PHIN Messaging Standard
Laboratory Result Message
For
BioWatch
OUL^R22
HL7 Version 2.5

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Centers for Disease Control and Prevention

Revision History

Revision	Date	By	Description
Version 1.1	3/21/2005	Austin Kreisler	Corrected problems with the example messages.
Version 1.0	2/16/2005	Austin Kreisler + BT Messaging Team	Convert message over to a 2.5 OUL^R22. One major change was the dropping the PH_ADDRCLASS vocabulary. This version will not support the XML encoding for additional address information in PID-11. BT Messaging Team is David Groves, Ted Klien, Mead Walker.

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1. Introduction

This supplement documents the use of the Health Level 7 (HL7) Version 2.5 OUL (Unsolicited Specimen Oriented Observation Message) to support reporting laboratory results in the context of Bio-terrorism response messaging. The document contains the following key sections:

- Messaging Scenarios: describes the context and usage for the messaging.
- Abstract Message: indicates the segments that comprise the message, and describes their ordering and repetition.
- Segment & Field Descriptions: provides details about the segments that make up the message, and the fields that comprise the segments.
- Datatypes: defines the datatypes that establish the format and components of fields.
- Code Systems and Value Sets: includes the list of valid values for coded fields within the message, and describes how vocabulary items are managed.
- Object Identifiers: defines the OIDs (object identifiers) that are used to identify a) specific parties involved in messaging, or in providing data relevant to messaging, and b) the coding systems and value sets that are used within the message.

The document is a supplement to the "Laboratory Result – Generic" which is based on the HL7 V2.5 OUL^R22 specification; however it has been significantly customized to meet BT reporting needs. Version 2.5 of the HL7 specification has been chosen since that is the most current version approved by the American National Standards Institute (ANSI). Furthermore, the message makes use of the SAC segment, introduced in Version 2.4, to carry needed information about specimen containers.

Scope

The specifications in this supplement are not intended as a tutorial for either HL7 or interfacing in general. The reader is expected to have a basic understanding of interface concepts, HL7, and the reporting of laboratory test results. This supplement is based on and conforms to the HL7 Standard, Version 2.5.

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2. Messaging Scenarios

Laboratory science is an essential public health tool in the identification of biological agents and in the management of the public health response to any bioterrorism threat or event. Because most agents rarely cause naturally occurring disease, CDC, in collaboration with the Association of Public Health Laboratories and the Federal Bureau of Investigation (FBI), established the Laboratory Response Network (LRN) to develop federal, state, and local public health laboratory capacity to respond to bioterrorism threats or events. This multilevel network of public health laboratories provides essential diagnostic capabilities in all state, territorial, and large metropolitan areas. CDC continues to provide training and technical assistance to state and local public health laboratories to ensure they will be better prepared to respond in the event of a terrorist attack.

BT Laboratory Results Messaging supports the transmission of laboratory results from LRN laboratories to public health departments and to CDC. Conceptually speaking, this messaging will support the full range of laboratory testing for BT agents. This supplement also specifically addresses the BT Laboratory Results Messaging necessary to support the BioWatch program of air sampling in many US metropolitan areas. The following scenarios have been identified within the BioWatch context:

> 1. Report on BioWatch PCR Screening Panel: BioWatch air-filter samples will each be tested by a PCR screening test to determine the possible presence of a BT agent. The report contains the result of PCR testing on such samples with a separate result component for each marker or primer set.

> 2. Organism/Toxin specific PCR Panel: Confirmatory PCR tests may be done on air-filter samples showing a positive result in the initial PCR screen. Additionally, other types of samples may be received in which the presence of a particular organism is suspected. This report contains the result of PCR testing of such samples.

> 3. Organism Susceptibility Report: Once an organism has been cultured from a sample, the organism that has been cultured can be tested for susceptibility to a range of antibiotics. This report contains the results of the susceptibility testing.

> 4. Bacterial Genomic Report: Once an organism has been identified, it is often useful to carry out further testing to identify particular bacterial strains. This report contains the results of such testing.

The reader should note that it is possible – given the repetition supported by the OUL – to include multiple types of testing for the same specimen within a single message. However, the initial implementation of BT Laboratory Results Messaging conveys each of the scenarios above within a single message in order to reduce the complexity of application processing in formatting and receiving messages.

The secure communication of messages will be accomplished by a CDC developed messaging component called the Public Health Information Network Messaging System (PHINMS). This component will accept a message from a BT Laboratory Results Message source, encrypt it, place an ebXML envelope around it and send it to a designated PHINMS receiver at the CDC or at a State Health Department.

3. Abstract Message

The OUL^R22 message is used for transmitting BT related laboratory results to State Health Departments, CDC, and other data receivers. The message description below shows how the OUL^R22 is constrained for use in the BT response context. Refer to "PHIN Messaging Standard Laboratory Result - OUL^R22" To see the full OUL^R22 message supported by PHIN.

Abstract Message Structure

	Unsolicited Specimen Oriented Observation Message OUL^R22	Chapter
Segment	Description	
	Header Begin	
MSH	Message Header	2.15.9
[{SFT}]	Software Segment	2.15.12
	Header End	
PID	Patient Identification	3.4.2
{	*Specimen Begin*	
SPM	Specimen Information	7.4.3
[{OBX}]	Field Observation Result for specimen	9.6.2
[{	*Container Begin*	
SAC	Container Information	13.4.3
}]	*Container End*	
{	*Order Begin*	
OBR	Observation Order	7.4.1
[ORC]	Common Order Segment	4.5.1
[{NTE}]	Notes and Comments for OBR	2.15.10
[{	*Result Begin*	
OBX	Test Observation Result	9.6.2
[{NTE}]	Notes and Comments for OBX	2.15.10
}]	*Result End*	
}	*Order End*	
}	*Specimen End*	

Segment Processing Rules

1. Unlike the standard HL7 specification for the OUL message, the PID is a required field. The PID is being used to capture information about the subject of the testing activity, that is to say the entity from which the specimen was taken. The source of the specimen may be a person, and it may be a location or structure.
2. The SPM carries specimen information. In some cases, a lab will report on testing that is carried out on specimens which have been previously tested, or which have been split off (aliquot) from a parent specimen at the same Lab or at another Lab. When this happens, and it is important to track information linking the tested specimen back to the original specimen source, information about the parent specimen and any previous testing or processing is captured in an SPM, OBR, and OBX group of segments which is linked to parent via the SPM-3 Parent Specimen ID field.
3. The SAC will carry information pertaining to specimen containers.
4. The OBX segment following the SPM captures additional information for a specimen that is not described by the standard message format.
5. In order to support complex clinical reporting such as microbiology susceptibility reports, the HL7 standard supports a) messages that contain multiple OBRs, and b) messages in which a tree structure is maintained by providing linkages between an OBR and its parent test (OBR) and result (OBX). While the message structure will support this multiplicity and this linkage, the initial implementation of BT Laboratory Results Messaging will not support either multiple tests, or nested tests. It will provide support for a single test (OBR) along with its associated set of results (multiple OBX segment instances).
6. The ORC is included in order to maintain consistency with the Electronic Lab Reporting (ELR) specification used for communicable disease result reporting. Within the ELR context, the segment contains ordering provider information that may be valuable for BT Response.

Example Message

The following example messages are provided as concrete examples of message instances that follow this supplement.

This is an example of a BioWatch message. That is to say, the report of results generated by testing a BioWatch air filter:

```
MSH|^~\&|^2.16.840.1.114222.4.3.2.1..^ISO|^2.16.840.1.114222.4.1.^ISO|^
2.16.840.1.114222.4.3.2.3^ISO|^2.16.840.1.114222.4.1.1^ISO|200305271131
||OUL^R22^OUL_R22|200305271131|P^T|2.5|||||||||||1.4

PID|1||PSU435^^^||^BioWatch|||||||||||||||||||||||||||||||

SPM||100-45678^^2.16.840.1.114222.4.3.2.1...3.9^ISO||AIRS^Air
Sample^2.16.840.1.113883.12.487||^^|^^|||^|^^|||BioWatch collector
sample|^^|BHZ
^Biohazard^2.16.840.1.113883.12.489|200304271115|200304271330||||E^Exce
llent^2.16.840.1.113883.12.491||^^||0|

SAC|P128327|||

OBR|1||03-
2.16.840.1.114222.4.3.2.1...3.5^ISO|BTAS021^Antimicrobial
Susceptibility Testing (ETest)^
2.16.840.1.114222.4.5.7||200304280619|200304261115|200304271115||
|||||||^^^^^^^^^^^||||||||||||2.16.840.1.114222.4.1.213~2.16.840.1.1142
22.4.1.174|^||RFS-BWT^Bio-Watch^2.16.840.1.114222.4.5.8^^Confirmatory
testing|||||||||^

ORC|NW||03-
30001^^2.16.840.1.114222.4.3.2.1...3.5^ISO|||||||||||^^^^^^^^^^^|||||||||
||^^^^|^^^^^^^^|^^^^

NTE|||

OBX||CE|177-6^CHLORTETRACYCLINE (MIC)^2.16.840.1.113883.6.1||AR-AMS-
1^Resistant^2.16.840.1.114222.4.5.10|||null|||F|||200304271121||||^^^

OBX||CE|185-9^CIPROFLOXACIN (MIC)^2.16.840.1.113883.6.1||AR-AMS-
2^Intermediate^2.16.840.1.114222.4.5.10|||MS|||F|||200304271121||||^^^

OBX||CE|460-6^STREPTOMYCIN (MIC)^2.16.840.1.113883.6.1||AR-AMS-
3^Susceptible^2.16.840.1.114222.4.5.10|||N|||F|||200304271121||||^^^

OBX||CE|496-0^TETRACYCLINE (MIC)^2.16.840.1.113883.6.1||AR-AMS-
1^Resistant^2.16.840.1.114222.4.5.10|||R|||F|||200304271121||||^^^
```

