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DE HL7 Technical System Design Documentation

Version 1.02

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Revision History

Date	Version	Description	Author
09.11.13	1.0	Initial Draft	James Garity
09.24.13	1.01	Replace all DOH reference to DPH. Update with LOINC mappings, added section for hearing mapping	James Garity
10.07.15	1.02	Updates to samples and tables for publication (Post Development)	Doni Antonelli

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1 Introduction

The DE DHIN Project represents a new process of sending Newborn Screening Lab results. This document defines the HL7 message for transmitting Newborn Dried Blood Spot (NDBS) laboratory results from the State of Delaware's Department of Health Newborn Screening Program. We have followed the recommended approach using an HL7 version 2.5.1 ORU^R01 message to send electronic NDBS laboratory results from the laboratory that conducted the testing to the results receiver, such as primary care physicians, birth hospitals, public health agencies, health information exchange (HIE) or vital records department.

Intended audience for this document includes, but are not limited to, laboratories testing NDBS specimens; hospitals and healthcare providers for newborns, including public health agencies, HIE's and vital records departments; Electronic Health Record (EHR) technology vendors and IT Systems developers.

Key assumptions:

- Electronic health record systems and laboratory systems are in place that allow for the electronic messaging of laboratory results.
- The data included for data exchange is available and contains sufficient information for the receiver to construct the laboratory results message.
- Exchanging partners agree to the standards, methodologies, and consent, privacy and security requirements for data exchange.
- Each ORU^R01 message contains laboratory results information for a single NDBS card (the specimen).

All updates to this document for redesign, process improvements or other business needs will be handled outside this document in a change control form or as agreed by Neometrics and the Newborn Screening Program at the Delaware State Department of Health.

Note: Acknowledgements are not a requirement for confirmation of receipt of the electronic results message.

The table below identifies the documentation used for developing this technical documentation.

Table 1-1: External Project Document Contributors

Document (and version / date)	Created or Available	Received or Reviewed	Author or Resource	Notes
HRSA/NLM Guidance for Sending Newborn Screening Results Electronically with HL7 Messaging	☒Yes ☐ No	☒Yes ☐ No	US National Library of Medicine – Lister Hill Center	Version 5.2 dated 10/28/2011

Newborn Dried Blood Spot (NDBS) Screening Implementation Guide for Laboratory Results	☒Yes ☐ No	☒Yes ☐ No	Public Health Information Network (PHIN)	Version 1.0.1 dated November 1, 2011
PHIN Message Structure Specification for National Condition Reporting	☒Yes ☐ No	☒Yes ☐ No	Public Health Information Network (PHIN) & Centers for Disease Control and Prevention (CDC)	Final version 1.0 dated August 18, 2007
Logical Observation Identifiers Names and Codes (LOINC) User's Guide	☒Yes ☐ No	☒Yes ☐ No	LOINC	Dated December 2010

2 HL7 Message Characteristics

2.1 Message Types

HL7 Message Type is a unique identifier. Every message must contain a Message Type code, an Event Type code representing the trigger event, and a Message Structure code. When specimen results are ready at Delaware, a nightly process will run where the system interface engine pushes the specimen results to the pre-determined location.

Table 2-1: Message types supported by DE DPH interface

Message Type	Meaning	Type
ORU^R01^ORU_R01	Observational Report (i.e. Unsolicited transmission of an observation message)	Out from DE DPH; Incoming to pre-defined locations

2.2 Message Segment Delimiters

HL7 version 2.5.1 messages consist of "records" called segments; these are represented as ASCII text with data fields and sub-fields separated by delimiters.

- All the required segments must be present. Segments always begin with a 3-character designation (e.g. OBR, OBX, MSH, PID, NK1, ORC and NTE) that indicate segment type.
- Segments always end with a carriage return character (hex 0D), sometimes indicated as <CR>.
- Place the Segment ID first in each segment.
- Precede each data field in each segment with the appropriate field separator (|).
- Encode the data fields in the order and data type specified in the segment definition table (table XXXX).
- Hats (^) separate components within a field.
- Ampersands (&) separate subcomponents within a component.
- Tildes (~) separate repeating values within a field.

2.3 Summary of Message Segments/Field Positions

The result data is sent through Message (Named) Segments and is based on NLM standards. A segment is a logical grouping of data fields. Each segment is named and is represented by a unique 3-letter code.

Segments within a defined message may be required or optional, may occur only once or may be allowed to repeat. Segments use the following convention to represent optionality and to specify whether the segments repeat.

Character	Description
XXX	Required

[XXX]	Optional
{XXX}	Repeating
[{XXX}]	Optional and repeating

A **message** is an entire unit of data transferred between systems in a single transmission.

A **segment** is a logical grouping of data fields. Each segment is named and is represented by a unique 3- letter code.

A **field** is a string of characters that represents the value for the field. Each field is identified by the segment and its position within the segment, such as MSH-2, which represents the second field in the Message Header segment. Data type and maximum lengths are specified for each field.

A **component** is one of a logical grouping of items that comprise the contents of a field. For a field that has several components, not all components are required to be valued.

Delimiter characters are used to separate segments, fields, components and subcomponents in an HL7 message. Delimiter values are specified in MSH-2. The delimiter values used in the MSH segment are used throughout the message.

Character	Description
<CR>	Segment terminator
|	Field separator
^	Component separator
&	Sub-component separator
~	Repetition separator

Important note: The terms above are definitions pulled directly from the Public Health Informatics Institutes NDBS Implementation Guide for lab results version 1.0.1 dated November 1, 2011.

2.4 Usage Definitions

Usage refers to the circumstances under which an element (segment, field, component, or subcomponent) appears in a message. Some elements must always be present, others never, and others may only be present in certain circumstances. A set of codes has been identified to clearly define the rules governing the presence of particular elements.

Value	Description	Comment
R	Required	A conforming sending application shall populate all “R” elements with a non-empty value. Conforming receiving application shall process or ignore the information conveyed by required

		elements.
RE	Required but may be empty	The element may be missing from the message, but must be sent by the sending application if there is relevant data. A conforming sending application must be capable of providing all "RE" elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values, then that element will be omitted. Receiving applications will be expected to process or ignore data contained in the element, but must be able to successfully process the message if the element is omitted (no error message should be generated because the element is missing). **Summary:** Both the sending and receiving system must support a data element designated as RE. If the data for the field exists in the sending system, then that data must be sent. The receiving system must be capable of receiving the data in that field. However, it must not raise an error if data for that field is missing.
O	Optional	This element may be present if specified in local profile. Local partners may develop profiles that support use of this element. In the absence of a profile, conformant sending applications will not send the element. Conformant receiving applications will ignore the element if it is sent, unless local profile specifies otherwise. Conformant receiving applications may not raise an error if it receives an unexpected optional element. **Summary**: Both the sending and receiving system must support a data element designated as Optional. The sending system must be capable of sending data for that field, and the receiving system must be capable of receiving data for that field. Whether data for that field is captured and sent is negotiated between the sender and receiver. Usage of optional fields will vary across jurisdictions based on jurisdictional requirements.
C	Conditional	This usage has an associated condition predicate. The associated condition predicate is specified in the HL7 message definition. **If the predicate is satisfied:** A conformant sending application must always send the element. A conformant receiving application must process or ignore data in the element. It may raise an error if the element is not present. **If the predicate is NOT satisfied:** A conformant sending application must NOT send the element. A conformant receiving application must NOT raise an error if the condition predicate is false and the element is not present, though it may raise an error if the element IS present.
CE	Conditional but may be	This usage has an associated condition predicate. The associated condition predicate is specified in the HL7 message definition.

	empty	**If the predicate is satisfied:** If the conforming sending application knows the required values for the element, then the application must send the element. If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application must be capable of knowing the element (when the predicate is true) for all 'CE' elements. If the element is present, the conformant receiving application shall process or ignore the values of that element. If the element is not present, the conformant receiving application shall not raise an error due to the presence or absence of the element. **If the predicate is not satisfied:** The conformant sending application shall not populate the element. The conformant receiving application may raise an application error if the element is present.
X	Not supported	The element is not supported. Sending applications should not send this element. Receiving applications should ignore this element if present, or may raise an error.

2.5 HL7 Data Types

To achieve successful data exchange, the meaning of the data exchanged must be understood and defined in the same way by both the sender and the receiver. Data types provide that definition and are the basic building blocks used to construct the HL7 message.

Each field, component, or subcomponent has a data type. The data type constrains and defines the field, component, or subcomponent at the most granular level, including specifications for formatting, adding rules and usage details for each data type. Additionally, data types may contain subcomponents that are specified by data types. Below is a table listing of data types. For a complete listing of the available data types, please refer to the HL7 Specification version 2.5.1.

Data Type	Description
CE	Coded element
CX	Extended composite ID with check digit
DTM	Date/time Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]] [+/- ZZZZ]
EI	Entity identifier
EIP	Entity identifier pair
ELD	Error location and description

ERL	Error location
FN	Family name
FT	Formatted data text
HD	Hierarchic designator
ID	Coded value for HL7 defined tables
IS	Coded value for user defined tables
MSG	Message type
NM	Numeric
PT	Processing type
SAD	Street address
SI	Sequence ID
ST	String data
TM	Time
TN	Telephone number
TS	Time stamp
TX	Text data
VID	Version identifier
XAD	Extended address
XCN	Extended composite ID number and name of persons
XON	Extended composite name and ID number for organizations
XPN	Extended person name
XTN	Extended telecommunications number

Important note: If information is not received / entered by the data entry team for a particular field, then data will not be sent in the HL7 message for that field. As long as the field is mapped to the HL7 field and part of the defined scope, data will be sent when the data is present.

2.6 Message Overview

This section describes how to manage the NDBS card variables by mapping the data elements on the card to a corresponding field in the HL7 message. Some elements match existing fields while other elements are transmitted through observation result OBX segments.

The data elements are described as 1- Administrative Segments of the HL7 message and 2- Clinical information (card variables) of the HRSA/NLM Guidance documents.

The table below provides the card variables mapped to matching or pre-defined HL7 fields.

