||CM[CR]
C4800 10:31:47,360 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30916133041^20130916152128||||"|||F||||Laboper
ator||C4800^Roche~25754_26010^Roche|20130916152
128[CR]
C4800 10:31:47,360 OBX|2|ST|07KRAS^07KRAS^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~25754_26
010^Roche|20130916152128[CR]
C4800 10:31:47,360 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508609^^99ROC|A01:A02^^99ROC[CR]
C4800 10:31:47,360 NTE|1||F;M7[CR]
C4800 10:31:47,360 NTE|2|||[CR]
C4800 10:31:47,360 NTE|3||Exp·Valid[CR]
C4800 10:31:47,360 OBX|3|ST|07KRAS03^07KRAS03^99ROC|1.2|N/A|||AnD^
99ROC|||P||||RocheNoCheck||C4800^Roche~25754_
26010^Roche|20130916152128[CR]
C4800 10:31:47,360 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508609^^99ROC|A01:A02^^99ROC[CR]
C4800 10:31:47,360 NTE|1||F;M7[CR]
C4800 10:31:47,360 NTE|2|||[CR]
C4800 10:31:47,360 NTE|3||Exp·Valid[CR]
C4800 10:31:47,360 SPM|2|7A19872342J5412&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 10:31:47,360 SAC|||7A19872342J5412[CR]
C4800 10:31:47,360 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 10:31:47,360 OBR||"|||07KRAS^07KRAS^99ROC||20130916090435[CR
]
C4800 10:31:47,360 ORC|SC||||CM[CR]
C4800 10:31:47,360 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30916133041^20130916152128||||"|||F||||Laboper
ator||C4800^Roche~25754_26010^Roche|20130916152
128[CR]
C4800 10:31:47,360 OBX|2|ST|07KRAS^07KRAS^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~25754_26
010^Roche|20130916152128[CR]
C4800 10:31:47,360 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508609^^99ROC|B01:B02^^99ROC[CR]
C4800 10:31:47,360 NTE|1||F;M7[CR]
```

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C4800 10:31:47,360 NTE|2||,[CR]
C4800 10:31:47,360 NTE|3||Exp·Valid[CR]
C4800 10:31:47,360 OBX|3|ST|07KRAS03^07KRAS03^99ROC|1.2|N/A|||AnD^
    ^99ROC|||P||||RocheNoCheck||C4800^Roche~25754_
    26010^Roche|20130916152128[CR]
C4800 10:31:47,360 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
    508609^^99ROC|B01:B02^^99ROC[CR]
C4800 10:31:47,360 NTE|1||F;M7[CR]
C4800 10:31:47,360 NTE|2||,[CR]
C4800 10:31:47,360 NTE|3||Exp·Valid[CR]
C4800 10:31:47,360 [FS][CR]

*      10:31:49,805 ACK Result: ExMID = 156ae7b1-9fa9-434c-b7ab-88
    969c0fe724

HOST   10:31:49,815 [VT]
HOST   10:31:49,815 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437^SN1234^M|LAB·Name|20150311103149+0100
    ||ACK^R22^ACK|15269c94-5512-45aa-a83c-5db9861e7
    1d5|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   10:31:49,835 MSA|AA|156ae7b1-9fa9-434c-b7ab-88969c0fe724[CR]
HOST   10:31:49,847 [FS][CR]

```

KRAS P2 ASTM communication traces

Result upload

```
c4800 13:54:33,687 [ENQ]
HOST   13:54:33,734 [ACK]
c4800 13:54:33,734 [STX]1H|^\&|||cobas·4800·software^85483df8-5301
               -41a7-ab30-a928940dc6f1^RocheCheck^2.2.0.1503^1
               394.LIS2||||LIS|RSUPL^REAL|P|1|20141210135342[
               CR]P|1[CR]O|1|7A15780220Z1367^AD1200001^A01:A02
               ^^^|||^07KRAS^^AnD|||20141210133947||||Q||||^M
               UTCONTROL|RocheCh[ETB]ED[CR][LF]
HOST   13:54:33,859 [ACK]
c4800 13:54:33,859 [STX]2eck|||||||P[CR]R|1|^/^07KRAS|Valid|||||
               P||RocheCheck|20141210134048|20141210134649|123
               456_12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|^
               ^/^07KRAS03|N/A||||P||RocheCheck|20141210134048
               |20141210134649|123456_12345[CR]C|1|I|F;M4|G[CR
               ]C|2|I|,|G[CR]P|2[CR]O|1|7A15780220[ETB]C7[CR][
               LF]
HOST   13:54:33,984 [ACK]
c4800 13:54:33,984 [STX]3Z1367^AD1200001^B01:B02^^^|||^07KRAS^^An
               D|||20141210133947||||Q||||^NEGCONTROL|RocheChe
               ck|||||||P[CR]R|1|^/^07KRAS|Valid||||P||Roche
               Check|20141210134048|20141210134649|123456_123
               45[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]R|2|^/^07KRA
               S03|N/A||||P||RocheChe[ETB]2C[CR][LF]
HOST   13:54:34,108 [ACK]
c4800 13:54:34,108 [STX]4ck|20141210134048|20141210134649|123456_1
               2345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]P|3[CR]O|1
               |7A15780220Z1367^AD1200001^C01:C02^^^|||^07KRA
               S^^AnD|||20141210133947||||Q||||^CALIBRATOR|Roc
               heCheck|||||||P[CR]R|1|^/^07KRAS|Valid||||P||Roche
               Check|20141210134048[ETB]35[CR][LF]
HOST   13:54:34,233 [ACK]
c4800 13:54:34,233 [STX]5|20141210134649|123456_12345[CR]C|1|I|F;M
               4|G[CR]C|2|I|,|G[CR]R|2|^/^07KRAS03|N/A||||P|||
               RocheCheck|20141210134048|20141210134649|123456
               _12345[CR]C|1|I|F;M4|G[CR]C|2|I|,|G[CR]P|4[CR]O
               |1|11111^AD1200001^D01:D02^^^|||^07KRAS^^AnD|||
               |20141210133947||||N||||^P||Roche[ETB]7D[CR][LF]
HOST   13:54:34,358 [ACK]
c4800 13:54:34,358 [STX]6Check|||||||P[CR]R|1|^/^07KRAS|Mutation
               ·Detected|||||P||RocheCheck|20141210134048|2014
               1210134649|123456_12345[CR]C|1|I|F;M4|G[CR]R|2|^
               ^/^07KRAS01|Codon·12/13||||P||RocheCheck|20141
               210134048|20141210134649|123456_12345[CR]C|1|I|
               F;M4|G[CR]P|5[CR]O|1|22222^AD[ETB]D5[CR][LF]
HOST   13:54:34,483 [ACK]
c4800 13:54:34,483 [STX]71200001^E01:E02^^^|||^07KRAS^^AnD|||2014
               1210133947||||N||||^P||RocheCheck|||||||P[CR]R
               |1|^/^07KRAS|Mutation·Detected|||||P||RocheChe
               k|20141210134048|20141210134649|123456_12345[CR
               ]C|1|I|F;M4|G[CR]R|2|^/^07KRAS01|Codon·12/13|||
               ||P||RocheCheck|2014[ETB]49[CR][LF]
HOST   13:54:34,608 [ACK]
c4800 13:54:34,608 [STX]01210134048|20141210134649|123456_12345[CR
               ]C|1|I|F;M4|G[CR]P|6[CR]O|1|33333^AD1200001^F01
```

```

:F02^^^| |^^^07KRAS^^AnD|||20141210133947||||N||
||^P|RocheCheck|||||P[CR]R|1|^07KRAS|No ·M
utation ·Detected|||||P| |RocheCheck|201412101340
48|20141210134649|12345[ETB]65[CR][LF]
HOST 13:54:34,732 [ACK]
c4800 13:54:34,732 [STX]16_12345[CR]C|1|I|F;M4|G[CR]R|2|^07KRAS0
3|N/A|||||P| |RocheCheck|20141210134048|20141210
134649|123456_12345[CR]C|1|I|F;M4|G[CR]P|7[CR]O
|1|44444^AD1200001^G01:G02^^| |^^^07KRAS^^AnD|||
|20141210133947||||N||||^P|RocheCheck||||||||P
[CR]R|1|^07KRAS|Mutation ·De[ETB]D2[CR][LF]
HOST 13:54:34,857 [ACK]
c4800 13:54:34,857 [STX]2tected|||||P| |RocheCheck|20141210134048|2
0141210134649|123456_12345[CR]C|1|I|F;M4|G[CR]R
|2|^07KRAS01|Codon ·12/13|||||P| |RocheCheck|20
141210134048|20141210134649|123456_12345[CR]C|1
|I|F;M4|G[CR]P|8[CR]O|1|55555^AD1200001^H01:H02
^^| |^^^07KRAS^^AnD|||2014[ETB]76[CR][LF]
HOST 13:54:34,982 [ACK]
c4800 13:54:34,982 [STX]31210133947||||N||||^P|RocheCheck||||||||P
[CR]R|1|^07KRAS|Mutation ·Detected|||||P| |Ro
cheCheck|20141210134048|20141210134649|123456_12
345[CR]C|1|I|F;M4|G[CR]R|2|^07KRAS01|Codon ·12
/13|||||P| |RocheCheck|20141210134048|2014121013
4649|123456_12345[CR]C|[ETB]73[CR][LF]
HOST 13:54:35,107 [ACK]
c4800 13:54:35,107 [STX]41|I|F;M4|G[CR]L|1|N[CR][ETX]4B[CR][LF]
HOST 13:54:35,216 [ACK]
c4800 13:54:35,216 [EOT]