The second example shows the result of testing a patient supplied specimen:

```
MSH|^~\&|^2.16.840.1.114222.4.3.2.1.100.1^ISO|^2.16.840.1.114222.4.1.10
0.1^ISO|^2.16.840.1.114222.4.3.2.3^ISO|^2.16.840.1.114222.4.1.1^ISO|200
30411075052||OUL^R22^OUL_R22|20030411075052|T^T|2.5|||||||||||1.4

PID|1||100-33003^^^^FI|67-09-
2345^^^^SS|Paxton^Amy^P||195407200700|F||2131-
1^Other^2.16.840.1.114222.4.5.3|654 Indianola Ave^^Columbus
^OH^43210^^^^^^0||^^^^^^^614-555-7865|||||||||N^Not Hispanic or
Latino^2.16.840.1.113883.12.189||||US^UNITED
STATES^2.16.840.1.114222.4.6.1||||||AL|||Human||Columbus mail center
```

```
SPM||100-10040^^2.16.840.1.114222.4.3.2.1.100.1.3.9^ISO||ASERU^Serum,
Acute^2.16.840.1.113883.12.487||HCL6^6N
HCL^2.16.840.1.113883.12.371|PNA^Aterial
puncture^2.16.840.1.113883.12.488|||^left lung|P^Patient (default if
blank component value)^2.16.840.1.113883.12.369|||serum
sample|CATM^Critical do not expose to atmosphere - Do not
uncap^2.16.840.1.113883.12.376|BHZ^Biohazard^2.16.840.1.113883.12.489|2
00304010416|200304010416||||F^Fair^2.16.840.1.113883.12.491||COOL^Cool^
2.16.840.1.113883.12.493||1|vacutaner purple top

OBX||TX|^Shipping Label Information||no shipping information provided

SAC|444-091234||WEC-0800^^2.16.840.1.114222.4.3.2.1.100.1.3.7^ISO|WEC-
08a^^2.16.840.1.114222.4.3.2.1.100.1.3.7^ISO

OBR|1|WEC-8765435^^2.16.840.1.114222.4.3.2.1.100.1.3.5^ISO|04-2003-
3524^^2.16.840.1.114222.4.3.2.1.100.1.3.5^ISO|BTAS035^Time-resolved
Fluorescence^2.16.840.1.114222.4.5.7||200304020453|||||||||||^^^^^^^^^^
^|||||||||||||||^04-2003-3510||RFSEMG^
Emergency^2.16.840.1.114222.4.5.8^^Ricin Toxin rule out||||||||||^

ORC|NW|WEC-8765435^^2.16.840.1.114222.4.3.2.1.100.1.3.5^ISO|04-2003-
3524^^2.16.840.1.114222.4.3.2.1.100.1.3.5^ISO|||||||||||^^^^^^^^^^^|||||
|||||^^^^|^^^^^^^^|^^^^

NTE|||Phone Dr. Thomas with results

OBX||CE|BTAS035^Time-resolved Fluorescence^2.16.840.1.114222.4.5.7||R-
40759^Negative^2.16.840.1.113883.6.51|||N|||F|||200304030452||||RSR-
5400^^^ISO

OBX||NM|BTAS035^Time-resolved
Fluorescence^2.16.840.1.114222.4.5.7||550^|||N|||F|||200304030452||||RS
R-5400^^^ISO
```

4. Message Segments

This supplement only provides Bioterrorism specific usage notes for supported fields. Not all fields have BT specific usage notes. For a full description of segments and fields refer to "PHIN Messaging Standard Laboratory Result - OUL^R22".

Segment Attribute Table Abbreviations

The abbreviated terms and their definitions used in the segment table headings are as follows:

ABBREVIATION	DEFINITION
SEQ	The sequence of the elements as they are numbered in the segment.
LEN	The length of the element.
DT	The data type of the element.
OPT	Whether the field is required, optional, or conditional in a segment. Required fields are defined by HL7 2.5 and do not refer to requirements for reporting laboratory findings to public health agencies. Refer to section 2.1 HL7 Definitions for the designations.
RP/#	Indicates if element repeats. IF the number of repetitions is limited, the number of allowed repetitions is given.
TBL#	Specific table reference. Tables used in public health messages are listed in *[Location to be determined]*.
ITEM#	HL7 unique item number for each element.
Element Name	Descriptive name of element in the segment.

Note: Legend of Table

Gray = **The PHIN Messaging Standard does not support the use of this field.**

MSH - Message Header Segment

MSH Attributes

Seq.	Len.	DT	Opt	Rpt#	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	1	ST	R				Field Separator	
2	4	ST	R				Encoding Characters	
3	227	HD	O		0361		Sending Application	
4	227	HD	R		0362	PH_PRTNERS	Sending Facility	
5	227	HD	O		0361		Receiving Application	
6	227	HD	R		0362	PH_PRTNERS	Receiving Facility	
7	26	TS	R				Date/Time Of Message	
8	40	ST	O				Security	Not Supported
9	15	MSG	R				Message Type	OUL^R22
10	20	ST	R				Message Control ID	
11	3	PT	R				Processing ID	

Seq.	Len.	DT	Opt	Rpt#	Tbl #	PHIN Code System / Value Set	Element Name	Comments
12	60	VID	R				Version ID	2.5
13	15	NM	O				Sequence Number	Not Supported
14	180	ST	O				Continuation Pointer	Not Supported
15	2	ID	O		0155		Accept Acknowledgment Type	Not Supported
16	2	ID	O		0155		Application Acknowledgment Type	Not Supported
17	3	ID	O		0399		Country Code	Not Supported
18	16	ID	O	Y	0211		Character Set	
19	250	CE	O				Principal Language Of Message	
20	20	ID	O		0356		Alternate Character Set Handling Scheme	
21	427	EI	O	Y			Message Profile Identifier	Version of specification to which this message conforms

MSH Usage Notes

MSH-3 <u>Sending application</u> (HD-180, Optional) 00003
Usage Note: For the first release of BT Laboratory Results Messaging, this field will be valued with an identifier provided by the BT Response application.

MSH-4 <u>Sending facility</u> (HD-227, Required) 00004
Usage Note: Valid values are drawn from the table PH_PRTNERS.

MSH-5 <u>Receiving application</u> (HD-227, Optional) 00005
Usage Note: For the first release of BT Laboratory Results Messaging, this field will be valued with an identifier provided by the BT Response application.

MSH-6 <u>Receiving facility</u> (HD-227, Required) 00006
Usage Note: Valid values are drawn from the table PH_PRTNERS.

MSH-21 <u>Message Profile Identifier</u> (EI - Optional)   01598
Usage Note: BT Laboratory Results Messaging will use this field to capture the particular Implementation Guide/Supplement and system implementation that the message is conformant to. The version ID for this Implementation Guide/Supplement is shown on the title page.

```
Example: the version of the specification to which this message
conforms. |BT-1.0|
```

SFT – Software segment

SFT – Software Segment Attributes

Seq.	Len.	DT	Opt	Rpt#	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	567	XON	R				Software Vendor Organization	
2	15	ST	R				Software Certified Version or Release Number	
3	20	ST	R				Software Product Name	
4	20	ST	R				Software Binary ID	
5	1024	TX	O				Software Product Information	
6	26	TS	O				Software Install Date	

SFT Usage Notes
There are no BT specific usage notes for the SFT segment.

PID - Patient Identification Segment

For BT Laboratory Results Messaging, the concept of "patient" has been replaced by that of test "subject". It is important to note that the test subject is not necessarily a person. It could also be a building, or a place within a building, from which a sample is taken.

PID Attributes

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	C				Set ID - PID	Required for living subjects (human and animal)
2	20	CX	B				Patient ID	Deprecated – Do Not Use
3	250	CX	R	Y		PHVS_EI_TYPE	Patient Identifier List	
4	20	CX	B	Y			Alternate Patient ID - PID	Not Supported
5	250	XPN	R	Y			Patient Name	Multiple sub-components
6	250	XPN	O	Y			Mother's Maiden Name	Not Supported
7	26	TS	O				Date/Time of Birth	
8	1	IS	O		0001	PHVS_SEX	Administrative Sex	
9	250	XPN	B	Y			Patient Alias	Not Supported
10	250	CE	O	Y	0005	P_RACE_CAT	Race	
11	250	XAD	O	Y			Patient Address	
12	4	IS	B		0289		County Code	Not Supported
13	250	XTN	O	Y			Phone Number - Home	
14	250	XTN	O	Y			Phone Number - Business	Not Supported
15	250	CE	O		0296		Primary Language	Not Supported
16	250	CE	O		0002		Marital Status	Not Supported
17	250	CE	O		0006		Religion	Not Supported
18	250	CX	O				Patient Account Number	Not Supported
19	16	ST	B				SSN Number - Patient	Not Supported
20	25	DLN	B				Driver's License Number - Patient	Not Supported
21	250	CX	O	Y			Mother's Identifier	Not Supported
22	250	CE	O	Y	0189	PHVS_P_ETHN_GRP	Ethnic Group	
23	250	ST	O				Birth Place	Not Supported
24	1	ID	O		0136		Multiple Birth Indicator	Not Supported
25	2	NM	O				Birth Order	Not Supported
26	250	CE	O	Y	0171	PH_COUNTRY_NM	Citizenship	
27	250	CE	O		0172		Veterans Military Status	Not Supported
28	250	CE	B		0212		Nationality	Not Supported
29	26	TS	O				Patient Death Date and Time	Not Supported
30	1	ID	O		0136		Patient Death Indicator	Not Supported
31	1	ID	O		0136		Identity Unknown Indicator	Not Supported
32	20	IS	O	Y	0445	HL70445	Identity Reliability Code	
33	26	TS	O				Last Update Date/Time	Not Supported
34	241	HD	O				Last Update Facility	Not Supported
35	250	CE	C		0446	PH_SPECIES	Species Code	
36	250	CE	C		0447		Breed Code	Not Supported
37	80	ST	O				Strain	
38	250	CE	O	2	0429		Production Class Code	Not Supported

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
39	250	CWE	O	Y	0171		Tribal Citizenship	Not Supported

PID Usage Notes

PID-3   <u>Patient Identifier List (CX)   00106</u>

Usage Note: The fourth subcomponent of each patient identifier entry is drawn from HL7 Table 0300 Namespace ID, which will contain a list of the OID namespace identifiers used for messages conformant to this supplement. These will all be OIDs. It is likely that OIDs will not be assigned for identifiers, e.g, SSN, driver's license that are assigned externally to the institution responsible for creating the message.