Table 2-2: ORU Field Summary

Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
Administrative Segments								
1	Field Separator(required)	Yes						
2	Encoding Characters(required)	Yes						
3	Sending Application(required)	Yes						
4	Sending Facility (required)	Yes						
5	Receiving Application (required by may be empty)	Yes						
6	Receiving Facility (required)	Yes						
7	Date/Time of Message(required)	Yes						
9.1	Message Code(required)	Yes						
9.2	Trigger Event(required)	Yes						
10	Message Control ID(required)	Yes						
11	Processing ID (required)	Yes						
12	Version ID(required)	Yes						
1	Set ID(required)		Yes					
3.1	Medical Record Number (required by may be empty)		Yes					
5.1	Newborn Last Name (required)		Yes					
5.2	Newborn First Name		Yes					

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Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
7.1	Birth Date & Time (required) Format: YYYMMDD or YYYYMMDDHHMM		Yes					
8.1-8.3	Administrative Sex (required) Note: HL7 2.5.1 table 0001		Yes					
10.1-10.3	Ethnicity/Race Note: HL7 2.5.1 table 0005		Yes					
22.1-22.3	Ethnic Group (required entity) Note: HL7 2.5.1 table 0189		Yes					
24.1-24.3	Multiple Birth Indicator (required entity) Format: Y/N		Yes					
25	Multiple Birth Order (required by may be empty)		Yes					
1	Set ID(required)			Yes				
2	Next of Kin Name (required)			Yes				
3.1-3.3	Relationship (required)			Yes				
1	Order Control (required)				Yes			
2	Placer Order Number				Yes			
3	Filler Order Number (required)				Yes			
21	Ordering Facility Name (required)				Yes			
22.1	Ordering Facility Address (required)				Yes			
22.2	Ordering Facility Address 2 (required)				Yes			
22.3	Ordering Facility City (required)				Yes			
22.4	Ordering Facility State (required)				Yes			
22.5	Ordering Facility Zip (required)				Yes			
22.6	Ordering Facility Country (required)				Yes			

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Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
23	Ordering Facility Phone Number (required)				Yes			
1	Set ID (required)							Yes
2	Source of Comments (required)							Yes
3	Comment (required)							Yes
4	Comment Type (required)							Yes
Report Section								
1	Set ID(required)					Yes		
2	Placer Order Number (required)					Yes		
3	Filler Order Number (required)					Yes		
4.1	Universal ID (LOINC Code)					Yes		
4.2	Procedure Name					Yes		
4.3	UID Code Source					Yes		
7	Observation Date & Time (required) Format: YYYYMMDDHHMM					Yes		
14	Specimen Received Date/Time (required) Format: YYYYMMDDHHMM					Yes		
22	Result/Report Status Change Date/Time (required) Format: YYYYMMDDHHMM					Yes		
25	Result Status(required)					Yes		
Report Summary								
1	Reason for lab test(required)					**Within**	Yes	

Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
2	Specimen quality(required)					OBR 2	Yes	
3	Overall Interpretation						Yes	
4…	Positive markers(required)						Yes	
5…	Equivocal Markers(required)						Yes	
6…	Conditions tested for						Yes	
Additional Demographic/Clinical Information								
1	Unique Bar Code of Current Sample LOINC 57723-9						Yes	
2	Birth weight LOINC 8339-4						Yes	
3	Birth plurality of pregnancy LOINC 57722-1						Yes	
4	Post-discharge LOINC 62323-1						Yes	
5	Post-discharge provider name LOINC 62324-9						Yes	
6	Birth time LOINC 57715-5						Yes	
7	State printed on filter paper card LOINC 57716-3						Yes	
8	Unique bar code of initial sample LOINC 57711-4						Yes	
9	Infant NICU Factors LOINC 57713-0 (required and may repeat if there are multiple NICU factors for the baby)						Yes	
10	Date of Last Blood Transfusion 62317-3						Yes	
11	Infant NICU Factors that affect					Within	Yes	

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Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
	newborn screening interpretation 67706-2					OBR 3		
12	Feeding types LOINC 67704-7						Yes	
13	Maternal Factors LOINC 67706-2						Yes	
Full Lab Results								
1	Set ID(required)					Within OBR 4 and Greater	Yes	
2	Value Type(required)						Yes	
3.1	Observational Identifier (LOINC Code) (required)						Yes	
3.2	Text(required)						Yes	
3.3	Observational Identifier system (LOINC) (required)						Yes	
4	Sub-ID for repeating OBX statements							
5.1	Observational Value (LOINC or SNOMED code) (required)						Yes	
5.2	Text/Value						Yes	

Sequence Position	Field Description	Segments						
		MSH	PID	NK1	ORC	OBR	OBX	NTE
		Message Header	Patient Identification	Next of Kin	Common Order	Order Detail	Observation/ Result	Notes and Comments (for Patient Identification)
5.3	Observational Value Identifier system (SNOMED or LOINC)						Yes	
6	Units						Yes	
7	References Range						Yes	
8	Abnormal Flags						Yes	
11	Observation Result Status(required)						Yes	
14	Date/Time of the Observation						Yes	

2.6.1 Detail of Message Segments

Each kind of segment is distinguished by a leading three-character code. The three-character codes or message segments needed for the results messages are detailed in the chart below.

Table 2-3: Unsolicited Result Message R01

Segment	Segment Name	Segment Description
MSH	Message Header (Administrative Segment)	Usage required. Defines the message source, purpose and destination.
PID	Patient Identification (Administrative Segment)	Usage required. Refers to the baby's data typically from the mother's record.
NK1	Next of Kin/Associated Parties (Administrative Segment)	Usage required. Used to carry data about the mother and additional NK1 segments can be added to carry data about the father or another caregiver.

ORC	Common Order	Optional, CE – conditional but it may be empty. Used to send information that is universal to all orders, such as the order number, the person entering the order and the ordering provider.
OBR	Observations Request (Report Summary Segment)	Usage required. Marks the beginning of the result data and can contain the optional sub-panel OBR headers.
OBX	Observation/Result (Report Summary Segment)	Usage required. Follows the OBR and contains results data.

Table 2-4:

2.6.2 Administrative Segments

The sections below contain the Administrative segments that will be used to send data from Delaware.

2.6.2.1 MSH – Message Header Mapping

Data from the message header is used to identify the sender of the message, the message type being processed, as well as to log a Unique Messaging ID.

Table 2-4 - Message Heading

Seq	Len	DT	Usage	Cardinality	TBL#	ITEM #	Element Name MSH	Description	MSH
1	1	ST	R	[1..1]		1	Field Separator	Character used as the field separator for the rest of the message (ASCII 124). Use literal value: '|'	|
2	4	ST	R	[1..1]		2	Encoding Characters	Component separator, repetition separator, escape character, and subcomponent separator (ASCII 94, 126, 92, 38, respectively). Use literal value: '^~\&'	^~\&
3	227	HD	R	[1..1]	361	3	Sending Application	Components: <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>	
4	227	HD	R	[1..1]	362	4	Sending Facility	Use the CLIA Number - |DPHLAB^08D0662985^CLIA|	DPHLAB^08D0662985^CLIA
5	227	HD	RE	[0..1]	361	5	Receiving Application	Components: <namespace ID (IS)> ^	

Seq	Len	DT	Usage	Cardinality	TBL#	ITEM #	Element Name MSH	Description	MSH
								<universal ID (ST)> ^ <universal ID type (ID)>	
6	227	HD	R	[1..1]	362	6	Receiving Facility	DHIN	
7	26	TS	R	[1..1]		7	Date/Time Of Message	Date/time the sending application created the message. The minimum granularity is to the second. If the time zone is not included, the time zone defaults to the local time zone of the sender.	
8	40	ST	X	[0..0]		8	Security	Not supported	
9	15	MSG	R	[1..1]	76	9	Message Type	The message type, trigger event, and structure ID for the message. **Use literal value: 'ORU^R01^ORU_R01'**	ORU^R01^ORU_R01
10	20	ST	R	[1..1]		10	Message Control ID	Unique ID for the message from the sending application. Use a counter.	######
11	3	PT	R	[1..1]	103	11	Processing ID	Indicator for the intent for processing the message. Use literal value: 'P' to indicate Production.	P
12	60	VID	R	[1..1]	104	12	Version ID	Specifies the HL7 version Use literal value: '2.5.1'	2.5.1
13	15	NM	X	[0..0]		13	Sequence Number	Not supported	
14	180	ST	X	[0..0]		14	Continuation Pointer	Not supported	
15	2	ID	X	[0..0]	155	15	Accept Acknowledgment Type	Not supported	
16	2	ID	X	[0..0]	155	16	Application Acknowledgment Type	Not supported	
17	3	ID	X	[0..0]	399	17	Country Code	Not supported	
18	16	ID	X	[0..0]	211	692	Character Set	Not supported	
19	250	CE	X	[0..0]		693	Principal Language Of Message	Not supported	
20	20	ID	X	[0..0]	356	1317	Alternate Character Set Handling Scheme	Not supported	
21	427	EI	X	[0..0]		1598	Message Profile Identifier	Not supported	

Sending Application – Components: <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>

Sending Facility – Use the CLIA Number - |DPHLAB^08D0662985^CLIA|

Receiving Application - Components: <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>

Receiving Facility – DHIN

Date/Time of Message – This field is used to record the date and time a message is transmitted. (Format: YYYYMMDDHHmm)

Message Code – This field is used to determine the type of message that is being sent from Delaware. The default value will always be "ORU".

Trigger Event – This field is used to determine the type of message that is being sent from Delaware. The default value will always be "R01".

Message Structure: This field indicates the message structure being used. The default value for Delaware will always be "ORU_R01".

Message Control ID – This field contains an identifier that uniquely identifies the message for the sending facility. Delaware system will send this identifier back to the HIS in the message acknowledgement segment (MSA). This value needs to be unique for every message sent by this Sending Application and Sending Facility.