```

KRAS P2 HL7 communication traces

Result upload

```
C4800 15:15:19,551 [VT]
C4800 15:15:19,551 MSH|^~\&|cobas·4800·software·2.2.0.1507^25754_2
6010^M|""|LIS|LIS·Facility|20150311151505+0100|
|OUL^R22^OUL_R22|25d3c70d-f761-4e2a-8cc1-ddf94d
83e064|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
THE[CR]
C4800 15:15:19,551 SPM|1|7A13456788G3214&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:15:19,551 SAC|||7A13456788G3214[CR]
C4800 15:15:19,551 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:15:19,551 OBR||"|||07KRAS^07KRAS^99ROC||20130911114615[CR
]
C4800 15:15:19,551 ORC|SC||||CM[CR]
C4800 15:15:19,551 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30911142252^20130911161337||||"|||F||||Laboper
ator||C4800^Roche~25754_26010^Roche|20130911161
337[CR]
C4800 15:15:19,551 OBX|2|ST|07KRAS^07KRAS^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~25754_26
010^Roche|20130911161337[CR]
C4800 15:15:19,551 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508603^^99ROC|A01:A02^^99ROC[CR]
C4800 15:15:19,551 NTE|1||F;M7[CR]
C4800 15:15:19,551 NTE|2||,[CR]
C4800 15:15:19,551 NTE|3||[CR]
C4800 15:15:19,551 OBX|3|ST|07KRAS03^07KRAS03^99ROC|1.2|N/A|||AnD^
99ROC|||P||||RocheNoCheck||C4800^Roche~25754_
26010^Roche|20130911161337[CR]
C4800 15:15:19,551 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508603^^99ROC|A01:A02^^99ROC[CR]
C4800 15:15:19,551 NTE|1||F;M7[CR]
C4800 15:15:19,551 NTE|2||,[CR]
C4800 15:15:19,551 NTE|3||[CR]
C4800 15:15:19,551 SPM|2|7A13456788G3214&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:15:19,551 SAC|||7A13456788G3214[CR]
C4800 15:15:19,551 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:15:19,551 OBR||"|||07KRAS^07KRAS^99ROC||20130911114615[CR
]
C4800 15:15:19,551 ORC|SC||||CM[CR]
C4800 15:15:19,551 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
30911142252^20130911161337||||"|||F||||Laboper
ator||C4800^Roche~25754_26010^Roche|20130911161
337[CR]
C4800 15:15:19,551 OBX|2|ST|07KRAS^07KRAS^99ROC|1.1|Valid|||AnD^^9
9ROC|||P||||RocheNoCheck||C4800^Roche~25754_26
010^Roche|20130911161337[CR]
C4800 15:15:19,551 INV|"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
508603^^99ROC|B01:B02^^99ROC[CR]
C4800 15:15:19,551 NTE|1||F;M7[CR]
```

```

C4800 15:15:19,551 NTE|2||,[CR]
C4800 15:15:19,551 NTE|3||[CR]
C4800 15:15:19,551 OBX|3|ST|07KRAS03^07KRAS03^99ROC|1.2|N/A|||AnD^
    ^99ROC|||P||||RocheNoCheck||C4800^Roche~25754_
    26010^Roche|20130911161337[CR]
C4800 15:15:19,551 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|CDO
    508603^^99ROC|B01:B02^^99ROC[CR]
C4800 15:15:19,551 NTE|1||F;M7[CR]
C4800 15:15:19,551 NTE|2||,[CR]
C4800 15:15:19,551 NTE|3||[CR]
C4800 15:15:19,551 [FS][CR]

*      15:15:21,908 ACK Result: ExMID = 25d3c70d-f761-4e2a-8cc1-dd
        f94d83e064

HOST   15:15:21,908 [VT]
HOST   15:15:21,918 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
    .2.0.1437^SN1234^M|LAB·Name|20150311151521+0100
    ||ACK^R22^ACK|0eefbdb2-8859-4e49-b4a9-ebd31b95c
    906|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   15:15:21,928 MSA|AA|25d3c70d-f761-4e2a-8cc1-ddf94d83e064[CR]
HOST   15:15:21,943 [FS][CR]

```

MRSA/SA ASTM communication traces

MRSA order download

```
c4800 13:57:03,454 [ENQ]
HOST   13:57:03,516 [ACK]
c4800 13:57:03,516 [STX]1H|^\&|||cobas·4800^39b8f1e0-b2e3-4f78-997
a-68a1d2c7e961^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141125135617[CR]Q|1|^M
RSASAdat001[CR]L|1|N[CR] [ETX]34[CR] [LF]
HOST   13:57:03,641 [ACK]
c4800 13:57:03,641 [EOT]

*      13:57:05,864 TSDWN: SID = MRSASAdat001

HOST   13:57:05,895 [ENQ]
c4800 13:57:05,895 [ACK]
HOST   13:57:05,926 [STX]1H|^\&|||ASTM32^06a1eea0-1d45-4c9a-9e4f-5a
bd176c5411^INSTALL^7.6.5^1394.LIS2||||cobas·48
00|TSDWN^REAL|P|1|20141125135703|[CR] [ETX]51[CR]
] [LF]
c4800 13:57:05,926 [ACK]
HOST   13:57:05,942 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 13:57:05,944 [ACK]
HOST   13:57:05,954 [STX]3O|1|MRSASAdat001||^^^03MRSASA^^Full|||20
141124152852||||N|||20141124152852|NSWAB^P|beff
ab|||||||O[CR] [ETX]0C[CR] [LF]
c4800 13:57:05,954 [ACK]
HOST   13:57:05,964 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 13:57:05,964 [ACK]
HOST   13:57:05,964 [EOT]

c4800 13:57:07,830 [ENQ]
HOST   13:57:07,954 [ACK]
c4800 13:57:07,954 [STX]1H|^\&|||cobas·4800^3bae7053-9e93-4e0d-8d0
3-c985384e207e^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141125135617[CR]Q|1|^M
RSASAdat002[CR]L|1|N[CR] [ETX]FA[CR] [LF]
HOST   13:57:08,064 [ACK]
c4800 13:57:08,079 [EOT]

*      13:57:10,289 TSDWN: SID = MRSASAdat002

HOST   13:57:10,320 [ENQ]
c4800 13:57:10,336 [ACK]
HOST   13:57:10,351 [STX]1H|^\&|||ASTM32^50e70e78-9b66-4e6d-bb3e-9f
776953c79a^INSTALL^7.6.5^1394.LIS2||||cobas·48
00|TSDWN^REAL|P|1|20141125135708|[CR] [ETX]27[CR]
] [LF]
c4800 13:57:10,353 [ACK]
HOST   13:57:10,363 [STX]2P|1[CR] [ETX]3F[CR] [LF]
c4800 13:57:10,363 [ACK]
HOST   13:57:10,373 [STX]3O|1|MRSASAdat002||^^^03MRSASA^^Full|||20
141124152852||||N|||20141124152852|NSWAB^P|beff
ab|||||||O[CR] [ETX]0D[CR] [LF]
c4800 13:57:10,373 [ACK]
HOST   13:57:10,383 [STX]4L|1|N[CR] [ETX]07[CR] [LF]
c4800 13:57:10,383 [ACK]
```

HOST 13:57:10,383 [EOT]