The fifth subcomponent of each patient identifier entry is an Identifier Type List drawn from the table PHVS_EI_TYPE.

PID-5   <u>Patient Name (XPN)</u>   00108

Usage Note: The current, assumed legal name of the patient should be sent in this field.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-7   <u>Date/Time of Birth</u>   (TS)   00110

Usage Note: The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-8   <u>Administrative Sex</u> (IS)   00111

Usage Note: The supported coding system/value set being supported is PHVS_SEX. This includes the NEDSS sex codes, which are a subset of HL7 Table 0001.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-10   <u>Race</u> (CE)   00113

Usage Note: This will be drawn from the PHIN value set for Race, PH_P_RACE_CAT, which is based on HL7 Table 0005 - Race.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-11   <u>Patient Address</u> (XAD)   00114

Usage Note: For BT Laboratory Results Messaging, the address, along with other PID attributes, carries information about the subject of testing, which may or may not be a "patient". In some

cases the test subject may be a structure at a particular location. This could be a location within a private residence or a place of business.

PID-13   Phone Number - Home (XTN)   00116

Usage Note: A single phone number will be collected for the test subject.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-22   Ethnic Group (CE)   00125

Usage Note: This field further defines the patient's ancestry. The list of valid ethnic groups is captured as PHVS_P_ETHNIC_GRP.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-26   Citizenship (CE)   00129

Usage Note: The list of valid countries for citizenship is captured as PH_COUNTRY_NM.

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-32   Identity Reliability Code (IS)   01536

Usage Note: HL7 Table 0445 (HL70445) is being used as the list of valid values.

The reader should note that BioWatch results – generated from air filters removed from automated BioWatch collectors – will not include test subject demographic information.

PID-35   Species Code (CE)   01539

Usage Note: The current release of BT Laboratory Results Messaging uses the coding system/value set PH_SPECIES to capture the list of species that is supported. Note, currently, the only values included are "human" and "other".

The reader should note that BioWatch results – generated from plates removed from automated BioWatch devices – will not include test subject demographic information.

PID-37   Strain (ST)   01541

Usage Note: The current BT Laboratory Results Messaging uses PID.37 – Strain – to carry information about the Bioterrorist event that testing is related to. The 80 character string field supports passage of either a name for the event, or a short description or comment.

SPM – Specimen Segment

SPM Attributes

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	O				Set ID – SPM	Not supported
2	80	EIP	R				Specimen ID	
3	80	EIP	O	Y			Specimen Parent IDs	
4	250	CWE	R		0487	PHVS_BTSpecimen_type	Specimen Type	
5	250	CWE	O	Y	0541		Specimen Type Modifier	Not supported
6	250	CWE	O	Y	0371	HL70371	Specimen Additives	
7	250	CWE	O		0488	HL70488	Specimen Collection Method	
8	250	CWE	O				Specimen Source Site	Not supported
9	250	CWE	O	Y	0542		Specimen Source Site Modifier	Not supported
10	250	CWE	O		0543	(none)	Specimen Collection Site	
11	250	CWE	O	Y	0369	HL70369	Specimen Role	
12	20	CQ	O				Specimen Collection Amount	
13	6	NM	C				Grouped Specimen Count	Not supported
14	250	ST	O	Y			Specimen Description	
15	250	CWE	O	Y	0376	HL70376	Specimen Handling Code	
16	250	CWE	O	Y	0489	PHVS_BT_RISKCODES	Specimen Risk Code	
17	26	DR	O				Specimen Collection Date/Time	
18	26	TS	O				Specimen Received Date/Time	
19	26	TS	O				Specimen Expiration Date/Time	Not supported
20	1	ID	O		0136		Specimen Availability	Not supported
21	250	CWE	O	Y	0490		Specimen Reject Reason	Not supported
22	250	CWE	O		0491	HL70491	Specimen Quality	
23	250	CWE	O		0492		Specimen Appropriateness	Not supported
24	250	CWE	O	Y	0493	PHVS_BT_SPECCOND	Specimen Condition	
25	20	CQ	O				Specimen Current Quantity	Not supported
26	4	NM	O				Number of Specimen Containers	
27	250	CWE	O			(none)	Container Type	
28	250	CWE	O		0544		Container Condition	Not supported
29	250	CWE	O		0494		Specimen Child Role	Not supported

SPM Usage Notes

SPM-4   Specimen Type   (CWE – 250, Required)   01900

Usage Note: The code system/value set PHVS_ BTSpecimen_type is being used to define the allowed specimen types.

SPM-6   Specimen Additives (CWE – 250, Optional)   01758

Usage Note: The code system/value set HL70371 is being used to define the allowed additive types.

SPM-7   Specimen Collection Method (CWE – 250, Optional)   01759

Usage Note: For BT Laboratory Results Messaging, the code system/value set HL70488 is being used to define the allowed specimen collection method types.

SPM-10   Specimen Collection Site   (CWE – 250, Optional)   01761

Usage Note: Within the context of BT Laboratory Results Messaging, this field is used to capture the site from which a specimen was collected. This could be a variety of location types ranging from anatomic sites to physical locations. Therefore, although HL7 designates this as a coded field, BT Laboratory Results Messaging does not currently support a coding system/value set for this field. As a result of this decision, the field value is passed as a text entry in the second component (within the CE data type) of the field.

SPM-11   Specimen Role   (CWE – 250, Optional)   01762 -
Usage Note: The code system/value set HL70369 is being used to define the supported specimen role types.

SPM-12   Specimen Collection Amount   (CQ – 20, Optional)   01902
Usage Note: The reader should note that the datatype assigned to the field is CQ. This field is not currently supported by the LRN Results Messenger, however the application is expected to be enhanced to provide this support. For applications that do support this field, it is required that the message include both the collection amount and the applicable unit of measure.

SPM-15   Specimen Handling Code   (CWE – 250, Optional)   01908
Usage Note: The code system/value set HL70376 is being used to define the supported specimen handling codes.

SPM-16   Specimen Risk Code (CWE – 250, Optional)   01903
Usage Note: The code system/value set PHVS_BT_RISKCODES is being used to define the supported risk types.

SPM-22   Specimen Quality (CWE – 250, Optional) 01768
Usage Note: The code system/value set HL70491 is being used to define the supported specimen quality types.

SPM-24   Specimen Condition (CWE – 250, Optional) 01770

Usage Note: The code system/value set PHVS_BT_SPECCOND is being used to define the supported specimen condition types.

SPM-27   Container Type   (CWE – 250, Optional)   01773

Usage Note: HL7 designates this as a coded field, however BT Laboratory Results Messaging does not currently support a coding system/value set for this field. Therefore, the field value is passed as a text entry in the second component (within the CE data type) of the field.

OBX - Observation/Result (following SPM)

OBX – Observation/Result Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	O				Set ID – OBX	Not Supported
2	2	ID	C		0125	HL70125	Value Type	TX
3	250	CE	R				Observation Identifier	Need a term for « Shipping Label Information »
4	20	ST	C				Observation Sub-ID	Not Supported
5	99999	Var	C	Y			Observation Value	
6	250	CE	O				Units	Not Supported
7	60	ST	O				References Range	Not Supported
8	5	IS	O	Y	0078	PHVS_OBS_INTRP	Abnormal Flags	Not Supported
9	5	NM	O				Probability	Not Supported
10	2	ID	O	Y	0080		Nature of Abnormal Test	Not Supported
11	1	ID	R		0085	PHVS_BT_OBSRESCODES	Observation Result Status	Not Supported
12	26	TS	O				Effective Date of Reference Range	Not Supported
13	20	ST	O				User Defined Access Checks	Not Supported
14	26	TS	O				Date/Time of the Observation	Not Supported
15	250	CE	O				Producer's ID	Not Supported
16	250	XCN	O	Y			Responsible Observer	Not Supported
17	250	CE	O	Y			Observation Method	Not Supported
18	22	EI	O	Y			Equipment Instance Identifier	Not Supported
19	26	TS	O				Date/Time of the Analysis	Not Supported

OBX Usage Notes

OBX-2 <u>Value Type</u> (ID) 00570

> Usage Note: For the OBX following the SPM segment, the value type should be TX.

OBX-3 <u>Observation Identifier</u> (CE) 00571

> Usage Note: For the OBX following the SPM segment, the Observation Identifier should be "Shipping Label Information" in component 2 of the CE data type.

OBX-5 <u>Observation Value</u> (varies)

> Usage Note: Shipping label information for the specimen and container.

SAC– Specimen Container Detail (Container Section)

For BT response, this segment is used to capture information regarding containers in which specimens are located.