Processing ID – This field specifies the mode that this data is being applied. Valid values are:

Table 2-5: Processing Mode

Value	Description
P	Production
D	Debugging or Development
T	Training or Testing

Version ID – This field is used to determine the HL7 version used. The version sent from a HIS can differ depending on submitter. The value in for the version sent from DE DPH will always be v2.5.1. The default value will always be "2.5.1".

2.6.2.2 PID – Patient Identification Mapping

The PID segment holds much of the patient demographic information received from the filter paper and stored in the Delaware systems.

Table 2-6: Patient Identification Mapping

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	PID
1	4	SI	R	[1..1]		104	Set ID -PID	Use literal value: '1'	1
2	20	CX	X	[0..0]		105	Patient ID	Not supported. Use PID-3 for baby's medical record number.	
3	250	CX	R	[1..*]		106	Patient Identifier List	Unique identifier for baby. Baby's medical record number must be sent and should be sent in the first instance of PID-3 if this field repeats. Other unique identifiers for baby may be sent, if available.	
3.1	15	ST	RE	[0..1]			ID Number	Enter baby's medical record number. Enter other unique identifiers for the baby, if available.	999888777666
3.5	5	ID	RE	[0..1]	203		Identifier Type Code	Use Literal value: 'MR' to indicate Medical Record Number. For other unique identifiers, enter the corresponding identifier type code.	MR
4	20	CX	X	[0..0]			Alternate Patient ID	Not supported	
5	250	XPN	R	[1..*]		108	Patient Name	Baby's name(s), including aliases. This field is repeating. The primary or legal name is reported first with Name Type Code (PID-5.7) as literal value "L" for Legal name. Aliases or other names will follow with the appropriate Name type Code. For alias, use Name Type Code (PID-5.7) as literal value "A" for Alias. Note that in the case with newborn screening, 'Baby boy' may be the legal name at birth and then may become an alias by the time the results are reported.	Last^first

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	PID
5.7	1	ID	RE	[0..1]	200		Name Type Code	Not Collected	
6	250	XPN	RE	[0..1]		109	Mother's Maiden Name	Not Collected	
6.2		ST	X	[0..0]			Given Name	Not supported	
6.3		ST	X	[0..0]			Second and Further Given Names or Initials Thereof	Not supported	
6.4		ST	X	[0..0]			Suffix (e.g., JR or III)	Not supported	
6.5		ST	X	[0..0]			Prefix (e.g., DR)	Not supported	
6.7		ID	X	[0..0]	200		Name Type Code	Not supported	
6.1		TS	X	[0..0]			Professional Suffix	Not supported	
7	26	TS	R	[1..1]		110	Date/ Time of Birth	Baby's date of birth. YYYYMMDD or YYYYMMDDHHMM Note: Even if birth time is included in PID-7, birth time must also be sent as an OBX segment to be sure it is included in the report display.	201110201030
8	1	IS	R	[1..1]	1	111	Sex	Enter baby's sex.	M
9	250	XPN	X	[0..0]		112	Patient Alias	Not supported. Use PID-5 (repeating field) for Patient Alias(es).	
10	250	CE	RE	[0..*]	5	113	Race	Baby's race	
10	20	ST	RE	[0..*]			Identifier	Enter code that represents baby's race	2106-3
10	99 9	ST	CE	[0..*]			Text	Enter text description that represents baby's race If PID-10.1 is populated, this component should also be populated.	White
10	20	ST	C	[0..*]			Name of Coding System	Use literal value: 'HL70005' If PID-10.1 is populated, this component must be populated.	HL70005
11	250	XAD	RE	[0..1]		114	Patient Address	Address where the baby resides. If baby resides with mother, then enter mother's address. If baby does not reside with mother,	

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	PID
								then enter address where baby specifically resides.	
12	4	IS	RE	[0..1]	289	115	County Code	County where baby resides. If baby resides with mother, then enter mother's county of residence. If baby does not reside with mother, then enter county where baby specifically resides.	
13	250	XTN	RE	[0..1]		116	Phone Number - Home	Baby's phone number. If baby resides with mother, then enter mother's phone number. If baby does not reside with mother, then enter phone number for where baby specifically resides.	
14	250	XTN	X	[0..0]		117	Phone Number - Business	Not supported	
15	250	CE	X	[0..0]	296	118	Primary Language	Not supported	
16	250	CE	X	[0..0]	2	119	Marital Status	Not supported	
17	250	CE	X	[0..0]	6	120	Religion	Not supported	
18	250	CX	X	[0..0]		121	Patient Account Number	Not supported	
19	16	ST	X	[0..0]		122	SSN Number Patient	Not supported	
20	25	DLN	X	[0..0]		123	Driver's License Number - Patient	Not supported	
21	250	CX	X	[0..0]		124	Mother's Identifier	Not supported	
22	250	CE	RE	[0..*]	189	125	Ethnic Group	Baby's ethnicity	
22	20	ST	RE	[0..*]			Identifier	Enter code that represents baby's ethnicity.	U
22	99 9	ST	CE	[0..*]			Text	Enter text description that represents baby's ethnicity. If PID-22.1 is populated, this component should also be populated.	Unknown

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	PID
22	20	ID	C	[0..*]			Name of Coding System	Literal value: 'HL70189' If PID-10.1 is populated, this component must be populated.	HL70189
23	250	ST	X	[0..0]		126	Birth Place	Not supported. Enter baby's birth hospital under OBX segment.	
24	1	ID	RE	[0..1]	136	127	Multiple Birth Inidcator	Enter (Y/N) to indicate whether baby is part of a multiple birth.	Y
25	2	NM	RE	[0..1]		128	Birth Order	If Multiple Birth Indicator (PID-24) is "Y", then enter the number indicating the baby's birth order, with literal value "1" for the first child born, "2" for the second child, and so on. If Multiple Birth Indicator (PID-24) is "N", then leave empty or enter "1". Note: It is strongly encouraged that this field be explicitly used to indicate birth order rather than the convention of using the baby's name (e.g. Baby Boy 1, Baby Boy 2, etc).	2
26	250	CE	X	[0..0]	171	129	Citizenship	Not supported	
27	250	CE	X	[0..0]	172	130	Veterans Military Status	Not supported	
28	250	CE	X	[0..0]	212	739	Nationality	Not supported	
29	26	TS	CE	[0..1]		740	Patient Death Date and Time	Not Collected	
30	1	ID	RE	[0..1]	136	741	Patient Death Indicator	Not Collected	
31	1	ID	X	[0..0]	136	1535	Identity Unknown Indicator	Not supported	
32	20	IS	X	[0..0]	445	1536	Identity Reliability Code	Not supported	
33	26	TS	X	[0..0]		1537	Last Update Date/Time	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	PID
34	241	HD	X	[0..0]		1538	Last Update Facility	Not supported	
35	250	CE	X	[0..0]	446	1539	Species Code	Not supported	
36	250	CE	X	[0..0]	447	1540	Breed Code	Not supported	
37	80	ST	X	[0..0]		1541	Strain	Not supported	
38	250	CE	X	[0..0]	429	1542	Production Class Code	Not supported	
39	250	CE	X	[0..0]	171	1840	Tribal Citizenship	Not supported	

Set ID – This field contains the number that identifies a single instance of a potentially repeating segment. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

Patient ID Number (Medical Record Number) – This field contains the primary identifier used by the sending facility to identify a patient uniquely for a patient's lifetime.

[Infant] Family Name (Newborn Last Name) – This field contains the legal last name of the newborn. For specimens that do not contain Newborn's name, the default name is "Newborn".

[Infant] Given Name (Newborn First Name) – This field contains the legal name of the newborn.

[Infant] Birth Date/Time – This field contains the birth date of the newborn. Format of the data sent via HL7 is YYYYMMDDHHMM or YYYYMMDD

Administrative Sex – This field contains the newborn's gender information. Valid values for this field are:

Table 2-7: Sex Options

Value	Description
F	Female
M	Male
U	Unknown

Ethnicity/Race – This field contains the ethnicity information for the newborn – HL7 code ^ text description ^ HL7 reference table (e.g.; 1002-5^American Indian or Alaska Native^HL70005). (Note – only HL7 values are available for race - Asian, African American, white, American Indian and Other) Valid values for this field:

HL7 Value	Description	Filter Paper Values
*2028-9	Asian	(0) Asian/Pacific Islander
2106-3	White	(1) White
2054-5	Black or African American	(2) Black/African Amer.
1002-5	American Indian or Alaska Native	(3) Am-Ind/AK-Nat
2028-9	Asian	(4) Asian-Indian
2028-9	Asian	(5) Chinese
2028-9	Asian	(6) Filipino
2028-9	Asian	(7) Japanese
2028-9	Asian	(8) Korean
2131-1	Other	(9) Unknown
2028-9	Asian	(A) Vietnamese
2131-1	Other	(B) Native-Hawaiian
2131-1	Other	(C)Samoan
2131-1	Other	(D)Hispanic
2131-1	Other	(E) Guamainian or Chamorro

Ethnic Group – This field contains the flag if the infant is of Hispanic descent – HL7 code ^text description^HL7 reference table (e.g.; H^Hispanic or Latino^HL70189).

Table 2-9: Ethnic Group Options

Value	Description
H	Hispanic or Latino
N	Unknown
U	Unknown

Multiple Birth Indicators – This field contains the flag if the infant is born of a multiple birth.

Table 2-10: Multiple Birth Options

Value	Description
Y	Yes; of multiple birth
N	No, of single birth

Birth Order – This field contains an integer representing the order of birth for the infant associated with that specimen (related to the other babies within that multiple birth instance). For example, if the baby is born third in a set of sextuplets – the value 3 will be passed.

2.6.2.3 NK1 –Next of Kin Mapping

The NK1 segment holds the next of kin (NOK) contact information for the patient; in all cases, this will be the Mother's information.