MRSA subtests order download

```
c4800 14:13:44,087 [ENQ]
HOST 14:13:44,196 [ACK]
c4800 14:13:44,212 [STX]1H|\^&|||cobas·4800^85c0a195-90a3-4c97-907
9-28230335097e^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141125141258[CR]Q|1|^M
RSASAdat001[CR]L|1|N[CR][ETX]08[CR][LF]
HOST 14:13:44,321 [ACK]
c4800 14:13:44,321 [EOT]

* 14:13:46,529 TSDWN: SID = MRSASAdat001

HOST 14:13:46,560 [ENQ]
c4800 14:13:46,560 [ACK]
HOST 14:13:46,576 [STX]1H|\^&|||ASTM32^2b7eb5ad-cfbc-4247-96ed-9a
30c08d62f2^INSTALL^7.6.5^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20141125141344|[CR][ETX]BC[CR]
|[LF]
c4800 14:13:46,576 [ACK]
HOST 14:13:46,591 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:13:46,593 [ACK]
HOST 14:13:46,603 [STX]30|1|MRSASAdat001||^^^03MRSA^^Full|||2014
1124153122||||N|||20141124153122|NSWAB^P|beffab
|||||||O[CR][ETX]66[CR][LF]
c4800 14:13:46,603 [ACK]
HOST 14:13:46,613 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:13:46,613 [ACK]
HOST 14:13:46,613 [EOT]

c4800 14:13:48,489 [ENQ]
HOST 14:13:48,598 [ACK]
c4800 14:13:48,598 [STX]1H|\^&|||cobas·4800^fce1068-6b79-44a9-815
f-db68d76f6a4d^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141125141258[CR]Q|1|^M
RSASAdat002[CR]L|1|N[CR][ETX]94[CR][LF]
HOST 14:13:48,707 [ACK]
c4800 14:13:48,723 [EOT]

* 14:13:50,933 TSDWN: SID = MRSASAdat002

HOST 14:13:50,964 [ENQ]
c4800 14:13:50,964 [ACK]
HOST 14:13:50,995 [STX]1H|\^&|||ASTM32^af5d8841-fb88-4bf7-be10-f1
eedbd958db^INSTALL^7.6.5^1394.LIS2|||||cobas·48
00|TSDWN^REAL|P|1|20141125141348|[CR][ETX]30[CR]
|[LF]
c4800 14:13:50,997 [ACK]
HOST 14:13:51,007 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:13:51,007 [ACK]
HOST 14:13:51,017 [STX]30|1|MRSASAdat002||^^^03MRSASA^^Full|||20
141124153122||||N|||20141124153122|NSWAB^P|beff
ab|||||||O[CR][ETX]FB[CR][LF]
c4800 14:13:51,017 [ACK]
HOST 14:13:51,027 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:13:51,027 [ACK]
HOST 14:13:51,027 [EOT]
```

```

c4800 14:13:53,012 [ENQ]
HOST   14:13:53,121 [ACK]
c4800 14:13:53,121 [STX]1H|\^&|||cobas·4800^2452a573-13f2-42cf-a94
a-f4a47c59c840^RocheCheck^2.2.0.1442^1394.LIS2|
||||LIS|TSREQ^REAL|P|1|20141125141258[CR]Q|1|^M
RSASAdat003[CR]L|1|N[CR][ETX]EB[CR][LF]
HOST   14:13:53,230 [ACK]
c4800 14:13:53,246 [EOT]

*      14:13:55,460 TSDWN: SID = MRSASAdat003

HOST   14:13:55,491 [ENQ]
c4800 14:13:55,507 [ACK]
HOST   14:13:55,522 [STX]1H|\^&|||ASTM32^d27e01da-f572-4f0f-932f-fd
b8c3815b13^INSTALL^7.6.5^1394.LIS2||||cobas·48
00|TSDWN^REAL|P|1|20141125141353|[CR][ETX]5B[CR]
][LF]
c4800 14:13:55,524 [ACK]
HOST   14:13:55,534 [STX]2P|1[CR][ETX]3F[CR][LF]
c4800 14:13:55,534 [ACK]
HOST   14:13:55,544 [STX]3O|1|MRSASAdat003||^^^03SA^^Full|||201411
24153122||||N|||20141124153122|NSWAB^P|beffab||| 
|||||||O[CR][ETX]C9[CR][LF]
c4800 14:13:55,544 [ACK]
HOST   14:13:55,554 [STX]4L|1|N[CR][ETX]07[CR][LF]
c4800 14:13:55,554 [ACK]
HOST   14:13:55,554 [EOT]

```

MRSA/SA result upload

```

c4800 15:03:41,310 [ENQ]
HOST   15:03:41,388 [ACK]
c4800 15:03:41,388 [STX]1H|\^&|||cobas·4800·software^639ca18d-ab3e
-44f9-bc03-bf50531ebf01^RocheCheck^2.2.0.1442^1
394.LIS2||||LIS|RSUPL^REAL|P|1|20141120150255[CR]P|1[CR]O|1|3PC121MPCBZ0032^CD0509008^A01^^^A
A5100106||^^^03MRSASA^^Full|||20140626111805||| 
||Q||||^POSCONTROL[ETB]5B[CR][LF]
HOST   15:03:41,513 [ACK]
c4800 15:03:41,513 [STX]2|Laboperator|||||||P[CR]R|1|^^^03MRSA|V
alid|||||P||Laboperator|20140626113350|20140626
144220|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|Ct:
0·(MMx·1),36.8;Ct:1·(MMx·1),40.8;Ct:5·(MMx·1),3
8.9|G[CR]R|2|^^^03SA|Valid|||||P||Laboperator|2
0140626113350|201406261[ETB]1F[CR][LF]
HOST   15:03:41,638 [ACK]
c4800 15:03:41,638 [STX]344220|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|
I|Ct:0·(MMx·1),36.8;Ct:1·(MMx·1),40.8;Ct:5·(MMx
·1),38.9|G[CR]P|2[CR]O|1|0NCR103488E0LD6^CD0509
008^B01^^^AA5100106||^^^03MRSASA^^Full|||201406
26111805||||Q||||^NEGCONTROL|Laboperator||||||| 
||P[CR]R|1|^^^03MRSA|Valid[ETB]65[CR][LF]
HOST   15:03:41,763 [ACK]
c4800 15:03:41,763 [STX]4|||||P||Laboperator|20140626113350|201406
26144220|50549_30071[CR]C|1|I|F;M7|G[CR]C|2|I|C
t:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),3
8.9|G[CR]R|2|^^^03SA|Valid|||||P||Laboperator|2
0140626113350|20140626144220|50549_30071[CR]C|1