SAC – Specimen Container Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	80	EI	O				External Accession Identifier	
2	80	EI	O				Accession Identifier	Not supported
3	80	EI	C				Container Identifier	
4	80	EI	C				Primary (parent) Container Identifier	

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
5	80	EI	O				Equipment Container Identifier	Not supported
6	300	SPS	D				Specimen Source	Not supported
7	26	TS	O				Registration Date/Time	Not supported
8	250	CE	O		0370		Container Status	Not supported
9	250	CE	O		0378		Carrier Type	Not supported
10	80	EI	O				Carrier Identifier	Not supported
11	80	NA	O				Position in Carrier	Not supported
12	250	CE	O		0379		Tray Type - SAC	Not supported
13	80	EI	O				Tray Identifier	Not supported
14	80	NA	O				Position in Tray	Not supported
15	250	CE	O	Y			Location	Not supported
16	20	NM	O				Container Height	Not supported
17	20	NM	O				Container Diameter	Not supported
18	20	NM	O				Barrier Delta	Not supported
19	20	NM	O				Bottom Delta	Not supported
20	250	CE	O				Container Height/Diameter/Delta Units	Not supported
21	20	NM	O				Container Volume	Not supported
22	20	NM	O				Available Specimen Volume	Not supported
23	20	NM	O				Initial Specimen Volume	Not supported
24	250	CE	O				Volume Units	Not supported
25	250	CE	O		0380		Separator Type	Not supported
26	250	CE	O		0381		Cap Type	Not supported
27	250	CWE	O	Y	0371		Additive	Not supported
28	250	CE	O				Specimen Component	Not supported
29	20	SN	O				Dilution Factor	Not supported
31	20	SN	O				Temperature	Not supported
32	20	NM	O				Hemolysis Index	Not supported
33	250	CE	O				Hemolysis Index Units	Not supported
34	20	NM	O				Lipemia Index	Not supported
35	250	CE	O				Lipemia Index Units	Not supported
36	20	NM	O				Icterus Index	Not supported
37	250	CE	O				Icterus Index Units	Not supported
38	20	NM	O				Fibrin Index	Not supported
39	250	CE	O				Fibrin Index Units	Not supported
40	250	CE	O	Y	0374		System Induced Contaminants	Not supported
41	250	CE	O	Y	0382		Drug Interference	Not supported
42	250	CE	O		0375		Artificial Blood	Not supported
43	250	CWE	O	Y	0376		Special Handling Code	Not supported
44	250	CE	O	Y	0377		Other Environmental Factors	Not supported

SAC Usage Notes

SAC-1 External Accession Identifier (EI, Required) 01329

Usage Note: Given that the identifying (accession) number for the specimen has been assigned externally to the lab, the OID identifying the ID namespace will not be valued.

SAC-3 Container Identifier (EI, Conditional) 01331

Usage Note: Given that the identifying number for the container has been assigned externally to

the lab, the OID identifying the ID namespace will not be valued.

SAC-4 <u>Primary (Parent) Container Identifier</u> (EI, Conditional) 01332

Usage Note: Given that the identifying number for the container has been assigned externally to the lab, the OID identifying the ID namespace will not be valued.

OBR - Observation Request Segment

OBR – Observation Request Segment Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	R				Set ID - OBR	
2	22	EI	C				Placer Order Number	
3	22	EI	R				Filler Order Number	
4	250	CE	R			PHVS_BT_LABTESTS	Universal Service Identifier	
5	2	ID	X				Priority – OBR	Not supported
6	26	TS	O				Requested Date/Time	Retained to be backward compatible with BT message.
7	26	TS	C				Observation Date/Time	
8	26	TS	O				Observation End Date/Time	
9	20	CQ	O				Collection Volume	Not Supported
10	250	XCN	O	Y			Collector Identifier	Not Supported
11	1	ID	O		0065		Specimen Action Code	Not Supported
12	250	CE	O				Danger Code	Not Supported
13	300	ST	O				Relevant Clinical Information	Not Supported
14	26	TS	B				Specimen Received Date/Time	Not Supported
15	300	SPS	B				Specimen Source	Not Supported
16	250	XCN	O	Y			Ordering Provider	
17	250	XTN	O	Y/2			Order Callback Phone Number	Not Supported
18	60	ST	O				Placer Field 1	Not Supported
19	60	ST	O				Placer Field 2	Not Supported
20	60	ST	O				Filler Field 1	Not Supported
21	60	ST	O				Filler Field 2	Not Supported
22	26	TS	C				Results Rpt/Status Chng - Date/Time	Not Supported
23	40	MOC	O				Charge to Practice	Not Supported
24	10	ID	O		0074		Diagnostic Serv Sect ID	Not Supported
25	1	ID	C		0123		Result Status	Not Supported
26	400	PRL	O				Parent Result	Not Supported
27	200	TQ	B	Y			Quantity/Timing	Not Supported
28	250	XCN	O	Y			Result Copies To	
29	200	EIP	O				Parent	
30	20	ID	O		0124		Transportation Mode	Not supported
31	250	CE	O	Y		PH_StudyReason, PHVS_BT_agents	Reason for Study	
32	200	NDL	O				Principal Result	Not Supported

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
							Interpreter	
33	200	NDL	O	Y			Assistant Result Interpreter	Not Supported
34	200	NDL	O	Y			Technician	Not Supported
35	200	NDL	O	Y			Transcriptionist	Not Supported
36	26	TS	O				Scheduled Date/Time	Not supported
37	4	NM	O				Number of Sample Containers *	Not supported
38	250	CE	O	Y			Transport Logistics of Collected Sample	Not supported
39	250	CE	O	Y			Collector's Comment *	
40	250	CE	O				Transport Arrangement Responsibility	Not Supported
41	30	ID	O		0224		Transport Arranged	Not Supported
42	1	ID	O		0225		Escort Required	Not Supported
43	250	CE	O	Y			Planned Patient Transport Comment	Not Supported
44	250	CE	O	N	0088		Procedure Code	Not Supported
45	250	CE	O	Y	0340		Procedure Code Modifier	Not Supported
46	250	CE	O	Y	0411		Placer Supplemental Service Information	Not Supported
47	250	CE	O	Y	0411		Filler Supplemental Service Information	Not Supported
48	250	CWE	C	N	0476		Medically Necessary Duplicate Procedure Reason.	Not Supported
49	2	IS	O	N			Result Handling.	Not Supported

OBR – Usage Notes

OBR-1 <u>Set ID</u>   (SI-4, Required)

Usage Note: In the initial implementation of BT Laboratory Results Messaging, only a single test will be passed in a message instance. Therefore, the only value passed for OBR.1 will be "1".

OBR-2 <u>Placer Order Number</u> (EI-22, Optional)

Usage Note: It is the number assigned to the test request or order by the system that initiated the request for performance of the test. That could be a BT Response field team, a provider, or some other organization. Given that the identifying number for the order has been assigned externally to the lab, the application will only populate the ID component of the EI data type. It is not expected that the OID identifying the ID namespace will be valued.

Note, the same value is populated in ORC.2 and OBR.2.

OBR-3 <u>Filler Order Number</u> (EI-22, Required)

Usage Note: This is the number assigned to the test by the organization performing the test. In the case of BT Laboratory Results Messaging, that means it is the laboratory performing the test.

Note the same value is populated in ORC.3 and OBR.3.

OBR-4 <u>Universal Service ID </u>(CE-250, Required)

Usage Note: BT Laboratory Results Messaging is providing a code system/value set that lists the test codes that are supported. This value set – PHVS_BT_LABTESTS – is drawn from the LOINC coding system. It only includes those tests considered relevant, and contains additional tests that are under consideration for inclusion in LOINC.

OBR-6 Requested Date Time (TS-26, Optional)

Usage Note: Note, HL7 has marked this field as included only for backwards compatibility, and suggested that component #4 of OBR.27 – Quantity/Timing be used instead. BT Laboratory Results Messaging is making use of OBR.6 because the sophisticated frequency representation of the Quantity/Timing field is not needed.

OBR-7 Observation Date Time (TS-26, Optional)

Usage Note: In the case of BioWatch specimens, OBR.7 will capture the date/time at which the BioWatch device was activated, and the collection plate was exposed.

OBR-8 Observation End Date Time (TS-26, Optional)

Usage Note: In the case of BioWatch specimens, OBR.8 will capture the date/time at which the collection plate within the BioWatch device was covered and the period of collecting exposure information stopped.

OBR-26 Parent Result (PRL-400) 00259
The PHIN Messaging Standard does not make use of this field.
Note, OBR.26 – Parent Result is used to organize and link component observations; that is to say, observations that need to be related in order to make up a larger whole. The HL7 standard states: "This field is defined to make it available for other types of linkages (e.g., toxicology). This important information, together with the information in OBR-29-parent, uniquely identifies the parent result's OBX segment related to this order." The current release of BT Laboratory Results Messaging only supports transmission of a single test that does not have a complex structure. Later releases will support a wider range of test structures, which will require that this element be supported.

OBR-28 Result Copies To (XCN-250, Optional) 00260

Usage Note: BT Laboratory Results Messaging will use the field to identify organizations who should receive test results. For BioWatch results this field will contain object identifiers (OIDs) for state and local health departments by whom the BioWatch results are to be seen in a Web-based application known as the LRN Results Viewer.

OBR-29 Parent (EIP-200, Optional) 00261

Usage Note: For the current release of BT Laboratory Results Messaging, which only supports transmission of a single test that does not have a complex structure, the parent number will be the identifier of a related test for which information was passed in an earlier message.

OBR-31 Reason for Study (CE-250, Optional) 00263

Usage Note: Two instances of the field are supported within BT Laboratory Results Messaging. The first instance will indicate at a high level the reason for testing. The second instance provides more detailed information – it will indicate the suspect agent whose potential presence has initiated the testing process.

The valid values for the first repetition of the field are carried in the PH_StudyReason coding system/value set. In the context of BT Laboratory Results Messaging, messages will contain the

appropriate reason for study code within the CE data type. The message may also contain descriptive text that further qualifies the chosen reason for study code. This text will be included in the Component #5 – alternate text – of the CE.

The valid values for the second repetition of the field are carried in the PHVS_BT_Agents coding system/value set.

OBR-39 Collector's Comment   (CE-250, Optional)   01030

Usage Note: BT Laboratory Results Messaging will use this field to capture critical information for BioWatch testing. That is to say, the field will be valued as "Duration for collection." It is noted that this duration may exceed start/end period. The value will be passed in the second component (text description) within the CE datatype.

ORC - Common Order Segment

For BT Laboratory Results Messaging only the original order id, and the identity of ordering provider and ordering facility are captured. Note, the "ordering facility" could be a BT Response team.