Table 2-11: Next of Kin Mapping

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	NK1
1	4	SI	R	[1..1]		190	Set ID -NK1	Literal value: '1'	1
2	250	XPN	R	[1..*]		191	Name	Baby's mother/father/caregiver's name. If mother's info is not provided, then provide available caregiver, guardian, adoption agency, or social services information.	LAST^FIRST
3	250	CE	R	[1..*]	63	192	Relationship	Relationship of the mother/father/ caregiver to the baby	
3.1	20	ST	R	[1..1]			Identifier	Enter the code of the person's relationship to the baby. If mother, then enter "MTH".	MTH
3.2	999	ST	R	[1..1]			Text	Enter the text description of the person's relationship to the baby. If mother, enter "Mother".	Mother
3.3	20	ST	R	[1..1]			Name of Coding System	Literal value 'HL70063'	HL70063
4	250	XAD	RE	[0..*]		193	Address	Address of the baby's mother / father/ caregiver.	
4.9	20	IS	RE	[0..1]	289		County/Parish code	Enter county code where the mother/father/ caregiver resides. Mother's county of residence is required and must be provided. Father/caregiver's county of residence is optional.	
5	250	XTN	RE	[0..*]		194	Phone Number	Mother / father / caregiver's phone number. Mother's phone number is required and must be provided. Father/caregiver's phone number is optional.	

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	NK1
6	250	XTN	X	[0..0]		195	Business Phone Number	Not supported	
7	250	CE	X	[0..0]	131	196	Contact Role	Not supported	
8	8	DT	X	[0..0]		197	Start Date	Not supported	
9	8	DT	X	[0..0]		198	End Date	Not supported	
10	60	ST	X	[0..0]		199	Next of Kin / Associated Parties Job Title	Not supported	
11	20	JCC	X	[0..0]	0327 /0328	200	Next of Kin / Associated Parties Job Code/Class	Not supported	
12	250	CX	X	[0..0]		201	Next of Kin / Associated Parties Employee Number	Not supported	
13	250	XON	X	[0..0]		202	Organization Name -NK1	Not supported	
14	250	CE	X	[0..0]	2	119	Marital Status	Not supported	
15	1	IS	X	[0..0]	1	111	Administrative Sex	Not supported	
16	26	TS	RE	[0..*]		110	Date/Time of Birth	Not supported	
17	2	IS	X	[0..0]	223	755	Living Dependency	Not supported	
18	2	IS	X	[0..0]	9	145	Ambulatory Status	Not supported	
19	250	CE	X	[0..0]	171	129	Citizenship	Not supported	
20	250	CE	X	[0..0]	296	118	Primary Language	Not supported	
21	2	IS	X	[0..0]	220	742	Living Arrangement	Not supported	
22	250	CE	X	[0..0]	215	743	Publicity Code	Not supported	
23	1	ID	X	[0..0]	136	744	Protection Indicator	Not supported	
24	2	IS	X	[0..0]	231	745	Student Indicator	Not supported	
25	250	CE	X	[0..0]	6	120	Religion	Not supported	
26	250	XPN	X	[0..0]		109	Mother's Maiden Name	Not supported. Use PID-6 for baby's mother's maiden name.	

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	NK1
27	250	CE	X	[0..0]	212	739	Nationality	Not supported	
28	250	CE	X	[0..0]	189	125	Ethnic Group	Not supported	
29	250	CE	X	[0..0]	222	747	Contact Reason	Not supported	
30	250	XPN	X	[0..0]		748	Contact Person's Name	Not supported	
31	250	XTN	X	[0..0]		749	Contact Person's Telephone Number	Not supported	
32	250	XAD	X	[0..0]		750	Contact Person's Address	Not supported	
33	250	CX	O	[0..*]		751	Next of Kin/Associated Party's Identifiers	Baby's mother's: 1) Medicaid Number (if eligible); and 2) Social Security Number	
33.1	15	ST	O	[0..1]			ID Number	1) For Medicaid Number: Enter mother's Medicaid Number. 2) For SSN: Enter mother's social security number	
33.4	227	HD	O	[0..1]			Assigning Authority	Assigning Authority for: 1) Medicaid Number 2) For SSN	
33.4.1	20	IS	O	[0..1]			Namespace ID	Enter name of assigning authority: 1) For Medicaid number: use the name of the State (2-letter FIPS code). 2) For SSN: use literal value 'SSA'	
33.4.2	199	ST	O	[0..1]			Universal ID	1) For Medicaid Number, if available, use OID for the State. 2) For 'SSA', use literal value: '2.16.840.1.113883.4.1'	
33.4.3	6	ID	O	[0..1]			Universal ID Type	Use literal value: 'ISO'	
33.5	5	ID	O	[0..1]	203		Identifier Type Code	1) For Medicaid Number: use literal value: 'MA' 2) For SSN: use literal value: 'SS'	
34	2	IS	X	[0..0]	311	752	Job Status	Not supported	
35	250	CE	X	[0..0]	5	113	Race	Not supported	
36	2	IS	X	[0..0]	295	753	Handicap	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL#	Item #	Element Name PID	Description	NK1
37	16	ST	X	[0..0]		754	Contact Person Social Security Number	Not supported	
38	250	ST	X	[0..0]		1905	Next of Kin Birth Place	Not supported	
39	2	IS	X	[0..0]	99	146	VIP Indicator	Not supported	

Set ID – This field contains the number that identifies a single instance of a potentially repeating segment. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

Name – This field contains the name of the next of kin or associated party. Multiple names for the same person are allowed, but the legal name must be sent in the first sequence.

Relationship - This field contains the actual personal relationship that the next of kin/associated party has to the patient – HL7 code^text description^HL7 reference table (e.g.; MTH^Mother^HL70064). The default value is "Mother".

Table 2-12: Next of Kin Relationship Options

Value	Description
MTH	Mother

2.6.2.4 ORC – Common Order Mapping

The ORC Segment is used to transmit fields that are common to all orders, such as the order number, the person entering the order and the ordering provider.

Table 2-13: Common Order Mapping

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name - PID	Description	ORC
1	2	ID	R	[1..1]	119	215	Order Control	Describes the type of action of trigger event related to the results message. Enter literal value: "RE" to indicate 'Observations / Performed Service to follow' Kitno(LABID)	12345

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name - PID	Description	ORC
2	22	EI	R	[1..1]		216	Placer Order Number	Order number for the message assigned by the order placer (hospital). Same value as OBR-2. (LABNO)	20130000000
3	22	EI	R	[1..1]		217	Filler Order Number	Order number assigned by the laboratory performing the test. Same value as OBR-3.	TBD
4	22	EI	X	[0..0]		218	Placer Group Number	Not supported	
5	2	ID	X	[0..0]	38	219	Order Status	Not supported	
6	1	ID	X	[0..0]	121	220	Response Flag	Not supported	
7	200	TQ	X	[0..0]		221	Quantity/Timing	Not supported	
8	200	EIP	X	[0..0]		222	Parent	Not supported	
9	26	TS	X	[0..0]		223	Date/Time of Transaction	Not supported	
10	250	XCN	X	[0..0]		224	Entered By	Not supported	
11	250	XCN	X	[0..0]		225	Verified By	Not supported	
12	250	XCN	R	[1..1]		226	Ordering Provider	Not supported	
12.1	15	ST	R	[1..1]			ID Number	Use NPI. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.	
12.9	227	HD	CE	[0..1]	363		Assigning Authority	Enter the system or entity that assigned the ordering provider identifier in ORC-12.1	
12.9.1	20	IS	CE	[0..1]			Namespace ID	If NPI, use literal value 'NPI'	
12.9.2	199	ST	CE	[0..1]			Universal ID	If NPI, use literal value: '2.16.840.1.113883.4.6'	
12.9.3	6	ID	CE	[0..1]			Universal ID Type	Use literal value 'ISO'	
13	80	PL	X	[0..0]		227	Enterer's Location	Not supported	
14	250	XTN	X	[0..0]		228	Call Back Phone Number	Not supported	
15	26	TS	X	[0..0]		229	Order Effective Date/Time	Not supported	
16	250	CE	X	[0..0]		230	Order Control Code Reason	Not supported	
17	250	CE	X	[0..0]		231	Entering Organization	Not supported	
18	250	CE	X	[0..0]		232	Entering Device	Not supported	
19	250	XCN	X	[0..0]		233	Action By	Not supported	
20	250	CE	X	[0..0]	339	1310	Advanced	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name - PID	Description	ORC
							Beneficiary Notice Code		
21	250	XON	R	[1..1]		1311	Ordering Facility Name	Name of the facility or hospital placing the order message.	PEACEHEALTH MEDICAL GROUP
21.6	227	HD	R	[1..1]			Assigning Authority	Enter the system or entity that assigned the facility or hospital identifier in ORC-21.10	
21.6.1	20	IS	CE	[0..1]			Namespace ID	If NPI, use literal value 'NPI'	NPI
21.6.2	199	ST	CE	[0..1]			Universal ID	If NPI, use literal value: '2.16.840.1.113883.4.6'	12345678
21.6.3	6	ID	CE	[0..1]			Universal ID Type	Use literal value 'ISO'	
21.6.2	199	ST	CE	[0..1]			Universal ID	If NPI, use literal value: '2.16.840.1.113883.4.6'	12345678
21.6.3	6	ID	CE	[0..1]			Universal ID Type	Use literal value 'ISO'	
21.7	5	IS	R	[1..1]			Identifier Type Code	Enter the type of identifier used by the facility or hospital ordering the message. e.g., literal value 'NPI'	PRN
21.10	20	ST	R	[1..1]			Organization Identifier	Unique identifier number for facility or hospital submitting the order message. Use NPI. If NPI is not available, use a different unique identifier, such as OID, CLIA, CAP, or a State-designated identifier.	TBD
22	250	XAD	R	[1..1]		1312	Ordering Facility Address	Address of the facility placing the order message.	4545 CORDATA PKWY, STE 1E ^^BELLINGHAM^DE^98226
23	250	XTN	R	[1..1]		1313	Ordering Facility Phone Number	Phone number of facility placing the order message	
23.1	199	ST	X				Telephone Number	Not supported. Deprecated as of 2.3.	
23.2	3	ID	X		201		Telecommunication Use Code	Not supported	
23.3	8	ID	X		202		Telecommunication Equipment Type	Not supported	
23.4	199	ST	X				Email Address	Not supported	
23.5	3	NM	X				Country Code	Not supported	
23.6	5	NM	R				Area/City Code	3-digit area code	360