```

```

| I | F; M7 | G[CR] C|2| I| Ct:0 · (M[ETB]23[CR] [LF]
HOST 15:03:41, 888 [ACK]
c4800 15:03:41, 888 [STX] 5Mx ·1), ---; Ct:1 · (MMx ·1), ---; Ct:5 · (MMx ·1), 3
8.9 | G[CR] P|3[CR] O|1|RDR0008232^CD0509008^C01^^^
AA5100106|||^03MRSASA^^Full|||20140626111805|||
||N||||NSWAB^P|Laboperator|||||||P[CR]R|1|^^^
03MRSA|Invalid·MRSA|||||P||Laboperator|20140626
113350|2014062614422[ETB]3D[CR] [LF]
HOST 15:03:42, 012 [ACK]
c4800 15:03:42, 012 [STX] 60|50549_30071[CR] C|1|I|F; M7 | G[CR] R|2|^^^0
3SA|POS·SA| |||||P||Laboperator|20140626113350|20
140626144220|50549_30071[CR] C|1|I|F; M7 | G[CR] P|4
[CR] O|1|RDR0008727^CD0509008^D01^^^AA5100106||^
^^03MRSASA^^Full|||20140626111805|||N||||NSWAB
^P|Laboperator|||||||P[CR]R[ETB]F0[CR] [LF]
HOST 15:03:42, 137 [ACK]
c4800 15:03:42, 137 [STX] 7|1|^03MRSA|Invalid·MRSA|||||P||Labopera
tor|20140626113350|20140626144220|50549_30071[C
R] C|1|I|F; M7 | G[CR] R|2|^^^03SA|Invalid·SA|||||P|
|Laboperator|20140626113350|20140626144220|5054
9_30071[CR] C|1|I|F; M7 | G[CR] P|5[CR] O|1|RDR000900
5^CD0509008^E01^^^AA510010[ETB]55[CR] [LF]
HOST 15:03:42, 262 [ACK]
c4800 15:03:42, 262 [STX] 06|||^03MRSASA^^Full|||20140626111805|||
N||||NSWAB^P|Laboperator|||||||P[CR]C|1|I|C1o
t|G[CR]R|1|^03MRSA|Failed|||||X||Laboperator|
20140626113350|20140626144220|50549_30071[CR] C|
1|I|F; X3, M7 | G[CR] R|2|^^^03SA|Failed|||||X||Labo
perator|20140626113350|[ETB]60[CR] [LF]
HOST 15:03:42, 387 [ACK]
c4800 15:03:42, 387 [STX] 120140626144220|50549_30071[CR] C|1|I|F; X3,
M7 | G[CR] P|6[CR] O|1|RDR0009006^CD0509008^F01^^^A
A5100106|||^03MRSASA^^Full|||20140626111805|||
|N||||NSWAB^P|Laboperator|||||||P[CR]R|1|^^^0
3MRSA|POS·MRSA|||||P||Laboperator|2014062611335
0|20140626144220|50549_[ETB]0C[CR] [LF]
HOST 15:03:42, 512 [ACK]
c4800 15:03:42, 512 [STX] 230071[CR] C|1|I|F; M7 | G[CR] R|2|^^^03SA|POS·
SA|||||P||Laboperator|20140626113350|2014062614
4220|50549_30071[CR] C|1|I|F; M7 | G[CR] P|7[CR] O|1|
RDR0009007^CD0509008^G01^^^AA5100106|||^03MRSA
SA^^Full|||20140626111805|||N||||NSWAB^P|Labop
erator|||||||P[CR]R|1|^^^03[ETB]7E[CR] [LF]
HOST 15:03:42, 636 [ACK]
c4800 15:03:42, 636 [STX] 3MRSA|POS·MRSA|||||P||Laboperator|20140626
113350|20140626144220|50549_30071[CR] C|1|I|F; M7
|G[CR] R|2|^^^03SA|POS·SA|||||P||Laboperator|201
40626113350|20140626144220|50549_30071[CR] C|1|I
|F; M7 | G[CR] P|8[CR] O|1|RDR0009008^CD0509008^H01^
^^AA5100106|||^03MRSASA^^[ETB]38[CR] [LF]
HOST 15:03:42, 761 [ACK]
c4800 15:03:42, 761 [STX] 4Full|||20140626111805|||N||||NSWAB^P|Lab
operator|||||||P[CR]R|1|^^^03MRSA|NEG·MRSA|||
||P||Laboperator|20140626113350|20140626144220|
50549_30071[CR] C|1|I|F; M7 | G[CR] R|2|^^^03SA|POS·
SA|||||P||Laboperator|20140626113350|2014062614
4220|50549_30071[CR] C|1|[ETB]C1[CR] [LF]
HOST 15:03:42, 886 [ACK]
c4800 15:03:42, 886 [STX] 5|I|F; M7 | G[CR] P|9[CR] O|1|RDR0009009^CD0509

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008^A02^^^AA5100106|||^03MRSASA^^Full|||201406
26111805||||N|||NSWAB^P|Laboperator|||||||P|[CR]R|1|^**03MRSA|NEG·MRSA||||P||Laboperator|20
140626113350|20140626144220|50549_30071[CR]C|1|
I|F;M7|G[CR]R|2|^**03SA|NE[ETB]51[CR][LF]
HOST 15:03:43,011 [ACK]
c4800 15:03:43,011 [STX]6G·SA||||P||Laboperator|20140626113350|20
140626144220|50549_30071[CR]C|1|I|F;M7|G[CR]P|1
0[CR]O|1|RDR0009010^CD0509008^B02^^^AA5100106|||^
**03MRSASA^^Full|||20140626111805||||N|||NSWA
B^P|Laboperator|||||||P[CR]C|1|I|Empty|G[CR]R
|1|^**03MRSA|Failed||||X|[ETB]24[CR][LF]
HOST 15:03:43,136 [ACK]
c4800 15:03:43,136 [STX]7|Laboperator|20140626113350|2014062614422
0|50549_30071[CR]C|1|I|F;X4,M7|G[CR]R|2|^**03SA
|Failed||||X||Laboperator|20140626113350|2014
626144220|50549_30071[CR]C|1|I|F;X4,M7|G[CR]P|1
1[CR]O|1|RDR0009011^CD0509008^C02^^^AA5100106|||^
**03MRSASA^^Full|||201406[ETB]7B[CR][LF]
HOST 15:03:43,276 [ACK]
c4800 15:03:43,276 [STX]026111805||||N|||NSWAB^P|Laboperator|||||
||||P[CR]R|1|^**03MRSA|POS·MRSA||||P||Labopera
tor|20140626113350|20140626144220|50549_30071[C
R]C|1|I|F;M7|G[CR]R|2|^**03SA|POS·SA||||P||Lab
operator|20140626113350|20140626144220|50549_30
071[CR]C|1|I|F;M7|G[CR]P|1[ETB]B4[CR][LF]
HOST 15:03:43,416 [ACK]
c4800 15:03:43,416 [STX]12[CR]O|1|RDR0009012^CD0509008^D02^^^AA510
0106|||^**03MRSASA^^Full|||20140626111805||||N|||N
||NSWAB^P|Laboperator|||||||P[CR]R|1|^**03MRS
A|POS·MRSA||||P||Laboperator|20140626113350|20
140626144220|50549_30071[CR]C|1|I|F;M7|G[CR]R|2
|^**03SA|POS·SA||||P|||[ETB]40[CR][LF]
HOST 15:03:43,557 [ACK]
c4800 15:03:43,557 [STX]2Laboperator|20140626113350|20140626144220
|50549_30071[CR]C|1|I|F;M7|G[CR]P|13[CR]O|1|RDR
0009013^CD0509008^E02^^^AA5100106|||^**03MRSA^^F
ull|||20140626111805||||N|||NSWAB^P|Laboperato
r|||||||P[CR]R|1|^**03MRSA|Invalid·MRSA||||P
||Laboperator|201406261[ETB]DC[CR][LF]
HOST 15:03:43,697 [ACK]
c4800 15:03:43,697 [STX]313350|20140626144220|50549_30071[CR]C|1|I
|F;M7|G[CR]P|14[CR]O|1|RDR0009014^CD0509008^F02
^^^AA5100106|||^**03MRSA^^Full|||20140626111805|
|||N|||NSWAB^P|Laboperator|||||||P[CR]R|1|^
^**03MRSA|Invalid·MRSA||||P||Laboperator|2014062
6113350|20140626144220|[ETB]D9[CR][LF]
HOST 15:03:43,838 [ACK]
c4800 15:03:43,838 [STX]450549_30071[CR]C|1|I|F;M7|G[CR]P|15[CR]O|1
|RDR0007899^CD0509008^G02^^^AA5100106|||^**03MR
SA^^Full|||20140626111805||||N|||NSWAB^P|Labop
erator|||||||P[CR]C|1|I|Clot|G[CR]R|1|^**03MR
SA|Failed||||X||Laboperator|20140626113350|201
40626144220|50549_30071[CR]C|[ETB]2C[CR][LF]
HOST 15:03:43,978 [ACK]
c4800 15:03:43,978 [STX]51|I|F;X3,M7|G[CR]P|16[CR]O|1|RDR0009015^C
D0509008^H02^^^AA5100106|||^**03MRSA^^Full|||201
40626111805||||N|||NSWAB^P|Laboperator|||||||
|P[CR]R|1|^**03MRSA|POS·MRSA||||P||Laboperator

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|20140626113350|20140626144220|50549_30071[CR]C
|1|I|F;M7|G[CR]P|17[CR]O|1|RD[ETB]A2[CR][LF]
HOST 15:03:44,118 [ACK]
c4800 15:03:44,118 [STX]6R0009016^CD0509008^A03^^AA5100106||^^^03
MRSA^^Full||||N||||NSWAB^P|Lab
operator|||||P[CR]R|1|^ ^^03MRSA|POS·MRSA|||
||P||Laboperator|20140626113350|20140626144220|
50549_30071[CR]C|1|I|F;M7|G[CR]P|18[CR]O|1|RDR0
09017^CD0509008^B03^^^ [ETB]6E[CR][LF]
HOST 15:03:44,259 [ACK]
c4800 15:03:44,259 [STX]7AA5100106|||^03MRSA^^Full|||201406261118
05||||N||||NSWAB^P|Laboperator|||||P[CR]R|1
|^ ^^03MRSA|NEG·MRSA||||P||Laboperator|20140626
113350|20140626144220|50549_30071[CR]C|1|I|F;M7
|G[CR]P|19[CR]O|1|RDR0009018^CD0509008^C03^^AA
5100106|||^03SA^^Full|[ETB]F4[CR][LF]
HOST 15:03:44,384 [ACK]
c4800 15:03:44,399 [STX]0|||20140626111805||||N||||NSWAB^P|Labopera
tor|||||P[CR]R|1|^ ^^03SA|NEG·SA||||P||Labo
perator|20140626113350|20140626144220|50549_300
71[CR]C|1|I|F;M7|G[CR]P|20[CR]O|1|RDR0007706^CD
0509008^D03^^AA5100106|||^03SA^^Full|||201406
26111805||||N||||NSWAB^P[ETB]1C[CR][LF]
HOST 15:03:44,540 [ACK]
c4800 15:03:44,540 [STX]1P|Laboperator|||||P[CR]C|1|I|Empty|G[
CR]R|1|^ ^^03SA|Failed||||X||Laboperator|201406
26113350|20140626144220|50549_30071[CR]C|1|I|F;
X4,M7|G[CR]P|21[CR]O|1|RDR0007707^CD0509008^E03
^^^AA5100106|||^03SA^^Full|||20140626111805|||
|N||||NSWAB^P|Laboperator|[ETB]A6[CR][LF]
HOST 15:03:44,680 [ACK]
c4800 15:03:44,680 [STX]2|||||P[CR]R|1|^ ^^03SA|POS·SA||||P||La
boperator|20140626113350|20140626144220|50549_3
0071[CR]C|1|I|F;M7|G[CR]P|22[CR]O|1|RDR0007708^
CD0509008^F03^^AA5100106|||^03SA^^Full|||2014
0626111805||||N||||NSWAB^P|Laboperator|||||P[CR]R|1
|^ ^^03SA|POS·SA||||ETB]D7[CR][LF]
HOST 15:03:44,820 [ACK]
c4800 15:03:44,820 [STX]3||P||Laboperator|20140626113350|201406261
44220|50549_30071[CR]C|1|I|F;M7|G[CR]P|23[CR]O|
1|RDR0007709^CD0509008^G03^^AA5100106|||^03SA
^^^Full|||20140626111805||||N||||NSWAB^P|Laboper
ator|||||P[CR]R|1|^ ^^03SA|POS·SA||||P||Lab
operator|20140626113350[ETB]75[CR][LF]
HOST 15:03:44,961 [ACK]
c4800 15:03:44,961 [STX]4|20140626144220|50549_30071[CR]C|1|I|F;M7
|G[CR]P|24[CR]O|1|RDR0007710^CD0509008^H03^^^AA
5100106|||^03SA^^Full|||20140626111805||||N|||
|NSWAB^P|Laboperator|||||P[CR]R|1|^ ^^03SA|I
nvalid·SA||||P||Laboperator|20140626113350|201
40626144220|50549_30071[ETB]67[CR][LF]
HOST 15:03:45,101 [ACK]
c4800 15:03:45,101 [STX]5[CR]C|1|I|F;M7|G[CR]L|1|N[CR][ETX]1B[CR][
LF]
HOST 15:03:45,210 [ACK]
c4800 15:03:45,226 [EOT]

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MRSA/SA HL7 communication traces

Order download