ORC – Common Order Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	2	ID	R		0119	HL70119	Order Control	
2	22	EI	C				Placer Order Number	
3	22	EI	C				Filler Order Number	
4	22	EI	O				Placer Group Number	Not supported
5	2	ID	O		0038		Order Status	Not supported
6	1	ID	O		0121		Response Flag	Not supported
7	200	TQ	B	Y			Quantity/Timing	Not supported
8	200	EIP	O				Parent	Not supported
9	26	TS	O				Date/Time of Transaction	Not supported
10	250	XCN	O	Y			Entered By	Not supported
11	250	XCN	O	Y			Verified By	Not supported
12	250	XCN	O	Y			Ordering Provider	Not supported
13	80	PL	O				Enterer's Location	Not supported
14	250	XTN	O	Y/2			Call Back Phone Number	Not supported
15	26	TS	O				Order Effective Date/Time	Not supported
16	250	CE	O				Order Control Code Reason	Not supported
17	250	CE	O				Entering Organization	Not supported
18	250	CE	O				Entering Device	Not supported
19	250	XCN	O	Y			Action By	Not supported
20	250	CE	O		0339		Advanced Beneficiary Notice Code	Not supported
21	250	XON	O	Y			Ordering Facility Name	
22	250	XAD	O	Y			Ordering Facility Address	
23	250	XTN	O	Y			Ordering Facility Phone Number	
24	250	XAD	O	Y			Ordering Provider Address	
25	250	CWE	O				Order Status Modifier	Not Supported
26	60	CWE	C		0552		Advanced Beneficiary Notice Override Reason	Not Supported

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
27	26	TS	O				Filler's Expected Availability Date/Time	Not Supported
28	250	CWE	O		0177		Confidentiality Code	Not Supported
29	250	CWE	O		0482		Order Type	Not Supported
30	250	CNE	O		0483		Enterer Authorization Mode	Not Supported

ORC Usage Notes

ORC-1   <u>Order Control</u>   (ID)   00215

Usage Note: The value "NW" will be defaulted. The reader should note that the current release of messaging will only support initial broadcast of a test result. Future releases may support revisions, deletions, etc.

ORC-2   <u>Placer Order Number</u>   (EI)   00216

Usage Note: This field is the placer application's order number. That is to say, it is the number assigned to the test request or order by the system that initiated the request for performance of the test. That could be a BT Response field team, a provider, or some other organization. Given that the identifying number for the order has been assigned externally to the lab, the application will only populate the ID component of the EI data type. It is not expected that the OID identifying the ID namespace will be valued.

Note, the same value is populated in ORC.2 and OBR.2.

ORC-3   <u>Filler Order Number</u>   (EI)   00217

Usage Note: This is the number assigned to the test by the organization performing the test. In the case of BT Laboratory Results Messaging, that means it is the laboratory performing the test.

Note, the same value is populated in ORC.3 and OBR.3.

OBX - Observation/Result

OBX – Observation/Result Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	O				Set ID – OBX	Not Supported
2	2	ID	C		0125	HL70125	Value Type	
3	250	CE	R			PHVS_BT_LABTESTS	Observation Identifier	
4	20	ST	C				Observation Sub-ID	Not Supported
5	99999	Var	C	Y			Observation Value	
6	250	CE	O				Units	Not Supported
7	60	ST	O				References Range	Not Supported
8	5	IS	O	Y	0078	PHVS_OBS_INTRP	Abnormal Flags	
9	5	NM	O				Probability	Not Supported
10	2	ID	O	Y	0080		Nature of Abnormal Test	Not Supported
11	1	ID	R		0085	PHVS_BT_OBSRESCODES	Observation Result Status	
12	26	TS	O				Effective Date of Reference	Not Supported

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
							Range	
13	20	ST	O				User Defined Access Checks	Not Supported
14	26	TS	O				Date/Time of the Observation	
15	250	CE	O				Producer's ID	Not Supported
16	250	XCN	O	Y			Responsible Observer	Not Supported
17	250	CE	O	Y			Observation Method	Not Supported
18	22	EI	O	Y			Equipment Instance Identifier	
19	26	TS	O				Date/Time of the Analysis	Not Supported

OBX field definitions

OBX-2 <u>Value Type</u> (ID) 00570

Usage Note: The only values for OBX.2 that supported within the first release of BT Laboratory Results Messaging are NM, ST, and CE.

OBX-3 <u>Observation Identifier</u> (CE) 00571

Usage Note: BT Laboratory Results Messaging is using the code system/value set PHVS_BT_LABTESTS to indicate the observation (result) types that are supported.

OBX-8 <u>Abnormal Flags</u> (IS) 00576

Usage Note: The NEDSS Base System code set – PHVS_OBS_INTRP – will be used. This code set is based on HL7 Table 0078.

OBX-11 <u>Observation Result Status</u> (ID) 00579

Usage Note: The code system/value set PHVS_BT_OBSRESCODES will be used to define the valid result statuses. The status of final should only be used when a final conclusion is reached. On the other hand, as long as the testing party thinks that further tests are needed, the test result should be given a status of "Preliminary". Once the professional responsible for the testing is satisfied, the result should be given the status "Final".

OBX-18 <u>Equipment Instance Identifier</u> (EI) 01479

Usage Note: The data type for the field is EI; however BT Laboratory Results Messaging currently passes the data as text within the first component of the EI data type.

NTE – Notes and Comments Segment

For BT Laboratory Results Messaging, depending on its position in the message, the NTE segment can have information about either a test, or a result (observation) associated with performance of a test.

NTE – Notes and Comments Attribute Table

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
1	4	SI	O				Set ID - NTE	Not Supported
2	8	ID	O		0105		Source of Comment	Not Supported

Seq	Len	DT	Opt	Rep #	Tbl #	PHIN Code System / Value Set	Element Name	Comments
3	64k	FT	O	Y			Comment	
4	60	CE	O				Comment Type	Not Supported

NTE Usage Notes

NTE-3 Comment (FT)

Usage Note: The message supports three kinds of comment, all captured within an NTE segment: a) order comments – associated with a particular test (OBR instance) b) result comments – associated with a particular observation (OBX).

5. Data Types

Only those data types which have BT specific documentation have been included in this supplement. All other data types used in the OUL^R22 are documented in the "PHIN Messaging Standard Laboratory Result - OUL^R22".

Data Type	Data Type Description
CE	Coded Element
CQ	Composite Quantity with Units
CWE	Coded With Exceptions
CX	Extended Composite ID with Check Digit
EI	Entity Identifier
EIP	Entity Identifier Pair
FN	Family Name
HD	Hierarchic Designator
MSG	Message Type
PT	Processing Type
SAD	Street Address
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name for Persons
XON	Extended Composite Name and ID Number for Organizations
XPN	Extended Person Name
XTN	Extended Telephone Number

CE - Coded Element

HL7 Component Table - CE – Coded Element

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Identifier	The relevant code value as drawn from the coding system or value set identified in Component #3
2	ST	Text	Descriptive text associated with the code value (component #1). The sending application will determine whether or not to include text
3	ID	Name of Coding System	The Object Identifier (OID) for the coding system or value set from which the code value is drawn. The applicable OID will be displayed in the applicable segment table.
4	ST	Alternate Identifier	Not Supported
5	ST	Alternate Text	Text associated with the local code for a coded item. In the case of OBR.31 – Reason for Study – this component is used to carry text that further describes the reason for study. This is the only situation in which the component is currently valued.
6	ID	Name of Alternate Coding System	Not Supported

CQ - Composite Quantity with Units

HL7 Component Table - CQ –Composite Quantity with Units

SEQ	DT	COMPONENT NAME	COMMENTS
1	NM	Quantity	
2	CE	Units	The unit of measure associated with the value. The OID for the applicable unit of measure coding system or value set is displayed in the applicable segment table.

CWE – Coded With Exceptions

HL7 Component Table - CWE – Coded with Exceptions

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Identifier	The relevant code value as drawn from the coding system or value set identified in Component #3
2	ST	Text	Descriptive text associated with the code value (component #1). The sending application will determine whether or not to include text
3	ID	Name of Coding System	The Object Identifier (OID) for the coding system or value set from which the code value is drawn. The applicable OID will be displayed in the applicable segment table.
4	ST	Alternate Identifier	Not Supported
5	ST	Alternate Text	Not Supported
6	ID	Name of Alternate Coding System	Not Supported
7	ST	Coding System Version ID	The version ID applicable to the coding system or value set referred to in component #3.
8	ST	Alternate Coding System Version ID	Not Supported
9	ST	Original Text	Not Supported

CX - Extended Composite ID with Check Digit

HL7 Component Table - CX – Extended Composite ID with Check Digit

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	ID Number	The identifier value that has been assigned.
2	ST	Check Digit	Not Supported
3	ID	Check Digit Scheme	Not Supported

SEQ	DT	COMPONENT NAME	COMMENTS
4	HD	Assigning Authority	The OID that has been assigned to the name space within which the ID values are unique is provided within the HD datatype. It is likely that OIDs will not be assigned for identifiers, e.g, SSN, driver's license that are assigned externally to the institution responsible for creating the message.
5	ID	Identifier Type Code	The value will be drawn from the table PHVS_EI_Type. (Note, this is a nested value set that concatenates EI_Type_CDC and EI_Type_HL7 in order to support the range of identifier types that are relevant to BT Laboratory Results Messaging.)
6	HD	Assigning Facility	Not Supported
7	DT	Effective Date	Not Supported
8	DT	Expiration Date	Not Supported
9	CWE	Assigning Jurisdiction	Not Supported
10	CWE	Assigning Agency or Department	Not Supported

EI - Entity Identifier

HL7 Component Table - EI – Entity Identifier

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Entity Identifier	The unique code – with the context defined by Component #3.
2	IS	Namespace ID	Not Supported
3	ST	Universal ID	The OID that identifies the namespace within which component #1 is unique. The OID to be used will be referenced in the segment table. NOTE: OID information will only provided for IDs assigned by the sending organization. It is expected that, for externally assigned identifiers, the proper OID to use will not be known.
4	ID	Universal ID Type	This will always be valued as "ISO" for BT Laboratory Results Messaging. This is based on the use of OIDs in component #3.