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name - PID	Description	ORC
23.7	9	NM	R				Local Number	7-digit telephone number	7382200
23.8	5	NM	RE				Extension	Extension to telephone number	
23.9	199	ST	X				Any Text	Not supported	
23.10	4	ST	X				Extension Prefix	Not supported	
23.11	6	ST	X				Speed Dial Code	Not supported	
24	250	XAD	X	[0..0]		1314	Ordering Provider Address	Not supported	
25	250	CE	X	[0..0]		1473	Order Status Modifier	Not supported	
26	60	CE	X	[0..0]	552	1641	Advanced Beneficiary Notice Override Reason	Not supported	
27	26	TS	X	[0..0]		1642	Filler's Expected Availability Date/Time	Not supported	
28	250	CE	X	[0..0]	177	615	Confidentiality Code	Not supported	
29	250	CE	RE	[0..1]	482	1643	Order Type	Literal value: “I” (Inpatient) or “O” (Outpatient)	
30	250	CNE	X	[0..0]	483	1644	Enterer Authorization Mode	Not supported	
31	250	CE	X	[0..0]		2286	Parent Universal Service Identifier	Not supported	

Order Control - This field will define the function of the order being placed. Valid values for this field:

Table 2-14: Order Control Options

Value	Description
NW	New order
CA	Cancel order/service request
XO	Order completed
RE	Observations to follow
AF	Order/service refill request approval
CH	Child order/service

Value	Description
CN	Combined result
CR	Cancelled as requested
DC	Discontinue order/service request
DE	Data errors
DF	Order/service refill request denied
DR	Discontinued as requested
FU	Order/service refilled, unsolicited
HD	Hold order request
HR	On hold as requested
LI	Link order/service to patient care problem or goal
NA	Number assigned
OC	Order/service cancelled
OD	Order/service discontinued
OE	Order/service released
OF	Order/service refilled as requested
OH	Order/service held
OK	Order/service accepted and OK
OP	Notification of order for outside dispense
OR	Released as requested
PA	Patient order/service
PR	Previous results with new order/service
PY	Notification of replacement order for outside dispense
RF	Observations/performed service to follow
RL	Release previous hold
RO	Replacement order
RP	Order/service replace request

Value	Description
RQ	Replaced as requested
RR	Request received
RU	Replaced unsolicited
SC	Status changed
SN	Send order/service number
SR	Response to send order/service status request
SS	Send order/service status request
UA	Unable to accept order/service
UC	Unable to cancel
UD	Unable to discontinue
UF	Unable to refill
UH	Unable to put on hold
UM	Unable to replace
UN	Unlink order/service from patient care problem or goal
UR	Unable to release
UX	Unable to change
XR	Changed as requested
XX	Order/service changed, unsolicited

Placer Order Number – This field contains the DE DPH pre-printed blood collection card Form number.

Filler Order Number – This field is the DE DPH accession number.

Ordering Facility Name – Submitter name

Ordering Facility Address 1 – Submitter street address

Ordering Facility Address 2 – Submitter supplemental address information

Ordering Facility City – Submitter city

Ordering Facility State – Submitter state

Ordering Facility Zip – Submitter postal code

Ordering Facility Phone Number – Submitter phone number

2.6.3 Reporting [Summary] Segments

2.6.3.1 NTE – Notes

The NTE segment is commonly used for sending notes and comments not already captured in other segments. Typically this includes Neometrics Mailer Tags.

Table 2-15: Notes and Comments Segment

HL7 Seq	HL7 Len	Usage	HL7 Data Type	Data Type (Oracle)	HL7 Element Name	Example Value	Notes
1	4	R	SI	varchar2 (255 bytes)	Set ID	"1"	The literal value : '1' for the first segment transmitted, '2' for the next segment and so on
2	8	RE	ID	varchar2 (255 bytes)	Source of Comment	"L"	Identifies the source of the comments
3	65536	R	FT		Comment	"Conditions test:…"	Comment or note
4	250	RE	CE	varchar2 (255 bytes)	Comment Type	"RE"	Type of comment

Set ID – This field contains the number that identifies a single instance of a potentially repeating segment. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

Source of Comment – see table of possible values;

Value	Description
L	Ancillary (filler) department is source of comment
O	Other system is source of comment
P	Ordered (placer) is source of comment

Comment Type – see table of possible values;

Value	Description
1R	Primary reason
2R	Secondary reason
AI	Ancillary instructions
DR	Duplicate/interaction reason
GI	General instructions
GR	General reasons
PI	Patient instructions
RE	Remark

2.6.3.2 OBR – Observations

This segment serves as the report header and identifies the observation set and relevant ordering information. The OBR segment content is detailed in Table 2-16 below.

The OBR set sequence is as follows:

- **OBR 1; Report purpose -** OBR 1 indicates that the message contains the results of a lab specimen for a newborn screening panel; it will contain the following elements:

OBR|1|PLACER|FILLER|**54089-8^Newborn screening panel American Health Information Community (AHIC)^LN**| | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

- **OBR 2; Report Summary** – The OBX segments following OBR 2 summarize the status of the specimen and contain the abnormal lab results; OBR 2 will contain the following elements:

OBR|2|PLACER|FILLER|**57128-1^Newborn Screening Report Summary Panel^LN** | | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

OBR 2 will have repeating OBX's.

- **OBR 3; Clinical Variables** – The OBX segments following OBR 3 contain the additional clinical card elements that are not contained in the PID, ORC, and NK1 segments; OBR 3 will contain the following elements:

OBR|3|PLACER|FILLER|**57717-1^Newborn screen card data panel^LN**| | |COLLECTION DATE/TIME| | | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

OBR 3 will have repeating OBX's.

- **OBR 4 (and greater); Full Lab Results** - The OBX segments following OBR 4 and any further OBR segments contain complete data related to the lab results; and OBR 4 and any subsequent OBR segments contain the following elements:

OBR|4|PLACER|FILLER|**57794-0^Newborn screening test results panel^LN**| | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

OBR's 4 and greater will have repeating OBX's.

The grid below contains the details on the data elements between each OBR pipe delimiter.

Table 2-16: Observation Request Mapping

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name PID	Description	MSG1-OBR1
1	4	SI	R	[1..1]		237	Set ID -OBR	Sequence number for an OBR segment if more than one are associated with a single PID segment Literal value: '1' for the first OBR segment transmitted; '2' for the next OBR segment and on	1
2	22	EI	R	[1..1]		216	Placer Order Number	Order number for the order message assigned by the order placer (hospital). Same value as ORC-2. (KITNO)	234560000 ^namespace&ID&code
3	22	EI	R	[1..1]		217	Filler Order Number	Filler order number assigned by the laboratory performing the test. Same value as ORC-3. (LABNO)	20132040003^namespace&ID&code
4	250	CE	R	[1..1]		238	Universal Service ID	Code for the observation request	
4.1	20	ST	RE	[1..1]			Identifier	Use literal value: '54089-8'	54089-8
4.2	999	ST	CE	[0..1]			Text	Use literal value 'Newborn screening panel AHIC'	Newborn screening panel patient AHIC
4.3	20	ID	C	[0..1]			Name of Coding System	Use literal value 'LN' for 'LOINC'	LN
5	2	ID	X	[0..0]		239	Priority - OBR	Not supported	
6	26	TS	X	[0..0]		240	Requested Date/Time	Not supported	
7	26	TS	R	[1..1]		241	Observation Date/Time #	Enter the specimen collection date/time YYYYMMDDHHMM	201307240100
8	26	TS	X	[0..0]		242	Observation End Date/Time #	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name PID	Description	MSG1-OBR1
9	20	CQ	X	[0..0]		243	Collection Volume	Not supported	
10	250	XCN	O	[0..1]		244	Collector Identifier	Person that collected the specimen. Hospitals typically record only the collector's initials. The transmitting of data for fields such as ID Number, Family Name, etc. is optional and should be negotiated between the sender and receiver of the data.	12345
11	1	ID	X	[0..0]	65	245	Specimen Action Code	Not supported	
12	250	CE	X	[0..0]		246	Danger Code	Not supported	
13	300	ST	X	[0..0]		247	Relevant Clinical Info.	Not supported	
14	26	TS	R	[1..1]		248	Specimen Received Date/Time	YYYYMMDD	20130723
15	300	SPS	X	[0..0]		249	Specimen Source	Not supported	
16	250	XCN	R	[1..1]		226	Ordering Provider	Provider ordering the laboratory test. Same value as ORC-12.	
16.1		ST	R	[1..1]			ID Number	Use NPI. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.	
16.9		HD	R	[1..1]			Assigning Authority	Enter the system or entity that assigned the ordering provider identifier in OBR-16.1	
16.9.1		IS	CE	[1..1]			Namespace ID	If NPI, use literal value 'NPI'	
16.9.2		ST	CE	[1..1]			Universal ID	If NPI, use literal value: '2.16.840.1.113883.4.6'	
16.9.3		ID	CE	[1..1]			Universal ID Type	Use literal value 'ISO'	
17	250	XTN	X	[0..0]		250	Order Callback Phone Number	Not supported	
18	60	ST	X	[0..0]		251	Placer Field 1	Not supported	
19	60	ST	X	[0..0]		252	Placer Field 2	Not supported	
20	60	ST	X	[0..0]		253	Filler Field 1	Not supported	
21	60	ST	X	[0..0]		254	Filler Field 2	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name PID	Description	MSG1-OBR1
22	26	TS	R	[1..1]		255	Results Rpt/Status Chng - Date/Time	Enter the results report / status change date and time YYYYMMDD	20130807
23	40	MOC	X	[0..0]		256	Charge to Practice	Not supported	
24	10	ID	X	[0..0]	74	257	Diagnostic Serv Sect ID	Not supported	
25	1	ID	R	[1..1]	123	258	Result Status	Enter the results status	F
26	400	PRL	X	[0..0]		259	Parent Result	Not supported	
27	200	TQ	X	[0..0]		221	Quantity/Timing	Not supported	
28	250	XCN	X	[0..0]		260	Result Copies To	Not supported	
29	200	EIP	RE	[0..1]		261	Parent ID	This field relates a child to its parent when a parent/child relationship exists. For example, if reflex testing is conducted, the parent ID could capture the ID of the parent result that triggered the reflex test. This can also be used to support and reflect nesting and OBR hierarchy used in HRSA/NLM Guidance Documents and LOINC AHIC NBD Panel.	
30	20	ID	X	[0..0]	124	262	Transportation Mode	Not supported	
31	250	CE	X	[0..0]		263	Reason for Study	Not supported	
32	200	NDL	X	[0..0]		264	Principal Result Interpreter	Not supported	
33	200	NDL	X	[0..0]		265	Assistant Result Interpreter	Not supported	
34	200	NDL	X	[0..0]		266	Technician	Not supported	
35	200	NDL	X	[0..0]		267	Transcriptionist	Not supported	
36	26	TS	X	[0..0]		268	Scheduled Date/Time	Not supported	
37	4	NM	X	[0..0]		1028	Number of Sample Containers	Not supported	
38	250	CE	X	[0..0]		1029	Transport Logistics of Collected	Not supported	