```
C4800 09:56:38,296 [VT]
C4800 09:56:38,296 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316095622+0100||QBP^Q11^QBP_Q
11|ea282362-0c44-41be-a257-900b667bbc14|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 09:56:38,296 QPD|WOS^Work·Order·Step^IHE_LAW|f88b783d-641f-4e
5c-983f-2ef5345e3e60|MRSA_SA_01[CR]
C4800 09:56:38,296 RCP|I||R^^HL70394[CR]
C4800 09:56:38,296 [FS] [CR]

*      09:56:38,598 ACK Inquiry: ExMID = ea282362-0c44-41be-a257-9
00b667bbc14

HOST 09:56:38,608 [VT]
HOST 09:56:38,608 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316095638+0100||RSP^K11
^RSP_K11|6a77c98d-b6f7-4367-9dc2-81295ee1a2bb|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 09:56:38,629 MSA|AA|ea282362-0c44-41be-a257-900b667bbc14[CR]
HOST 09:56:38,644 QAK|f88b783d-641f-4e5c-983f-2ef5345e3e60|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 09:56:38,654 QPD|WOS^Work·Order·Step^IHE_LAW|f88b783d-641f-4
e5c-983f-2ef5345e3e60|MRSA_SA_01[CR]
HOST 09:56:38,664 [FS] [CR]

*      09:56:39,564 Order: SID^MID = MRSA_SA_01^55c8c40b-a1f5-4812
-b869-76479edae2c5

HOST 09:56:39,564 [VT]
HOST 09:56:39,574 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316095639+0100||OML^O33
^OML_O33|55c8c40b-a1f5-4812-b869-76479edae2c5|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 09:56:39,590 SPM|1|MRSA_SA_01&ROCHE||NSWAB^99ROC||||||P^H
L70369[CR]
HOST 09:56:39,602 SAC|||MRSA_SA_01[CR]
HOST 09:56:39,612 ORC|NW|||||||20150312141151[CR]
HOST 09:56:39,622 OBR||12345||03MRSASA^03MRSASA^99ROC[CR]
HOST 09:56:39,632 [FS] [CR]

C4800 09:56:41,710 [VT]
C4800 09:56:41,710 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316095625+0100||ORL^O34^ORL_O
34|26d94cfcd-7f31-4307-a31b-9eff5ca405dd|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 09:56:41,710 MSA|AA|55c8c40b-a1f5-4812-b869-76479edae2c5[CR]
C4800 09:56:41,710 SPM|1|MRSA_SA_01&ROCHE||NSWAB^99ROC||||||P^H
L70369[CR]
C4800 09:56:41,710 SAC|||MRSA_SA_01[CR]
C4800 09:56:41,710 ORC|OK|12345|||SC[CR]
C4800 09:56:41,710 [FS] [CR]

C4800 09:56:41,931 [VT]
C4800 09:56:41,931 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
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LIS·Facility|20150316095622+0100||QBP^Q11^QBP_Q
11|48a2ca70-f786-4610-947b-96e1b167d3ba|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 09:56:41,931 QPD|WOS^Work·Order·Step^IHELAW|861f0004-f142-48
88-8a9e-def709f444ef|MRSA_SA_02[CR]
C4800 09:56:41,931 RCP|I||R^^HL70394[CR]
C4800 09:56:41,931 [FS] [CR]

*      09:56:42,233 ACK Inquiry: ExMID = 48a2ca70-f786-4610-947b-9
6e1b167d3ba

HOST 09:56:42,233 [VT]
HOST 09:56:42,245 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316095642+0100||RSP^K11
^RSP_K11|a225f4c0-9ceb-4b9d-8ada-a9a16b0f9677|P
|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]
HOST 09:56:42,255 MSA|AA|48a2ca70-f786-4610-947b-96e1b167d3ba[CR]
HOST 09:56:42,265 QAK|861f0004-f142-4888-8a9e-def709f444ef|OK|WOS
^Work·Order·Step^IHE_LAW[CR]
HOST 09:56:42,275 QPD|WOS^Work·Order·Step^IHE_LAW|861f0004-f142-4
888-8a9e-def709f444ef|MRSA_SA_02[CR]
HOST 09:56:42,285 [FS] [CR]

*      09:56:43,195 Order: SID^MID = MRSA_SA_02^74ca660b-d1e4-4b4c
-a8a7-623f095dd1ae

HOST 09:56:43,195 [VT]
HOST 09:56:43,207 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437|LAB·Name|20150316095643+0100||OML^O33
^OML_O33|74ca660b-d1e4-4b4c-a8a7-623f095dd1ae|P
|2.5.1||||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]
HOST 09:56:43,217 SPM|1|MRSA_SA_02&ROCHE||NSWAB^^99ROC||||||P^H
L70369[CR]
HOST 09:56:43,227 SAC|||MRSA_SA_02[CR]
HOST 09:56:43,237 ORC|NW|||||||20150312141151[CR]
HOST 09:56:43,247 OBR||12345||03SA^03SA^99ROC[CR]
HOST 09:56:43,257 [FS] [CR]

C4800 09:56:45,278 [VT]
C4800 09:56:45,278 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316095629+0100||ORL^O34^ORL_O
34|6aeb8e5-cb1e-41f1-aa00-df433c10758f|P|2.5.1
|||||UNICODE·UTF-8|||LAB-28^IHE[CR]
C4800 09:56:45,278 MSA|AA|74ca660b-d1e4-4b4c-a8a7-623f095dd1ae[CR]
C4800 09:56:45,278 SPM|1|MRSA_SA_02&ROCHE||NSWAB^^99ROC||||||P^H
L70369[CR]
C4800 09:56:45,278 SAC|||MRSA_SA_02[CR]
C4800 09:56:45,278 ORC|OK|12345|||SC[CR]
C4800 09:56:45,278 [FS] [CR]

C4800 09:56:45,491 [VT]
C4800 09:56:45,491 MSH|^~\&|cobas·4800·software·2.2.0.1507||"|"LIS|
LIS·Facility|20150316095622+0100||QBP^Q11^QBP_Q
11|d648dd1b-ea83-44e3-994f-89996dc12a23|P|2.5.1
||||ER|AL||UNICODE·UTF-8|||LAB-27^IHE[CR]
C4800 09:56:45,491 QPD|WOS^Work·Order·Step^IHELAW|4c0b0088-50bf-4f
69-9b32-74a33e0c2666|MRSA_SA_03[CR]
C4800 09:56:45,491 RCP|I||R^^HL70394[CR]
C4800 09:56:45,491 [FS] [CR]

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* 09:56:45,713 ACK Inquiry: ExMID = d648dd1b-ea83-44e3-994f-89996dc12a23

HOST 09:56:45,713 [VT]

HOST 09:56:45,725 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2·2.0.1437|LAB·Name|20150316095645+0100||RSP^K11^RSP_K11|79e45ea-f300-4fa6-a58a-08fe09a4f30e|P|2.5.1|||||UNICODE·UTF-8|||LAB-27^IHE[CR]

HOST 09:56:45,735 MSA|AA|d648dd1b-ea83-44e3-994f-89996dc12a23[CR]

HOST 09:56:45,745 QAK|4c0b0088-50bf-4f69-9b32-74a33e0c2666|OK|WOS^Work·Order·Step^IHE_LAW[CR]

HOST 09:56:45,755 QPD|WOS^Work·Order·Step^IHE_LAW|4c0b0088-50bf-4f69-9b32-74a33e0c2666|MRSA_SA_03[CR]

HOST 09:56:45,765 [FS] [CR]

* 09:56:46,675 Order: SID^MID = MRSA_SA_03^0c3bfd15-8966-46b1-8460-edcb3d461c96

HOST 09:56:46,675 [VT]

HOST 09:56:46,685 MSH|^~\&|LIS|LIS.Facility|cobas·4800·software·2·2.0.1437|LAB·Name|20150316095646+0100||OML^O33^OML_O33|0c3bfd15-8966-46b1-8460-edcb3d461c96|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-28^IHE[CR]

HOST 09:56:46,700 SPM|1|MRSA_SA_03&ROCHE||NSWAB^^99ROC||||||P^H L70369[CR]

HOST 09:56:46,712 SAC|||MRSA_SA_03[CR]

HOST 09:56:46,722 ORC|NW|||||||20150312141151[CR]

HOST 09:56:46,732 OBR||12345||03MRSA^03MRSA^99ROC[CR]

HOST 09:56:46,742 [FS] [CR]

C4800 09:56:48,769 [VT]