EIP - Entity Identifier Pair

HL7 Component Table - EIP – Entity Identifier Pair

SEQ	DT	COMPONENT NAME	COMMENTS
1	EI	Placer Assigned Identifier	Not Supported
2	EI	Filler Assigned Identifier	The filler number assigned to the parent order.

FN - Family Name

HL7 Component Table - FN – Family Name

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Surname	The last name of the person.

SEQ	DT	COMPONENT NAME	COMMENTS
2	ST	Own Surname Prefix	Not Supported
3	ST	Own Surname	Not Supported
4	ST	Surname Prefix From Partner/Spouse	Not Supported
5	ST	Surname From Partner/Spouse	Not Supported

HD - Hierarchic Designator

HL7 Component Table - HD – Hierarchic Designator

SEQ	DT	COMPONENT NAME	COMMENTS
1	IS	Namespace ID	Not Supported
2	ST	Universal ID	The OID that identifies the namespace within which component #1 is unique. The OID to be used will be referenced in the segment table.
3	ID	Universal ID Type	This will always be valued as "ISO" for BT Laboratory Results Messaging. This is based on the use of OIDs in component #3.

MSG – Message Type

HL7 Component Table - MSG – Message Type

SEQ	DT	COMPONENT NAME	COMMENTS
1	ID	Message Code	The first component is the message type code defined by HL7 Table 0076 - Message type. OUL is the only value currently supported.
2	ID	Trigger Event	The second component is the trigger event code defined by HL7 Table 0003 - Event type. R22 is the only value currently supported.
3	ID	Message Structure	The third component is the abstract message structure code defined by HL7 Table 0354 - Message structure. OUL_R22 is only value currently supported.

SAD – Street Address

HL7 Component Table - SAD – Street Address

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Street or Mailing Address	The street designation within a postal address.
2	ST	Street Name	Not Supported
3	ST	Dwelling Number	Not Supported

VID – Version Identifier

HL7 Component Table - VID – Version Identifier

SEQ	DT	COMPONENT NAME	COMMENTS
1	ID	Version ID	Used to identify the HL7 version. Currently V2.5 is supported. Note, the value for the component is drawn from Table HL70104.
2	CE	Internationalization Code	Not Supported
3	CE	International Version ID	Not Supported

XAD - Extended Address

HL7 Component Table - XAD – Extended Address

SEQ	DT	COMPONENT NAME	COMMENTS
1	SAD	Street Address	The street address. See the discussion of the SAD data type.
2	ST	Other Designation	Not Supported
3	ST	City	The city that is designated within a postal address is included within this component.
4	ST	State or Province	The state or province that is designated within a postal address is included within this component.
5	ST	Zip or Postal Code	The zip code that is designated within a postal address is included within this component.
6	ID	Country	Not Supported
7	ID	Address Type	Not Supported
8	ST	Other Geographic Designation	Not Supported
9	IS	County/Parish Code	Not Supported
10	IS	Census Tract	Not Supported
11	ID	Address Representation Code	Not Supported
12	DR	Address Validity Range	Not Supported
13	TS	Effective Date	Not Supported
14	TS	Expiration Date	Not Supported

XCN - Extended Composite ID Number and Name for Persons

HL7 Component Table - XCN – Extended Composite ID Number and Name for Persons

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	ID Number	The identifier assigned to the person.
2	FN	Family Name	The family name, or surname of the person.

SEQ	DT	COMPONENT NAME	COMMENTS
3	ST	Given Name	The first given name – first name – of the person.
4	ST	Second and Further Given Names or Initials Thereof	Not Supported
5	ST	Suffix (e.g., JR or III)	Not Supported
6	ST	Prefix (e.g., DR)	Not Supported
7	IS	Degree (e.g., MD)	Not Supported
8	IS	Source Table	Not Supported
9	HD	Assigning Authority	Not Supported
10	ID	Name Type Code	Not Supported
11	ST	Identifier Check Digit	Not Supported
12	ID	Check Digit Scheme	Not Supported
13	ID	Identifier Type Code	This component indicates the ID type for the identifier in component #1. If an ID number is provided for a person, the ID type must be valued as well.
14	HD	Assigning Facility	Not Supported
15	ID	Name Representation Code	Not Supported
16	CE	Name Context	Not Supported
17	DR	Name Validity Range	Not Supported
18	ID	Name Assembly Order	Not Supported
19	TS	Effective Date	Not Supported
20	TS	Expiration Date	Not Supported
21	ST	Professional Suffix	Not Supported
22	CWE	Assigning Jurisdiction	Not Supported
23	CWE	Assigning Agency or Department	Not Supported

XON - Extended Composite Name and Identification Number for Organizations

HL7 Component Table - XON – Extended Composite Name and Identification Number for Organizations

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Organization Name	The name that has been assigned to the organization.
2	IS	Organization Name Type Code	Not Supported
3	NM	ID Number	Not Supported
4	NM	Check Digit	Not Supported

SEQ	DT	COMPONENT NAME	COMMENTS
5	ID	Check Digit Scheme	Not Supported
6	HD	Assigning Authority	Not Supported
7	ID	Identifier Type Code	Not Supported
8	HD	Assigning Facility	Not Supported
9	ID	Name Representation Code	Not Supported
10	ST	Organization Identifier	Not Supported

XPN - Extended Person Name

HL7 Component Table - XPN– Extended Person Name

SEQ	DT	COMPONENT NAME	COMMENTS
1	FN	Family Name	The family name or surname of the test subject.
2	ST	Given Name	The first or initial given name of the test subject. Also, if test subject is not a person, but is a location or structure, component #2 will hold name information.
3	ST	Second and Further Given Names or Initials Thereof	The second given name, or middle name for the test subject.
4	ST	Suffix (e.g., JR or III)	Not Supported
5	ST	Prefix (e.g., DR)	Not Supported
6	IS	Degree (e.g., MD)	Not Supported
7	ID	Name Type Code	Not Supported
8	ID	Name Representation Code	Not Supported
9	CE	Name Context	Not Supported
10	DR	Name Validity Range	Not Supported
11	ID	Name Assembly Order	Not Supported
12	TS	Check Digit Scheme	Not Supported
13	TS	Identifier Type Code	Not Supported
14	ST	Assigning Facility	Not Supported

XTN - Extended Telecommunication Number

HL7 Component Table - XTN – Extended Telecommunication Number

SEQ	DT	COMPONENT NAME	COMMENTS
1	ST	Telephone Number	Not Supported
2	ID	Telecommunication Use Code	Not Supported

SEQ	DT	COMPONENT NAME	COMMENTS
3	ID	Telecommunication Equipment Type	Not Supported
4	ST	Email Address	Not Supported
5	NM	Country Code	Not Supported
6	NM	Area/City Code	Not Supported
7	NM	Local Number	Not Supported
8	NM	Extension	Not Supported
9	ST	Any Text	Not Supported. Note: In BT Messaging v1.6 the phone number was carried in this component. It now resides in component 12.
10	ST	Extension Prefix	Not Supported
11	ST	Speed Dial Code	Not Supported
12	ST	Unformatted Telephone number	The telephone number is provided as a free text entry.

6. Code System/Value Set Tables

Much of the vocabulary used in the BT Laboratory Message is already defined in the "PHIN Messaging Standard Laboratory Result - OUL^R22". This BT Laboratory Message Supplement will only describe value sets that are not described in the OUL^R22 document.

This section contains the vocabulary items to be used with the described message. Every field in a message that contains one or more coded values has its value constrained by the specific list of values that are permitted in that field. Over time, the "list of values" that is associated with a field will change. It is important, for message implementation, both to make sure that transmitted messages (message instances) contain valid values. It is also important to make sure that updates to the valid vocabularies are properly managed. The segment tables in the previous sections associate a Table to each of these coded fields; these tables are listed in this section below, and enumerate all of the code values that may be used for the specified field in this message.

Every code value that is passed in a message instance is drawn from a code system, which has an OID associated with it as a globally unique identifier of the code system. In the general case, a) the coded values allowed in a field may be drawn from more than one code system, and b) the coded values are a subset of the codes from a given coding system. Combining (a) and (b) makes it possible for the allowed code value to be a combination of multiple subsets drawn from multiple coding systems. In most cases, only some of the codes defined in a code system are legal for use in a particular message.

The subsets of the codes that are legal for a particular field are identified by an HL7 construct known as a Value Set. A value set is a collection of coded values drawn from code systems. Value Sets may be simple or compound. Simple Value Sets are an enumerated list of codes drawn from a single code system. Compound Value Sets are an enumerated list of simple value sets. Compound Value Sets may not contain other compound value sets, and may not directly reference coding systems. These value sets serve to identify the specific set of coded values for the message from the universe of coded values across all coding systems.

The segment tables in previous sections identify the vocabulary (identified with a Table) that is used for each field containing a coded value. For fields that use the datatype CE or CWE, (these datatypes require that messages include the name of the code system as well as the code value), the message contains the OID that uniquely defines the coding system as well as the coded value itself.

The Value Sets are identified by an OID, but this OID does not get transmitted in any of the messages. However, the value set OID is useful and important when vocabulary items are modified or replaced. Each section below contains a header that describes the following items:
- table name,
- where the codes in the table come from, (i.e. the code system and its OID)
- the Value Sets and their OIDs (if any) that define the subsets of code from the code systems.,
- a description of how the codes in this table are to be used.

This header section is followed by a table in which lists each code value, and the Term associated with the code value. This Term is the text associated with the code, and is often used as the display text in user interfaces. For those tables where the code values are drawn from more than one code system, the OID for the code system is also listed in a column. The sections are in alphabetical order by table name.