Seq	Len	DT	Usage	Cardinality	TBL #	Item #	Element Name PID	Description	MSG1-OBR1
							Sample		
39	250	CE	X	[0..0]		1030	Collector's Comment	Not supported	
40	250	CE	X	[0..0]		1031	Transport Arrangement Responsibility	Not supported	
41	30	ID	X	[0..0]	224	1032	Transport Arranged	Not supported	
42	1	ID	X	[0..0]	225	1033	Escort Required	Not supported	
43	250	CE	X	[0..0]		1034	Planned Patient Transport Comment	Not supported	
44	250	CE	X	[0..0]	88	393	Procedure Code	Not supported	
45	250	CE	X	[0..0]	340	1316	Procedure Code Modifier	Not supported	
46	250	CE	X	[0..0]	411	1474	Placer Supplemental Service Information	Not supported	
47	250	CE	X	[0..0]	411	1475	Filler Supplemental Service Information	Not supported	
48	250	CE	X	[0..0]	476	1646	Medically Necessary Duplicate Procedure Reason.	Not supported	
49	2	IS	X	[0..0]	507	1647	Result Handling	Not supported	
50	250	CE	X	[0..0]		2286	Parent Universal Service Identifier	Not supported	

Set ID – This field contains the number that identifies a single instance of a potentially repeating segment. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

Placer Order Number – This field contains the DE DPH pre-printed blood collection card number.

Filler Order Number – This field is the DE DPH accessioning number.

Universal Service Identifier –

(Text) Procedure Code - This field contains the identifier code for the requested observation/test/battery (e.g. "54089-8^Newborn screening panel AHIC^LN").

(Text) Procedure Name – This field contains the text for the requested observation/test/battery (e.g., "54089-8^Newborn screening panel AHIC^LN").

(ID) System – This field contains the system for the requested observation/test/battery (e.g., "54089-8^Newborn screening panel AHIC^LN").

Collection Date/Time – Date/time specimen DEs collected.

Specimen Received Date– Date specimen DEs received by State lab.

Results Report/Status Change – Date of specimen results reports/status change

Result Status-This field represents the results status of the specimen HL7 table 0123.

2.6.3.3 OBX – Observation Results

This segment is used to transmit the specimen results – and some supplemental demographic information.

The grid below displays all of the sequence information contained in the OBX segment.

The OBX set sequence is as follows:

OBX|1|CE|57721-3^Reason for lab test in Dried blood spot^LN||LA12426-5^Subsequent screen - required by protocol^LN|||N|||F|||201110240100|

OBX|2|CE|57718-9^Sample quality of Dried blood spot^LN||LA12432-3^Acceptable^LN|||N|||F|||201110240100|

OBX|3|CE|57130-7^Newborn screening report - overall interpretation^LN||LA12430-7^Out of range requiring further filter paper testing for at least one condition^LN|||A|||F|||201110240100|

OBX|4|CE|57131-5^Newborn conditions with positive markers [Identifier] in Dried blood spot^LN||LA137-2^None^LN|||N|||F|||201110240100|

OBX|5|CE|57720-5^Newborn conditions with equivocal markers [Identifier] in Dried blood spot^LN||LA137-2^None^LN|||N|||F|||201110240100|

Table 2-17: Observation/Result Detail Mapping

HL7 Sequence	HL7 Length	Usage	HL7 Data Type	Data Type (Oracle)	HL7 Element Name	Example Value	Notes
1	4	R	SI		Set ID	"1"	Literal value: '1' for the first OBX segment transmitted; '2' for the next and so on
2	2	R	ID		Value Type	"CE"	Refer to table 0125 in the HL7 spec for available value types
3	Varies	R	Varies		Observation Identifier		
3.1		R	ST		Identifier/Code	"57721-3"	LOINC Code
3.2		R	ST		Text	"Reason for lab test in dried blood spot"	Text description
3.3		R	ID		Name of Coding System	"LN"	Use literal value 'LN' for LOINC. This is required for OBX segments that use LOINC codes as specified in Chapter 8. If a secondary coding system is used, such as the use of local codes, then use the appropriate value for that coding system.
5	20	CE	ST		Observation Sub-ID		Result of the observation. Data type of this field matches the data type specified in OBX-2. This is the "answer" to the "question" in OBX-3. The answer list that is referenced depends on OBX-3. Reference the HRSA/NLM Guidance Documents for the specific answer lists that should be referenced.
5.1			CE		Code	"LA12421-6"	LOINC Code
5.2			ST		Text	"Initial Screen"	

HL7 Sequence	HL7 Length	Usage	HL7 Data Type	Data Type (Oracle)	HL7 Element Name	Example Value	Notes
5.3	??	??	ID	??	Coding System	"LN"	Name of coding system
6	250	RE	CE	??	Units		UCUM is the preferred standard units of measure. Some lab measures are without units but all others should have units indicated. NLM Guide says units should be U/g{Hb}
7	60	RE	ST	??	Reference Range		Interpretation range that applies to the value reported in OBX-5.
8	5	RE	IS	??	Abnormal Flags		(See table)
11	1	R	ID	??	Observation Result Status	"F"	(see Table)
14	26	CE	TS	??	Observation Date/Time	"20110203091446"	Date/Time of sample collection. YYYYMMDDHHMM

Set ID – This field contains the number that identifies a single instance of a potentially repeating segment. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

Value Type – This field contains the format of the observation value.

Table 2-18: Value Type Options Table 0125

Value	Description
AD	Address
CE	Coded Entry
CF	Coded Element With Formatted Values
CK	Composite ID With Check Digit
CN	Composite ID And Name
CP	Composite Price
CX	Extended Composite ID With Check Digit
DT	Date

Value	Description
ED	Encapsulated Data
FT	Formatted Text (Display)
MO	Money
NM	Numeric
PN	Person Name
RP	Reference Pointer
SN	Structured Numeric
ST	String Data.
TM	Time
TN	Telephone Number
DTM	Time Stamp (Date & Time)
TX	Text Data (Display)
XAD	Extended Address
XCN	Extended Composite Name And Number For Persons
XON	Extended Composite Name And Number For Organizations
XPN	Extended Person Name
XTN	Extended Telecommunications Number

Universal Service Identifier

(Text) Procedure Code – This field contains the identifier code for the requested observation/test/battery (e.g., "54089-8^Newborn screening panel AHIC^LN").

(Text) Procedure Name – This field contains the text for the requested observation/test/battery (e.g., "54089-8^Newborn screening panel AHIC^LN").

(ID) System – This field contains the system used for the code of the requested observation/test/battery (e.g., "54089-8^Newborn screening panel AHIC^LN").

Table 2-19: ID Options

Value	Description
LN	LOINC
SCT	SNOMED CT
L	Local

Observation Value - This field contains the result of the observation. Data type of this field matches the data type specified in OBX-2. This is the answer to the "question" in OBX-3.

Units – Measurement units of results.

Reference Range – This field contains the interpretation range that applies to the value reported in OBX-5.

Abnormal Flags – This field contains a table lookup indicating the normalcy status of the result.

Table 2-20: Abnormal Flags Options

Value	Description	Comments
N	Normal	
A	Abnormal	
H	High	
L	Low	
AA	Critically abnormal	
HH	Critically High	
LL	Critically Low	

Observation Result Status – This field is the status of results for this order

Table 2-21: Observation Result Status Options

Value	Description
C	Record coming over is a correction and thus replaces a final result
D	Deletes the OBX record
F	Final results; Can only be changed with a corrected result.
I	Specimen in lab; results pending
N	Not asked; used to affirmatively document that the observation identified in the OBX DEs not sought when the universal service ID in OBR-4 implies that it would be sought.
P	Preliminary results
R	Results entered -- not verified
S	Partial results. Deprecated. Retained only for backDErd compatibility as of V2.6.
X	Results cannot be obtained for this observation
U	Results status change to final without retransmitting results already sent as 'preliminary.' E.g., radiology changes status from preliminary to final
W	Post original as wrong, e.g., transmitted for wrong patient

Observation Date/Time – Sample collection date and time.

2.6.3.3.1 Report Summary

The report summary fields in the table below are the fields that provide the sample usability information and summary data on the abnormal and borderline test results. The table below details the content of the Report Summary data within the OBX segment (OBR Set 2).