C4800 09:56:48,769 MSH|^~\&|cobas·4800·software·2.2.0.1507|"||LIS|LIS.Facility|20150316095633+0100||ORL^O34^ORL_O34|8de97d63-a025-433d-8a07-1048cc101339|P|2.5.1|||||UNICODE·UTF-8|||LAB-28^IHE[CR]

C4800 09:56:48,769 MSA|AA|0c3bfd15-8966-46b1-8460-edcb3d461c96[CR]

C4800 09:56:48,769 SPM|1|MRSA_SA_03&ROCHE||NSWAB^^99ROC||||||P^H L70369[CR]

C4800 09:56:48,769 SAC|||MRSA_SA_03[CR]

C4800 09:56:48,769 ORC|OK|12345|||SC[CR]

C4800 09:56:48,769 [FS] [CR]

Result upload

C4800 11:50:15,125 [VT]

C4800 11:50:15,125 MSH|^~\&|cobas·4800·software·2.2.0.1507^INI_TES T_12345^M|"||LIS|LIS.Facility|20150311114959+0100||OUL^R22^OUL_R22|142cc1c9-030e-4e4e-be49-7475c5f5c26f|P|2.5.1|||ER|AL||UNICODE·UTF-8|||LAB-29^IHE[CR]

C4800 11:50:15,125 SPM|1|3PC123456BZ1011&ROCHE||"||||||Q^HL70369[CR]

C4800 11:50:15,125 SAC|||3PC123456BZ1011[CR]

C4800 11:50:15,125 INV|POSCONTROL^^99ROC|OK^HL70383|CO^HL70384[CR]

C4800 11:50:15,125 OBR||"||03MRSASA^03MRSASA^99ROC||20141029153904[CR]

C4800 11:50:15,125 ORC|SC||||CM[CR]

C4800 11:50:15,125 OBX|1|DR|RunTimeRange^Run · Execution · Time · Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20141029153951^20141029154847||||"|||F|||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 OBX|2|ST|03MRSA^03MRSA^99ROC|1.1|Valid|||Full^^99ROC|||P|||||RocheNoCheck||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1213791^99ROC|A01^99ROC[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|DwpId^99ROC|AA1213791^99ROC[CR]

C4800 11:50:15,125 NTE|1||F;M7[CR]

C4800 11:50:15,125 NTE|2||Ct:0 · (MMx · 1), 36.5; Ct:1 · (MMx · 1), 39.6; Ct:5 · (MMx · 1), 39.6[CR]

C4800 11:50:15,125 NTE|3||[CR]

C4800 11:50:15,125 OBX|3|ST|03SA^03SA^99ROC|1.2|Valid|||Full^99ROC|||P|||||RocheNoCheck||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1213791^99ROC|A01^99ROC[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|DwpId^99ROC|AA1213791^99ROC[CR]

C4800 11:50:15,125 NTE|1||F;M7[CR]

C4800 11:50:15,125 NTE|2||Ct:0 · (MMx · 1), 36.5; Ct:1 · (MMx · 1), 39.6; Ct:5 · (MMx · 1), 39.6[CR]

C4800 11:50:15,125 NTE|3||[CR]

C4800 11:50:15,125 SPM|2|0NC123456BZ1011&ROCHE|||||||Q^HL70369[CR]

C4800 11:50:15,125 SAC|||0NC123456BZ1011[CR]

C4800 11:50:15,125 INV|NEGCONTROL^99ROC|OK^HL70383|CO^HL70384[C]

C4800 11:50:15,125 OBR||"||03MRSASA^03MRSASA^99ROC||20141029153904[CR]

C4800 11:50:15,125 ORC|SC||||CM[CR]

C4800 11:50:15,125 OBX|1|DR|RunTimeRange^Run · Execution · Time · Range^99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|20141029153951^20141029154847||||"|||F|||||Laboperator||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 OBX|2|ST|03MRSA^03MRSA^99ROC|1.1|Valid|||Full^^99ROC|||P|||||RocheNoCheck||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1213791^99ROC|B01^99ROC[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|DwpId^99ROC|AA1213791^99ROC[CR]

C4800 11:50:15,125 NTE|1||F;M7[CR]

C4800 11:50:15,125 NTE|2||Ct:0 · (MMx · 1), ---; Ct:1 · (MMx · 1), ---; Ct:5 · (MMx · 1), 39.6[CR]

C4800 11:50:15,125 NTE|3||[CR]

C4800 11:50:15,125 OBX|3|ST|03SA^03SA^99ROC|1.2|Valid|||Full^99ROC|||P|||||RocheNoCheck||C4800^Roche~INI_TEST_12345^Roche|20141029154847[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|MwpId^99ROC|AD1213791^99ROC|B01^99ROC[CR]

C4800 11:50:15,125 INV|"||OK^HL70383|OT^HL70384|DwpId^99ROC|AA1213791^99ROC[CR]

C4800 11:50:15,125 NTE|1||F;M7[CR]

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C4800 11:50:15,125 NTE|2||Ct:0·(MMx·1),---;Ct:1·(MMx·1),---;Ct:5·(MMx·1),39.6[CR]
C4800 11:50:15,125 NTE|3||[CR]
C4800 11:50:15,125 [FS] [CR]

*      11:50:23,386 ACK Result: ExMID = 142cc1c9-030e-4e4e-be49-74
75c5f5c26f

HOST   11:50:23,396 [VT]
HOST   11:50:23,396 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311115023+0100
||ACK^R22^ACK|af3948ad-8d49-4868-9d91-8cc2aa44b
54e|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST   11:50:23,416 MSA|AA|142cc1c9-030e-4e4e-be49-7475c5f5c26f[CR]
HOST   11:50:23,428 [FS] [CR]
```

PIK3CA RUO ASTM communication traces

Result upload

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c4800 11:36:13,619 [ENQ]
HOST   11:36:13,697 [ACK]
c4800 11:36:13,697 [STX]1H|^&|||cobas·4800·software^d8d73438-7993
               -41bf-b336-5e14f771da72^RocheCheck^2.2.0.1503^1
               394.LIS2||||LIS|RSUPL^REAL|P|1|20141211113522[
               CR]P|1[CR]O|1|6A13456788G3214^AD1200021^A01:A02
               :A03^^^| | ^^^06PIK3CA^^AnD|||20141201130951|||Q
               ||| |^MUTCONTROL|L[ETB]E4[CR] [LF]
HOST   11:36:13,822 [ACK]
c4800 11:36:13,822 [STX]2aboperator|||||||P[CR]C|1|I|mut·contr|G
               [CR]R|1|^ ^^06PIK3CA|Valid||||P||Laboperator|20
               141201131157|20141201131234|INI_TEST_12345[CR]C
               |1|I|F;M7|G[CR]C|2|I|,|G[CR]R|2|^ ^^06PIK3CA10|N
               /A|||||P||Laboperator|20141201131157|2014120113
               1234|INI_TEST_12345[CR]C|1|I|[ETB]6D[CR] [LF]
HOST   11:36:13,947 [ACK]
c4800 11:36:13,947 [STX]3F;M7|G[CR]C|2|I|,|G[CR]P|2[CR]O|1|6A13456
               788G3214^AD1200021^B01:B02:B03^^^| | ^^^06PIK3CA^
               ^And|||20141201130951|||Q||| |^NEGCONTROL|Labop
               erator|||||||P[CR]C|1|I|neg·contr|G[CR]R|1|^ ^
               ^06PIK3CA|Valid||||P||Laboperator|201412011311
               57|20141201131234|INI_TEST[ETB]5C[CR] [LF]
HOST   11:36:14,072 [ACK]
c4800 11:36:14,072 [STX]4_12345[CR]C|1|I|F;M7|G[CR]C|2|I|,|G[CR]R|
               2|^ ^^06PIK3CA10|N/A||||P||Laboperator|20141201
               131157|20141201131234|INI_TEST_12345[CR]C|1|I|F
               ;M7|G[CR]C|2|I|,|G[CR]P|3[CR]O|1|54055535490^AD
               1200021^C01:C02:C03^^^| | ^^^06PIK3CA^^AnD|||2014
               1201130951|||N||||^P|Laboperato[ETB]7D[CR] [LF]
HOST   11:36:14,196 [ACK]
c4800 11:36:14,196 [STX]5r|||||||P[CR]R|1|^ ^^06PIK3CA|Mutation·D
               etected|||||P||Laboperator|20141201131157|2014
               201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|2
               | | ^06PIK3CA01|E542K||||P||Laboperator|2014120
               1131157|20141201131234|INI_TEST_12345[CR]C|1|I|
               F;M7|G[CR]R|3|^ ^^06PIK3CA0[ETB]95[CR] [LF]
HOST   11:36:14,321 [ACK]
c4800 11:36:14,321 [STX]64|N345K|||||P||Laboperator|20141201131157
               |20141201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[
               CR]R|4|^ ^^06PIK3CA07|H1047X||||P||Laboperator|
               20141201131157|20141201131234|INI_TEST_12345[CR
               ]C|1|I|F;M7|G[CR]R|5|^ ^^06PIK3CA02|E545X||||P|
               |Laboperator|2014120113[ETB]79[CR] [LF]
HOST   11:36:14,446 [ACK]
c4800 11:36:14,446 [STX]71157|20141201131234|INI_TEST_12345[CR]C|1
               |I|F;M7|G[CR]R|6|^ ^^06PIK3CA05|C420R||||P||Lab
               operator|20141201131157|20141201131234|INI_TEST
               _12345[CR]C|1|I|F;M7|G[CR]R|7|^ ^^06PIK3CA08|G10
               49R|||||P||Laboperator|20141201131157|201412011
               31234|INI_TEST_12345[CR]C|[ETB]16[CR] [LF]
HOST   11:36:14,571 [ACK]
c4800 11:36:14,571 [STX]01|I|F;M7|G[CR]R|8|^ ^^06PIK3CA03|Q546X|||
               |P||Laboperator|20141201131157|20141201131234|I
               NI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|9|^ ^^06PIK3C
```