Periodically, code values in code systems are updated to represent corrections or enhancements to the code system. A comprehensive table of code values, terms, and code system OIDs will be periodically made available so that implementers of messages using this Supplement will be able to update their vocabulary. This new distribution will represent a wholesale replacement of the vocabulary listed in this document.

PH_PRTNERS

Table Content Definition: Code System (CDC)

Code System Name: PH_PRTNERS
Code System OID: 2.16.840.1.114222.4.5.11
Functional Description

This code system contains the coded values of messaging partners in the Public Health Information Network (PHIN). All of these code values are themselves OIDs, and consist of codes identifying State and Local Departments of Health, LRN Laboratories, and other entities. For national security reasons, the values of all the participants in the BioTerror Response network, enumerated in this table, are not published here, but are available to partners upon request.

PH_ PRTNERS Table Codes
Public Health Messaging Partners Identifiers

This value set will be distributed separately.

PHVS_BT_Agents

Table Content Definition: Compound Value Set
Value Set Definition:
- Value Set Name: PHVS_ BT_Agents
- Value Set OID: 2.16.840.1.114222.4.11.238
- Component #1:
  - o Value Set PHVS_BTAgents_exts
  - o Value Set OID: 2.16.840.1.114222.4.11.239
  - o Based on Code System: PHVS_BTAgents_exts
  - o Code System OID: 2.16.840.1.11422.4.5.6
- Component #2:
  - o Value Set PHVS_BTAgents_SL
  - o Value Set OID: 2.16.840.1.114222.4.11.242
  - o Based on Code System: SNM3
  - o Code System OID: 2.16.840.1.113883.6.51

Functional Description:

This Value Set comprises all legal values for the suspect agents used for BT results messaging. It is built upon a specific small subset of SNOMED International codes enumerated for value set PHVS_BTAgents_SL plus a set of extensions defined in coding system PHVS_BTAgents_exts. These extensions represent organisms or other agents that do not have an appropriate representation within SNOMET International. As these codes are added to SNOMED they will be removed from the custom extensions value set, and added to the SNOMED based value set to provide an incremental update mechanism for the newly defined codes. (The old code values, although their use will be deprecated, must not be removed from the CDC code system since that would make searches through historical records intractable.)

PHVS_BT_Agents Table Codes
Public Health Bioterrorism Suspect Agent Code Values

CodeSystem	Code	Term
2.16.840.1.114222.4.5.6	C-900ZZ	Chemical Agents/blood
2.16.840.1.114222.4.5.6	C-901ZZ	Chemical Agents/incapacitating
2.16.840.1.114222.4.5.6	C-902ZZ	Chemical Agents/vomiting
2.16.840.1.114222.4.5.6	C-903ZZ	staphylococcus enterotoxin B
2.16.840.1.114222.4.5.6	DE-904ZZ	multidrug resistant TB
2.16.840.1.113883.6.51	C-270F8	Chemical Agents/other
2.16.840.1.113883.6.51	C-27111	Chemical Agents/nerve
2.16.840.1.113883.6.51	C-272F9	Chemical Agents/Blister-vesicants
2.16.840.1.113883.6.51	C-273F9	Chemical Agents/choking-lung
2.16.840.1.113883.6.51	C-276F9	Chemical Agents/riot control - tear
2.16.840.1.113883.6.51	C-30202	ricin toxin
2.16.840.1.113883.6.51	C-36304	clostridium botulinum toxin

CodeSystem	Code	Term
2.16.840.1.113883.6.51	C-36320	staphylococcus toxin
2.16.840.1.113883.6.51	C-36384	epsilon toxin of clostridium perfringens
2.16.840.1.113883.6.51	F-61989	emetic
2.16.840.1.113883.6.51	L-12202	bacillus anthracis
2.16.840.1.113883.6.51	L-1320A	brucella species
2.16.840.1.113883.6.51	L-14118	clostridium botulinum
2.16.840.1.113883.6.51	L-14210	clostridium perfringens
2.16.840.1.113883.6.51	L-16F08	burkholderia mallei
2.16.840.1.113883.6.51	L-1E401	yersinia pestis
2.16.840.1.113883.6.51	L-1F201	francisella tularensis (organism)
2.16.840.1.113883.6.51	L-2A301	coxiella burnetii
2.16.840.1.113883.6.51	L-30023	arbovirus
2.16.840.1.113883.6.51	L-32300	flavivirus
2.16.840.1.113883.6.51	L-32301	yellow fever virus
2.16.840.1.113883.6.51	L-32921	nipah virus
2.16.840.1.113883.6.51	L-34400	hanta viruses
2.16.840.1.113883.6.51	L-3750C	variola virus
2.16.840.1.113883.6.51	Z-999X	BioWatch

PHVS_BT_LABTESTS

Table Content Definition: Compound Value Set
   Value Set Definition:
- Value Set Name: PHVS_ BT_LABTESTS
- Value Set OID: 2.16.840.1.114222.4.11.244
- Component #1:
  - Value Set PHVS_BT_LABTESTS_SL
  - Value Set OID: 2.16.840.1.114222.4.11.237
  - Based on Code System: LOINC
  - Code System OID: 2.16.840.1.113883.6.1
- Component #2:
  - Value Set PHVS_BT_LABTESTS_CDC
  - Value Set OID: 2.16.840.1.114222.4.11.243
  - Based on Code System: PH_BT_LABTESTS_CDC
  - Code System OID: 2.16.840.1.114222.4.5.7
   Functional Description:

This Value Set comprises all legal values for lab assays, tests, and panels used for BT results messaging. It is built upon a specific small subset of LOINC lab assay codes enumerated for value set PBVS_BT_LABTESTS_SL plus a set of extensions defined in coding system PH_BT_LABTESTS_CDC. These extensions represent assays newly developed by the CDC and not yet incorporated into the LOINC vocabulary. This code system is subsetted by the value set PHVS_BT_LABTESTS_CDC since as these tests are added to LOINC, they will be removed from the value set and added to the LOINC based value set to provide an incremental update mechanism for the newly defined standard assay codes (the old code values, although their use will be deprecated, must not be removed from the CDC code system since that would make searches through historical records intractable.)

PHVS_ BT_LABTESTS Table Codes
Public Health Bioterrorism Laboratory Test Code Values

CodeSystem	Code	Term
2.16.840.1.113883.6.1	10739-1	Virus Electron Microscopy
2.16.840.1.113883.6.1	11467-8	BACILLUS ANTHRACIS Antibody:Immunoblot
2.16.840.1.113883.6.1	11468-6	Time-resolved Fluorescence
2.16.840.1.113883.6.1	11469-4	Colony morphology
2.16.840.1.113883.6.1	14209-1	FRANCISELLA TULARENSIS AB.IGA
2.16.840.1.113883.6.1	16875-7	FRANCISELLA TULARENSIS Antibody Titer
2.16.840.1.113883.6.1	16876-5	FRANCISELLA TULARENSIS AB.IGA:Latex