OBR|2|PLACER|FILLER|**57128-1^Newborn Screening Report Summary Panel^LN**| | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

Table 2-22: Summary OBX Data Details

Data	Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range SAMPLE	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE
Reason for specimen	1	CE	57721-3^ Reason for lab test in Dried blood spot^LN		LA12421-6^ Initial screen^LN				F	20110101 0800
Specimen quality	2	CE	57718-9^ Specimen quality of dried blood spot^LN		LA12432-3 ^Acceptable^LN				F	20110101 0800
Overall interpretation	3	CE	57130-7^ Newborn screening report - overall interpretation^LN		LA12430-7^ Not normal requiring further filter paper testing for at least one condition^ LN			A	F	20110101 0800
Set ID 4 and greater will contain the abnormal tests results ***and*** equivocal results for this specimen. Listed below is an example.										
Positive markers	4…	CE	57131-5^ Newborn conditions with positive markers [Identifier] in Dried blood spot^LN	1… (and additional OBX's for results with positive markers	LA12509-8^ MCAD^LN^128596003 ^Mediumchain acylcoenzyme A dehydrogenase deficiency			A or N	F	20110101080 0

Data	Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range SAMPLE	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE
				set)	^SCT					
Equivocal markers (borderline or inconclusive)	5…	CE	57720-5^ Newborn conditions with equivocal markers [Identifier] in Dried blood spot^LN	1… (and additional OBX's for results with equivocal markers set)	LA137-2^ None^LN			A or N	F	20110101080000
Set ID 6 and greater will contain [just] the **tests** applied to this specimen. Listed below is an example.										
All conditions tested for	6…	CE	577197^ Conditions tested for in this newborn screening study [Identifier] in Dried blood spot ^LN	1… (and additional OBX's for tests set)	LA12520-5 ^PKU^LN^7573000^Classical phenylketonuria (disorder)^SCT			A or N	F	20110101080000

2.6.3.3.2 Clinical Information

The additional clinical fields in the table below are the demographic data elements that are captured but are not included in PID, NK1, or ORC message segments. The table below details the content of the additional Clinical Information contained on the filter paper within the OBX segment (OBR Set 3).

OBR|3|PLACER|FILLER|**57717-1^Newborn screen card data panel^LN**| | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

Table 2-23: Clinical OBX Data Details

Data	Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE	Date/Time of the Observation SAMPLE
Clinical Events That Affect NBS Interpretation	1	ST	57723-9^Unique bar code number of Current sample^LN		"12345678"			N	F	201101010800	
Clinical Events That Affect NBS Interpretation	2	NM	8339-4^Body weight Measured – at birth^ LN (required)		"2600"	G		N	F	201101010800	'X' value if missing data
Clinical Events That Affect NBS Interpretation	3	CE	57722-1^Birth plurality of Pregnancy^ LN		"LA12914-0^Unknown plurality^LN"			N	F	201101010800	
Clinical Events That Affect NBS Interpretation	4	TX	62323-1^Post-discharge provider ID [Identifier]^LN		'P466666'			N	F	201101010800	OBX will not populate if not provided
Clinical Events That Affect NBS Interpretation	5	TX	62324-9^Post-discharge provider name in Provider^LN		'Ashleigh Fleischman, MD'			N	F	201101010800	OBX will not populate if not provided
Clinical Events That Affect NBS Interpretation	6	TM	57715-5^Birth time^ LN (required)		"1500"			N	F	201101010800	'X' value if missing data
Clinical	7	ST	57716-3^State		"DE"			N	F	201101010800	

Data	Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE	Date/Time of the Observation SAMPLE
Events That Affect NBS Interpretation			printed on filter paper card [Identifier] in NBS card^LN								
Clinical Events That Affect NBS Interpretation	8	ST	57711-4^Unique bar code number of Initial sample^ LN		“12345678”			N	F	201101010800	
Clinical Events That Affect NBS Interpretation	9-11, 13	CE	57713-0^Infant NICU factors that affect newborn screening interpretation^ LN	1-5	“LA12419-0^Infant in NICU at time of specimen collection^LN”			N	F	201101010800	Will repeat up to 5 times for NICU, Antibiotics, Steroids, Transfused, Other (HA/TPN)
Clinical Events That Affect NBS Interpretation	12	TX	67703-9^Other infant NICU factors that affect newborn screening interpretation Narrative^ LN		“HA/TPN”			N	F	201101010800	Conditional on answer above= “Other”
Clinical Events That Affect NBS Interpretation	13	DT	62317-3^Date last blood product Transfusion^LN		“08/23/2011”			N	F	201101010800	Condition on answer above=”Transfusion”

Data	Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE	Date/Time of the Observation SAMPLE
Clinical Events That Affect NBS Interpretation	14	CE	67704-7^Feeding types^ LN		"LA12418-2^TPN^ LN"			N	F	201101010800	
Clinical Events That Affect NBS Interpretation	15	CE	67706-2^Maternal factors that affect newborn screening interpretation from mother^ LN		"LA16931-0^Steriod Treatment^ LN"			N	F	201101010800	Either None or Steroids and missing Obstetric estimation of gestational age. This is a required field not collected in DE. Add to deviation from IG section.

2.6.3.3.3 Full Lab Results

The report summary fields in the table below are the fields that provide the full detail data on all test results. The table below details the content of the Report Summary data within the OBX segment (OBR Set 4 and greater).

OBR|4 |PLACER|FILLER|**57794-0^Newborn screening test results panel^LN**| | |COLLECTION DATE/TIME| | | | | |SPECIMEN RECEIVED DATE| | | | | | |RESULTS RPT/STATUSCHNG DATE | | |RESULTS STATUS |

Table 2-24: Full Lab OBX Data Details

Set ID - OBX	Value Type	Observation Identifier	Observation Sub-ID	Observation Value SAMPLE	Unit	Reference Range	Abnormal Flags SAMPLE	Result Status	Date/Time of the Observation SAMPLE
1	CE	46733-2^Amino Acidemias newborn screen interpretation^LN		LA6626-1^Normal^LN				F	201101010800
2	CE	57710-6^Amino acidemias newborn screening comment/discussion^LN					N	F	201101010800
3	CE	46743-1^Maple syrup urine disease newborn screen interpretation^LN		LA6626-1^Normal^LN			N	F	
4	TX	58230-4^Maple syrup urine disease newborn screening comment/discussion^LN					N	F	
5	NM			99	umol/L		N	F	
6	NM			99	umol/L		N	F	

Table 2-25: Set ID 1 options57721-3

Value	Description
LA12421-6	Initial Screen
LA12425-7	Subsequent screen– required by law

Value	Description
LA12426-5	Subsequent screen – required by protocol
LA12427-3	Subsequent screen– for clarification of initial results (not by law or protocol)
LA16473-3	Subsequent screen-reason unknown
LA14132-7	No sample collected due to parental refusal

Table 2-26: 57718-9

Value	Description
LA12432-3	Acceptable
LA12433-1	No Sample Received
LA12443-0	Specimen quantity insufficient for testing
LA12682-3	Specimen appears scratched or abraded
LA12683-1	Specimen not dry before mailing
LA12684-9	Specimen appears supersaturated
LA12685-6	Specimen appears diluted, discolored or contaminated
LA12686-4	Specimen exhibits serum rings
LA12435-6	Specimen appears clotted or layered
LA12687-2	No Blood
LA12441-4	Sample too old

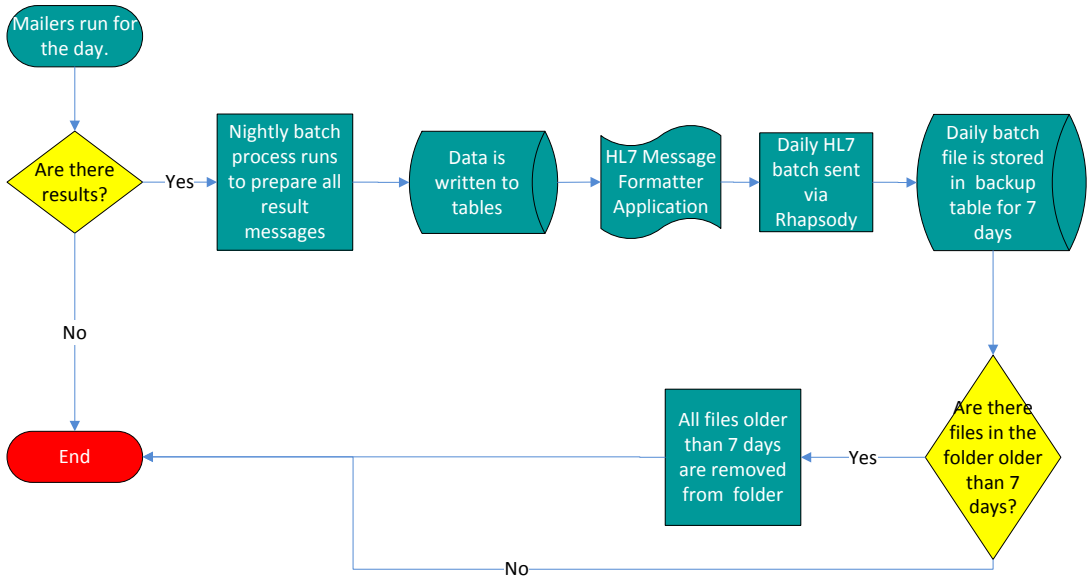
3 HL7 Outbound Parameters

The System Architecture section displays sample HL7 messages to be sent to the external entities.

3.1 Message Delivery

3.1.1 Data Process

Figure 3-1: Message Delivery Data Process



3.1.2 Folder Location/Access

The Rhapsody information will be established and maintain by the DPH IRM Office. The State will be responsible for deliving the messages to the DE facilities, once generated out of the Neometrics Applications and placed in a pre-determine location on the DPH NBS server

3.1.3 Storage

Each day an HL7 batch file will be posted to the folder of all specimen results that have been completed. The folder will hold no more than 7 days of rolling batch files posted to the location. Location and storage of ORU HL7 messages has not been determined by DE DPH.