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A06|R88Q|||||P||Laboperator|20141201131157|2014
1201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|
10|^~~~06PIK3CA09|M1043I|||[ETB]74[CR] [LF]
HOST 11:36:14,696 [ACK]
c4800 11:36:14,696 [STX]1|||P||Laboperator|20141201131157|201412011
31234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|4[CR]
O|1|54055535494^AD1200021^D01:D02:D03^~~~| | ^~~~06
PIK3CA^^AnD|||20141201130951||||N||||^P|Laboper
ator|||||||P[CR]R|1|^~~~06PIK3CA|Mutation·Dete
cted|||||P||Laboperator[ETB]OE[CR] [LF]
HOST 11:36:14,820 [ACK]
c4800 11:36:14,820 [STX]2|20141201131157|20141201131234|INI_TEST_1
2345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA01|E542K
|||||P||Laboperator|20141201131157|201412011312
34|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^~~~06P
IK3CA02|E545X|||||P||Laboperator|20141201131157
|20141201131234|INI_TES[ETB]C0[CR] [LF]
HOST 11:36:14,945 [ACK]
c4800 11:36:14,945 [STX]3T_12345[CR]C|1|I|F;M7|G[CR]R|4|^~~~06PIK3C
A03|Q546X|||||P||Laboperator|20141201131157|201
41201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P
|5[CR]O|1|54055535498^AD1200021^E01:E02:E03^~~~|
|^~~~06PIK3CA^^AnD|||20141201130951||||N||||^P|L
aboperator|||||||P[CR]R|1|^ [ETB]16[CR] [LF]
HOST 11:36:15,070 [ACK]
c4800 11:36:15,070 [STX]4^~~~06PIK3CA|Mutation·Detected|||||P||Labop
erator|20141201131157|20141201131234|INI_TEST_1
2345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA04|N345K
|||||P||Laboperator|20141201131157|201412011312
34|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^~~~06P
IK3CA05|C420R|||||P||La[ETB]DA[CR] [LF]
HOST 11:36:15,195 [ACK]
c4800 11:36:15,195 [STX]5boperator|20141201131157|20141201131234|I
NI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^~~~06PIK3C
A06|R88Q|||||P||Laboperator|20141201131157|2014
1201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|
6[CR]O|1|54055535502^AD1200021^F01:F02:F03^~~~|
|^~~~06PIK3CA^^AnD|||2014120[ETB]F6[CR] [LF]
HOST 11:36:15,320 [ACK]
c4800 11:36:15,320 [STX]61130951||||N||||^P|Laboperator|||||||P[
CR]R|1|^~~~06PIK3CA|Mutation·Detected|||||P||Lab
operator|20141201131157|20141201131234|INI_TEST
_12345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA07|H10
47X|||||P||Laboperator|20141201131157|201412011
31234|INI_TEST_12345[ETB]C7[CR] [LF]
HOST 11:36:15,444 [ACK]
c4800 11:36:15,444 [STX]7[CR]C|1|I|F;M7|G[CR]R|3|^~~~06PIK3CA08|G10
49R|||||P||Laboperator|20141201131157|201412011
31234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^~~~
06PIK3CA09|M1043I||||P||Laboperator|2014120113
1157|20141201131234|INI_TEST_12345[CR]C|1|I|F;M
7|G[CR]P|7[CR]O|1|54055535506^AD[ETB]D8[CR] [LF]
HOST 11:36:15,585 [ACK]
c4800 11:36:15,585 [STX]01200021^G01:G02:G03^~~~| | ^~~~06PIK3CA^^AnD|
| |20141201130951||||N||||^P|Laboperator|||||||
|P[CR]R|1|^~~~06PIK3CA|Mutation·Detected|||||P|||
Laboperator|20141201131157|20141201131234|INI_T
EST_12345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA01|
E542K|||||P||Laboper[ETB]CA[CR] [LF]

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HOST 11:36:15,725 [ACK]
c4800 11:36:15,725 [STX]1ator|20141201131157|20141201131234|INI_TE
      ST_12345[CR]C|1|I|F;M7|G[CR]R|3|^06PIK3CA04|N
      345K||||P||Laboperator|20141201131157|20141201
      131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^
      ^06PIK3CA07|H1047X||||P||Laboperator|201412011
      31157|20141201131234|IN[ETB]26[CR][LF]
HOST 11:36:15,850 [ACK]
c4800 11:36:15,866 [STX]2I_TEST_12345[CR]C|1|I|F;M7|G[CR]P|8[CR]O|
      1|54055535510^AD1200021^H01:H02:H03^^|||^06PI
      K3CA^^AnD|||20141201130951||||N||||^P|Laboperat
      or|||||||P[CR]R|1|^06PIK3CA|Mutation.Detect
      ed|||||P||Laboperator|20141201131157|2014120113
      1234|INI_TEST_12345[CR]C|1[ETB]9C[CR][LF]
HOST 11:36:16,006 [ACK]
c4800 11:36:16,006 [STX]3|I|F;M7|G[CR]R|2|^06PIK3CA02|E545X||||P|
      ||Laboperator|20141201131157|20141201131234|IN
      I_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^06PIK3CA
      05|C420R||||P||Laboperator|20141201131157|2014
      1201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|
      4|^06PIK3CA08|G1049R||||[ETB]9A[CR][LF]
HOST 11:36:16,146 [ACK]
c4800 11:36:16,146 [STX]4|P||Laboperator|20141201131157|2014120113
      1234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|9[CR]O
      |1|54055535514^AD1200021^A04:A05:A06^^|||^06PI
      K3CA^^AnD|||20141201130951||||N||||^P|Labopera
      tor|||||||P[CR]R|1|^06PIK3CA|Mutation.Detec
      ted|||||P||Laboperator|[ETB]0F[CR][LF]
HOST 11:36:16,287 [ACK]
c4800 11:36:16,287 [STX]520141201131157|20141201131234|INI_TEST_12
      345[CR]C|1|I|F;M7|G[CR]R|2|^06PIK3CA03|Q546X|P
      |||Laboperator|20141201131157|2014120113123
      4|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^06PI
      K3CA06|R88Q||||P||Laboperator|20141201131157|2
      0141201131234|INI_TEST_[ETB]F5[CR][LF]
HOST 11:36:16,427 [ACK]
c4800 11:36:16,427 [STX]612345[CR]C|1|I|F;M7|G[CR]R|4|^06PIK3CA0
      9|M1043I||||P||Laboperator|20141201131157|2014
      1201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|
      10[CR]O|1|54055535518^AD1200021^B04:B05:B06^^|
      |^06PIK3CA^^AnD|||20141201130951||||N||||^P|L
      aboperator|||||||P[CR]R|1|[ETB]A7[CR][LF]
HOST 11:36:16,568 [ACK]
c4800 11:36:16,568 [STX]7^06PIK3CA|Mutation.Detected||||P||Labop
      erator|20141201131157|20141201131234|INI_TEST_1
      2345[CR]C|1|I|F;M7|G[CR]R|2|^06PIK3CA01|E542K
      ||||P||Laboperator|20141201131157|201412011312
      34|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^06PI
      K3CA05|C420R||||P||La[ETB]D0[CR][LF]
HOST 11:36:16,708 [ACK]
c4800 11:36:16,724 [STX]0boperator|20141201131157|20141201131234|I
      NI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^06PIK3C
      A09|M1043I||||P||Laboperator|20141201131157|20
      141201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]
      P|11[CR]O|1|54055535517^AD1200021^C04:C05:C06^
      ||^06PIK3CA^^AnD|||2014[ETB]DE[CR][LF]
HOST 11:36:16,848 [ACK]
c4800 11:36:16,848 [STX]11201130951||||N||||^P|Laboperator|||||||P|
      |P[CR]R|1|^06PIK3CA|Mutation.Detected||||P||
```

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Laboperator|20141201131157|20141201131234|INI_T
EST_12345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA04|
N345K|||||P||Laboperator|20141201131157|2014120
1131234|INI_TEST_123[ETB]B2[CR] [LF]
HOST 11:36:16,989 [ACK]
c4800 11:36:16,989 [STX]245[CR]C|1|I|F;M7|G[CR]R|3|^~~~06PIK3CA08|G
1049R|||||P||Laboperator|20141201131157|2014120
1131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4|^
~~~06PIK3CA03|Q546X|||||P||Laboperator|201412011
31157|20141201131234|INI_TEST_12345[CR]C|1|I|F;
M7|G[CR]P|12[CR]O|1|54055535513^[ETB]C5[CR] [LF]
HOST 11:36:17,129 [ACK]
c4800 11:36:17,129 [STX]3AD1200021^D04:D05:D06^~~~| |~~~06PIK3CA^^An
D||||20141201130951||||N||||^P||Laboperator|||||||
||||P[CR]R|1|^~~~06PIK3CA|Mutation.Detected|||||P
||Laboperator|20141201131157|20141201131234|INI
_TEST_12345[CR]C|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA0
7|H1047X|||||P||Labo[ETB]52[CR] [LF]
HOST 11:36:17,270 [ACK]
c4800 11:36:17,270 [STX]4perator|20141201131157|20141201131234|INI
_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^~~~06PIK3CA0
2|E545X|||||P||Laboperator|20141201131157|20141
201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|4
|^~~~06PIK3CA06|R88Q|||||P||Laboperator|20141201
131157|20141201131234|I[ETB]CC[CR] [LF]
HOST 11:36:17,410 [ACK]
c4800 11:36:17,410 [STX]5NI_TEST_12345[CR]C|1|I|F;M7|G[CR]P|13[CR]
O|1|54055535509^AD1200021^E04:E05:E06^~~~| |~~~06
PIK3CA^^AnD||||20141201130951||||N||||^P||Laboper
ator|||||||P[CR]R|1|^~~~06PIK3CA|Mutation.Dete
cted|||||P||Laboperator|20141201131157|20141201
131234|INI_TEST_12345[CR]C[ETB]74[CR] [LF]
HOST 11:36:17,550 [ACK]
c4800 11:36:17,550 [STX]6|1|I|F;M7|G[CR]R|2|^~~~06PIK3CA01|E542K|||
|||P||Laboperator|20141201131157|20141201131234|
INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|3|^~~~06PIK3
CA07|H1047X|||||P||Laboperator|20141201131157|2
0141201131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR
]R|4|^~~~06PIK3CA05|C420R|| [ETB]45[CR] [LF]
HOST 11:36:17,691 [ACK]
c4800 11:36:17,691 [STX]7||||P||Laboperator|20141201131157|20141201
131234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]R|5|^~
^~06PIK3CA03|Q546X|||||P||Laboperator|2014120113
1157|20141201131234|INI_TEST_12345[CR]C|1|I|F;M
7|G[CR]R|6|^~~~06PIK3CA09|M1043I|||||P||Labopera
tor|20141201131157|2014[ETB]B2[CR] [LF]
HOST 11:36:17,831 [ACK]
c4800 11:36:17,831 [STX]01201131234|INI_TEST_12345[CR]C|1|I|F;M7|G
[CR]P|14[CR]O|1|54055535505^AD1200021^F04:F05:F
06^~~~| |~~~06PIK3CA^^AnD||||20141201130951||||N||
|||P||Laboperator|||||||P[CR]C|1|I|no.comment|
G[CR]R|1|^~~~06PIK3CA|Mutation.Detected|||||P||L
aboperator|20141201131157|[ETB]B5[CR] [LF]
HOST 11:36:17,972 [ACK]
c4800 11:36:17,972 [STX]120141201131234|INI_TEST_12345[CR]C|1|I|F;
M7|G[CR]R|2|^~~~06PIK3CA04|N345K|||||P||Labopera
tor|20141201131157|20141201131234|INI_TEST_1234
5[CR]C|1|I|F;M7|G[CR]R|3|^~~~06PIK3CA02|E545X|||
|||P||Laboperator|20141201131157|20141201131234|

```