CodeSystem	Code	Term
2.16.840.1.113883.6.1	16877-3	FRANCISELLA TULARENSIS AB.IGG:Latex
2.16.840.1.113883.6.1	16878-1	FRANCISELLA TULARENSIS AB.IGM
2.16.840.1.113883.6.1	20691-2	BACILLUS ANTHRACIS:ORGANISM SPECIFIC CULTURE
2.16.840.1.113883.6.1	20706-8	Toxicity
2.16.840.1.113883.6.1	21598-8	Real-time PCR (VZV)
2.16.840.1.113883.6.1	22109-3	BACILLUS ANTHRACIS Antibody
2.16.840.1.113883.6.1	22859-3	BACILLUS ANTHRACIS Antibody Titer
2.16.840.1.113883.6.1	22860-1	BACILLUS ANTHRACIS Antibody
2.16.840.1.113883.6.1	22861-9	BACILLUS ANTHRACIS Antibody:Immunodiffusion
2.16.840.1.113883.6.1	22862-7	BACILLUS ANTHRACIS Antibody:Aggl
2.16.840.1.113883.6.1	22863-5	BACILLUS ANTHRACIS Antibody:EIA
2.16.840.1.113883.6.1	22864-3	BACILLUS ANTHRACIS Antibody:CF
2.16.840.1.113883.6.1	22865-0	BACILLUS ANTHRACIS Antibody Immunodiffusin (Titer)
2.16.840.1.113883.6.1	22867-6	DFA (Capsule Antigen)
2.16.840.1.113883.6.1	23122-5	FRANCISELLA TULARENSIS A DNA:PCR (Amplified)
2.16.840.1.113883.6.1	23123-3	FRANCISELLA TULARENSIS A RRNA:DNA
2.16.840.1.113883.6.1	23124-1	FRANCISELLA TULARENSIS Antibody:EIA
2.16.840.1.113883.6.1	23125-8	FRANCISELLA TULARENSIS Antibody Titer;Aggl
2.16.840.1.113883.6.1	23126-6	FRANCISELLA TULARENSIS Antigen:IMMUNE STAIN
2.16.840.1.113883.6.1	23128-2	FRANCISELLA TULARENSIS B DNA:PCR (Amplifed)
2.16.840.1.113883.6.1	23129-0	FRANCISELLA TULARENSIS B RRNA:PCR
2.16.840.1.113883.6.1	23130-8	FRANCISELLA TULARENSIS DNA:PCR (Amplified)
2.16.840.1.113883.6.1	23131-6	FRANCISELLA TULARENSIS RRNA:PCR
2.16.840.1.113883.6.1	23741-2	FRANCISELLA TULARENSIS Antibody Titer:CF
2.16.840.1.113883.6.1	33676-8	Colony morphology (culture)
2.16.840.1.113883.6.1	33679-2	Real-time PCR
2.16.840.1.113883.6.1	33681-8	Cellular Fatty Acid Analysis
2.16.840.1.113883.6.1	33683-4	Serology (Micro-Agglutination)
2.16.840.1.113883.6.1	33684-2	FRANCISELLA TULARENSIS Antibocy (Tube Aggl)
2.16.840.1.113883.6.1	33685-9	Culture
2.16.840.1.113883.6.1	33687-5	DFA (cellular F1 antigen)
2.16.840.1.113883.6.1	33689-1	Serology (Passive Hemagglutination/Inhibition)
2.16.840.1.113883.6.1	33690-9	YERSINIA PESTIS Antibody (EIA)
2.16.840.1.113883.6.1	33691-7	Real-time PCR
2.16.840.1.113883.6.1	33693-3	Specific Bacteriophage lysis
2.16.840.1.113883.6.1	33694-1	CLOSTRIDIUM BOTULINUM:ORGANISM SPECIFIC CULTURE
2.16.840.1.113883.6.1	33696-6	Mouse Bioassay
2.16.840.1.113883.6.1	33697-4	BACILLUS ANTHRACIS Antigen:IF (DFA)
2.16.840.1.113883.6.1	33698-2	Gamma phage lysis
2.16.840.1.113883.6.1	33699-0	MALACHITE GREEN STAIN
2.16.840.1.113883.6.1	33700-6	SPORE IDENTIFICATION:MALACHITE GREEN STAIN
2.16.840.1.113883.6.1	33701-4	Neutralization - antitoxin A
2.16.840.1.113883.6.1	33702-2	Neutralization - antitoxin E
2.16.840.1.113883.6.1	33703-0	Neutralization - antitoxin F
2.16.840.1.113883.6.1	33704-8	Neutralization - antitoxin trivalent (A,B,E)
2.16.840.1.113883.6.1	33705-5	Neutralization - antitoxin B
2.16.840.1.113883.6.1	33714-7	Slide Agglutination
2.16.840.1.113883.6.1	5055-9	BACILLUS ANTHRACIS AB:Antibody:Hem Aggl
2.16.840.1.113883.6.1	5166-4	FRANCISELLA TULARENSIS Antibody:Latex
2.16.840.1.113883.6.1	5167-2	FRANCISELLA TULARENSIS Antigen Titer:Latex
2.16.840.1.113883.6.1	6407-1	FRANCISELLA TULARENSIS AB.IGM:Latex
2.16.840.1.113883.6.1	6408-9	DFA (surface antigen)
2.16.840.1.113883.6.1	664-3	Gram Stain
2.16.840.1.113883.6.1	666-8	Capsule (India Ink Stain)
2.16.840.1.113883.6.1	668-4	Capsule (M'Fadyean Stain)
2.16.840.1.113883.6.1	680-9	Motility (wet mount)
2.16.840.1.113883.6.1	682-5	Differential Stain (Wright-Giemsa)
2.16.840.1.113883.6.1	7888-1	FRANCISELLA TULARENSIS Antibody
2.16.840.1.113883.6.1	7889-9	FRANCISELLA TULARENSIS AB.IGG
2.16.840.1.113883.6.1	7890-7	FRANCISELLA TULARENSIS AB.IGM
2.16.840.1.114222.4.5.7	BTAS001	Hemolysis
2.16.840.1.114222.4.5.7	BTAS002	Motility medium
2.16.840.1.114222.4.5.7	BTAS003	DFA (Cell Wall Antigen)
2.16.840.1.114222.4.5.7	BTAS004	Antimicrobial Susceptibility Testing
2.16.840.1.114222.4.5.7	BTAS005	Real-time PCR
2.16.840.1.114222.4.5.7	BTAS006	Lipase Reaction

CodeSystem	Code	Term
2.16.840.1.114222.4.5.7	BTAS007	Anaerobic Requirement
2.16.840.1.114222.4.5.7	BTAS008	Time-resolved Fluorescence
2.16.840.1.114222.4.5.7	BTAS009	Coxiella burnetii Real-time PCR
2.16.840.1.114222.4.5.7	BTAS010	Microagglutination
2.16.840.1.114222.4.5.7	BTAS011	Real-time PCR
2.16.840.1.114222.4.5.7	BTAS012	CO_2 Requirement
2.16.840.1.114222.4.5.7	BTAS013	Dye Tolerance Test
2.16.840.1.114222.4.5.7	BTAS014	Slide Agglutination
2.16.840.1.114222.4.5.7	BTAS015	Gel Formation
2.16.840.1.114222.4.5.7	BTAS016	Hydrogen Sulfide Test
2.16.840.1.114222.4.5.7	BTAS017	Tbilisi Phage lysis
2.16.840.1.114222.4.5.7	BTAS018	Real-time PCR
2.16.840.1.114222.4.5.7	BTAS019	Differential Stain (Wayson)
2.16.840.1.114222.4.5.7	BTAS020	Biochemical Screening
2.16.840.1.114222.4.5.7	BTAS021	Antimicrobial Susceptibility Testing (E-Test)
2.16.840.1.114222.4.5.7	BTAS022	Biochemical Identification/Characterization
2.16.840.1.114222.4.5.7	BTAS023	Mouse Inoculation
2.16.840.1.114222.4.5.7	BTAS024	Pulsed-Field Gel Electrophoresis
2.16.840.1.114222.4.5.7	BTAS025	Time-resolved Fluorescence
2.16.840.1.114222.4.5.7	BTAS026	Real-time PCR (Vaccinnia)
2.16.840.1.114222.4.5.7	BTAS027	Real-time PCR (Orthopoxvirus)
2.16.840.1.114222.4.5.7	BTAS028	Real-time PCR (Variola)
2.16.840.1.114222.4.5.7	BTAS029	Biochemical Screening
2.16.840.1.114222.4.5.7	BTAS030	Antimicrobial Susceptibility Testing (E-Test)
2.16.840.1.114222.4.5.7	BTAS031	Biochemical Identification/Characterization
2.16.840.1.114222.4.5.7	BTAS032	Time-resolved Fluorescence
2.16.840.1.114222.4.5.7	BTAS033	Mouse Inoculation
2.16.840.1.114222.4.5.7	BTAS034	Pulsed-Field Gel Electrophoresis
2.16.840.1.114222.4.5.7	BTAS035	Time-resolved Fluorescence
2.16.840.1.114222.4.5.7	BTAS036	Bru. spp. Mouse bioassay
2.16.840.1.114222.4.5.7	BTAS037	B. Anthracis culture
2.16.840.1.114222.4.5.7	BTAS038	Sporulation (wet mount)
2.16.840.1.114222.4.5.7	BTAS039	Biochemical screening
2.16.840.1.114222.4.5.7	BTAS040	Colony morphology
2.16.840.1.114222.4.5.7	BTAS041	Antimicrobial Susceptibility Testing
2.16.840.1.114222.4.5.7	BTAS042	Time-resolved Fluorescence
2.16.840.1.114222.4.5.7	BTAS043	Separation of cellular proteins (SDS-PAGE)
2.16.840.1.114222.4.5.7	BTAS044	Western Blot
2.16.840.1.114222.4.5.7	BTAS045	Plasmid Profiling
2.16.840.1.114222.4.5.7	LRN-BCS08	Oxidase Test
2.16.840.1.114222.4.5.7	LRN-BCS09	Urease Test
2.16.840.1.114222.4.5.7	LRN-BCS10	Triple Sugar Iron
2.16.840.1.114222.4.5.7	LRN-BCS11	Growth at 42C
2.16.840.1.114222.4.5.7	LRN-BCS12	Gas from nitrate
2.16.840.1.114222.4.5.7	LRN-BCS13	Arginine dihydrolase
2.16.840.1.114222.4.5.7	LRN-BCS14	Maltose utilization
2.16.840.1.114222.4.5.7	LRN-BCS15	Sucrose utilization

PHVS_BT_OBSRESCODES

Table Content Definition: Simple Value Set
Value Set Definition:

- Name: PHVS_BT_OBSRESCODES
- OID: 2.16.840.1.114222.4.11.246
- Based on Code System: Specimen type (HL7 Version 2 table 85)
- Code System OID: 2.16.840.1.113883.12.85

Functional Description

This value set enumerates the Observation Result Status Codes that are used in this type of message. It is a subset of the HL7 suggested code values from published table 85.

PHVS_BT_OBSRESCODES Table Codes
Public Health Bio-Terror Result Status Values

Code	Term

Code	Term
C	Correction record; replace final result
F	Final results
I	In lab; results pending
O	Order only (no result)
P	Preliminary results
R	Results not verified
S	Partial results
X	Cannot obtain results

PHVS_BT_RISKCODES

Table Content Definition: Simple Value Set
Value Set Definition:

- Value Set Name: PHVS_BT_ RISKCODES
- OID: 2.16.840.1.114222.4.11.245
- Based on Code System: Specimen type (HL7 Version 2 table 489)
- Code System OID: 2.16.840.1.113883.12.489

Functional Description

This value set enumerates the subset of the HL7 version 2 Risk code values that are used in this type of message. It is a subset of the HL7 suggested code values from published table 0489.

PHVS_BT_ RISKCODES Table Codes
Public Health Bio-Terror Specimen Biohazard Risk Values

Code	Term
BHZ	Biohazard
BIO	Biological
INF	Infectious Material
INJ	Injury Hazard
POI	Poison

7. Use of Object Identifiers (OIDs)

See the "PHIN Messaging Standard Laboratory Result - OUL^R22" Implementation Guide for details regarding the use of OID's.

8. Miscellaneous

The section contains additional material for use by implementers.

Separators

The table below shows the separators that will be supported by BT Laboratory Results Messaging.

SeparatorType	Value	Field Path	Replacement
Segment	\x0D		
Field Repeat	~	MSH.EncodingCharacters	\R\
Null Value	""		
Field Level 1	|	MSH.FieldSeparator	\F\
Field Level 2	^	MSH.EncodingCharacters	\S\
Field Level 3	&	MSH.EncodingCharacters	\T\
User Defined String 1	\	MSH.EncodingCharacters	\E\

References

Health Level Seven, Version 2.5 2003 Chapter 13
Health Level Seven, Version 2.5 2003 Chapter 7