```
INI_TEST_12345[CR]C|1|I|F;[ETB]88[CR][LF]
HOST 11:36:18,112 [ACK]
c4800 11:36:18,112 [STX]2M7|G[CR]R|4|^^^06PIK3CA08|G1049R||||P||L
aboperator|20141201131157|20141201131234|INI_TE
ST_12345[CR]C|1|I|F;M7|G[CR]R|5|^^^06PIK3CA06|R
88Q||||P||Laboperator|20141201131157|201412011
31234|INI_TEST_12345[CR]C|1|I|F;M7|G[CR]L|1|N[C
R] [ETX]DE[CR][LF]
HOST 11:36:18,252 [ACK]
c4800 11:36:18,252 [EOT]
```

PIK3CA RUO HL7 communication traces

Result upload

```
C4800 15:07:16,592 [VT]
C4800 15:07:16,592 MSH|^~\&|cobas·4800·software·2.2.0.1507^50037_2
6433^M||"||LIS|LIS·Facility|20150311150702+0100|
|OUL^R22^OUL_R22|24028297-a4ae-4ddb-81b6-52d346
e746a3|P|2.5.1|||ER|AL|UNICODE·UTF-8|||LAB-29^
THE[CR]
C4800 15:07:16,592 SPM|1|6A1L214791F1799&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:07:16,592 SAC|||6A1L214791F1799[CR]
C4800 15:07:16,592 INV|MUTCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:07:16,592 OBR||"|||06PIK3CA^06PIK3CA^99ROC||2014032601220
2[CR]
C4800 15:07:16,592 ORC|SC||||CM[CR]
C4800 15:07:16,592 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
40326235357^20140327012301||||"|||F||||Laboper
ator||C4800^Roche~50037_26433^Roche|20140327012
301[CR]
C4800 15:07:16,592 OBX|2|ST|06PIK3CA^06PIK3CA^99ROC|1.1|Valid|||An
D^99ROC|||P||||RocheNoCheck||C4800^Roche~5003
7_26433^Roche|20140327012301[CR]
C4800 15:07:16,592 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
806951^^99ROC|A01:A02:A03^^99ROC[CR]
C4800 15:07:16,592 NTE|1||F;M7[CR]
C4800 15:07:16,592 NTE|2||,[CR]
C4800 15:07:16,592 NTE|3||[CR]
C4800 15:07:16,592 OBX|3|ST|06PIK3CA10^06PIK3CA10^99ROC|1.2|N/A|||
AnD^99ROC|||P||||RocheNoCheck||C4800^Roche~50
037_26433^Roche|20140327012301[CR]
C4800 15:07:16,592 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
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C4800 15:07:16,592 NTE|3||[CR]
C4800 15:07:16,592 SPM|2|6A1L214791F1799&ROCHE||"|||||||Q^^HL7036
9[CR]
C4800 15:07:16,592 SAC|||6A1L214791F1799[CR]
C4800 15:07:16,592 INV|NEGCONTROL^^99ROC|OK^^HL70383|CO^^HL70384[C
R]
C4800 15:07:16,592 OBR||"|||06PIK3CA^06PIK3CA^99ROC||2014032601220
2[CR]
C4800 15:07:16,592 ORC|SC||||CM[CR]
C4800 15:07:16,592 OBX|1|DR|RunTimeRange^Run·Execution·Time·Range^
99ROC^S_OTHER^Other_Supplemental^IHELAW|1.0|201
40326235357^20140327012301||||"|||F||||Laboper
ator||C4800^Roche~50037_26433^Roche|20140327012
301[CR]
C4800 15:07:16,592 OBX|2|ST|06PIK3CA^06PIK3CA^99ROC|1.1|Valid|||An
D^99ROC|||P||||RocheNoCheck||C4800^Roche~5003
7_26433^Roche|20140327012301[CR]
C4800 15:07:16,592 INV||"||OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
806951^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 15:07:16,592 NTE|1||F;M7[CR]
```

```

C4800 15:07:16,592 NTE|2||,[CR]
C4800 15:07:16,592 NTE|3||[CR]
C4800 15:07:16,592 OBX|3|ST|06PIK3CA10^06PIK3CA10^99ROC|1.2|N/A|||
AnD^^99ROC|||P||||RocheNoCheck||C4800^Roche~50
037_26433^Roche|20140327012301[CR]
C4800 15:07:16,592 INV|" "|OK^^HL70383|OT^^HL70384|MwpId^^99ROC|FD2
806951^^99ROC|B01:B02:B03^^99ROC[CR]
C4800 15:07:16,592 NTE|1||F;M7[CR]
C4800 15:07:16,592 NTE|2||,[CR]
C4800 15:07:16,592 NTE|3||[CR]
C4800 15:07:16,592 [FS][CR]

*      15:07:18,758 ACK Result: ExMID = 24028297-a4ae-4ddb-81b6-52
d346e746a3

HOST 15:07:18,758 [VT]
HOST 15:07:18,768 MSH|^~\&|LIS|LIS·Facility|cobas·4800·software·2
.2.0.1437^SN1234^M|LAB·Name|20150311150718+0100
||ACK^R22^ACK|1e938467-230b-4bc8-b391-a5af870e5
ced|P|2.5.1|||||UNICODE·UTF-8|||LAB-29^IHE[CR]
HOST 15:07:18,778 MSA|AA|24028297-a4ae-4ddb-81b6-52d346e746a3[CR]
HOST 15:07:18,788 [FS][CR]

```

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