Note: Batch process runs daily

3.2 Message Samples

3.2.1 Normal

Below is an illustrative example of the grammar statement for the outbound ORU R01 (Results) message where the specimen results are Normal:

MSH PID NK1 ORC {OBR} {NTE} {OBX}

```
MSH|^~\&| DEDPH |DEDPH | DEDPH |C1259|2013030509592013||ORU^R01^ORU_R01|2013030500011|P|2.5.1|

PID|1||999888777666^^^^MR||GARY^RESLER||201110201030|M||2106-
3^White^HL70005||||||||||||U^Unknown^HL70189||Y|2|

NK1|1|THOMAS^TRICY|MTH^Mother^HL70063|

ORC|RE|18453504|20113040577|||||||||||||||||PEACEHEALTH MEDICAL GROUP ^^^^^DEDPH^PRN^^^C1259|4545
CORDATA PKWY, STE 1E ^^BELLINGHAM^DE^98226|^^^^^360^7382200|

NTE|1|L|Conditions tested: Biotinidase deficiency (BIO), Galactosemia (GALT),  Congenital
Hypothyroidism (CH), Congenital Adrenal Hyperplasia (CAH), Cystic Fibrosis (CF), Hemoglobinopathies
(HB), Amino Acid profile: Argininosuccinic acidemia (ASA), Citrullinemia (CIT), Homocystinuria (HCY),
Maple syrup urine disease (MSUD), Phenylketonuria (PKU) and Tyrosinemia type I (TYR-I) , Organic Acid
profile: 3-hydroxy-3-methylglutaric aciduria (HMG), Beta-ketothiolase deficiency (BKT), Glutaric
acidemia type I (GA-I), Isovaleric acidemia (IVA), Methylmalonic acidemia (MMA - types mutase, CblA
and CblB), Multiple carboxylase deficiency (MCD) and Propionic acidemia (PROP), and Fatty Acid
```

```
profile: Carnitine uptake deficiency (CUD), Long-chain L-3-hydroxy acyl-CoA dehydrogenase (LCHAD)
deficiency, Medium-chain acyl-CoA dehydrogenase (MCAD) deficiency, Trifunctional protein (TFP)
deficiency and Very-long chain acyl-CoA dehydrogenase (VLCAD) deficiency.|RE|

NTE|2|L|Delaware State Department of Health  Newborn Screening Program  Address: 1610 NE 150th Street
MS: K17-9 Shoreline, DE 98155-0729  Website:  www.DPH.DE.gov/nbs  Phone: (206) 418-5410  Fax: (206)
418-5415  Email: NBS.Prog@DPH.DE.gov|RE|

NTE|3|L|Normal ranges based on child's age, birth weight or transfusion status. If some or all of this
information DEs not provided by the submitter, the normal range may be blank.|GI|

NTE|4|L|Age of Collection: 8 day(s) 5 hour(s)|RE|

NTE|5|P|Optional Use: NO MORE STEROIDS|RE|

OBR|1|18453504|20113040577|54089-8^Newborn screening panel American Health Information Community
(AHIC)^LN|||201110281530|||||||20111031||||||||20111102|||F|

OBR|2|18453504|20113040577|57128-1^Newborn Screening Report summary
panel^LN|||201110281530|||||||20111031||||||||20111102|||F|

OBX|1|CE|57721-3^Reason for lab test in Dried blood spot^LN||LA12426-5^Subsequent screen - required by
protocol^LN|||N|||F|||201110281530|

OBX|2|CE|57718-9^Sample quality of Dried blood spot^LN||LA12432-
3^Acceptable^LN|||N|||F|||201110281530|

OBX|3|CE|57130-7^Newborn screening report - overall interpretation^LN||LA12428-1^All screening is in
range for the conditions tested^LN|||N|||F|||201110281530|

OBX|4|CE|57131-5^Newborn conditions with positive markers [Identifier] in Dried blood spot^LN||LA137-
2^None^LN|||N|||F|||201110281530|

OBX|5|CE|57720-5^Newborn conditions with equivocal markers [Identifier] in Dried blood spot^LN||LA137-
2^None^LN|||N|||F|||201110281530|
```

```
OBX|6|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|1|LA12471-1^ASA^LN^41013004^Argininosuccinate lyase deficiency^SCT||||||F|||201110281530|

OBX|7|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|2|LA12474-5^BKT^LN^237953006^Mitochondrial 2-methylacetoacetyl-CoA thiolase deficiency -
potassium stimulated^SCT||||||F|||201110281530|

OBX|8|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|3|LA12476-0^CBL A^LN^73843004^Cobalamin A disease^SCT||||||F|||201110281530|

OBX|9|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|4|LA12477-8^CBL B^LN^82245003^Cobalamin B disease^SCT||||||F|||201110281530|

OBX|10|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|5|LA12482-8^CIT-I^LN^398680004^Citrullinemia^SCT||||||F|||201110281530|

OBX|11|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|6|LA12483-6^CIT-II^LN^30529005^Citrullinemia, neonatal type^SCT||||||F|||201110281530|

OBX|12|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|7|LA12487-7^CUD^LN^21764004^Renal carnitine transport defect^SCT||||||F|||201110281530|

OBX|13|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|8|LA12493-5^GA-1^LN^76175005^Glutaric aciduria, type
1^SCT||||||F|||201110281530|

OBX|14|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|9|LA12496-8^HCY^LN^11282001^Homocystinuria^SCT||||||F|||201110281530|

OBX|15|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|10|LA12499-2^HMG^LN^410059004^Hydroxymethylglutaric aciduria^SCT||||||F|||201110281530|
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OBX|16|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|11|LA12505-6^IVA^LN^87827003^Isovaleryl-CoA dehydrogenase
deficiency^SCT||||||F|||201110281530|

OBX|17|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|12|LA12507-2^LCHAD^LN^307127004^Isolated long chain hydroxyacyl-CoA dehydrogenase
deficiency^SCT||||||F|||201110281530|

OBX|18|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|13|LA12509-8^MCAD^LN^128596003^Medium-chain acyl-coenzyme A dehydrogenase
deficiency^SCT||||||F|||201110281530|

OBX|19|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|14|LA12510-6^MCD^LN^360369003^Holocarboxylase synthase deficiency^SCT||||||F|||201110281530|

OBX|20|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|15|LA12513-0^MSUD^LN^27718001^Maple syrup urine disease^SCT||||||F|||201110281530|

OBX|21|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|16|LA12515-5^MUT^LN^124680001^Deficiency of methylmalonyl-CoA
mutase^SCT||||||F|||201110281530|

OBX|22|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|17|LA12520-5^PKU^LN^7573000^Classical phenylketonuria^SCT||||||F|||201110281530|

OBX|23|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|18|LA12523-9^PROP^LN^69080001^Propionic acidemia^SCT||||||F|||201110281530|

OBX|24|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|19|LA12527-0^TFP^LN^237999008^Mitochondrial trifunctional protein
deficiency^SCT||||||F|||201110281530|

OBX|25|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|20|LA12528-8^TYR-1^LN^410056006^Tyrosinemia type I^SCT||||||F|||201110281530|
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OBX|26|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|21|LA12531-2^VLCAD^LN^237997005^Very long chain acyl-CoA dehydrogenase
deficiency^SCT||||||F|||201110281530|

OBX|27|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|22|LA12532-0^BIO^LN^8808004^Biotinidase deficiency^SCT||||||F|||201110281530|

OBX|28|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|23|LA12533-8^CAH^LN^124214007^Deficiency of steroid 11-beta-
monooxygenase^SCT||||||F|||201110281530|

OBX|29|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|24|LA12537-9^CF^LN^190905008^Cystic fibrosis^SCT||||||F|||201110281530|

OBX|30|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|25|LA12538-7^CH^LN^190268003^Congenital hypothyroidism^SCT||||||F|||201110281530|

OBX|31|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|26|LA12543-7^GALT^LN^398664009^Deficiency of UTP-hexose-1-phosphate
uridylyltransferase^SCT||||||F|||201110281530|

OBX|32|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|27|LA12602-1^Hb C-carrier^LN^76050008^Hemoglobin C trait^SCT||||||F|||201110281530|

OBX|33|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|28|LA12603-9^Hb D-carrier^LN^7391009^Hemoglobin D trait^SCT||||||F|||201110281530|

OBX|34|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|29|LA12604-7^Hb E-carrier^LN^46248003^Hemoglobin E trait^SCT||||||F|||201110281530|

OBX|35|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|30|LA12606-2^Hb S (sickle)-carrier^LN^16402000^Sickle cell trait^SCT||||||F|||201110281530|

OBX|36|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|31|LA12607-0^Hb C-disease^LN^51053007^Hemoglobin C disease^SCT||||||F|||201110281530|
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OBX|37|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|32|LA12608-8^Hb C beta-thalassemia^LN^61777009^Thalassemia-hemoglobin C
disease^SCT||||||F|||201110281530|

OBX|38|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|33|LA12609-6^Hb D-disease^LN^61777009^Thalassemia-hemoglobin C
disease^SCT||||||F|||201110281530|

OBX|39|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|34|LA12610-4^Hb D beta-thalassemia^LN^47047009^Thalassemia with other
hemoglobinopathy^SCT||||||F|||201110281530|

OBX|40|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|35|LA12611-2^Hb beta zero-thalassemia^LN^8671500^^SCT||||||F|||201110281530|

OBX|41|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|36|LA12612-0^Hb E-disease^LN^25065001^Hemoglobin E disease^SCT||||||F|||201110281530|

OBX|42|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|37|LA12613-8^Hb E beta-thalassemia^LN^234392002^Hemoglobin E/beta thalassemia
disease^SCT||||||F|||201110281530|

OBX|43|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|38|LA12614-6^Hb SS-disease (sickle cell anemia)^LN^127040003^Hb SS
disease^SCT||||||F|||201110281530|

OBX|44|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|39|LA12615-3^Hb S beta-thalassemia^LN^127041004^Sickle cell-beta-
thalassemia^SCT||||||F|||201110281530|

OBX|45|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|40|LA12616-1^Hb SC-disease^LN^35434009^Sickle cell-hemoglobin C
disease^SCT||||||F|||201110281530|
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OBX|46|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|41|LA12617-9^Hb SD-disease^LN^25472008^Sickle cell-hemoglobin D
disease^SCT||||||F|||201110281530|

OBX|47|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|42|LA12618-7^Hb SE-disease^LN^47024008^Sickle cell-hemoglobin E
disease^SCT||||||F|||201110281530|

OBX|48|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|43|LA12620-3^Hb S plus Hb other than A,C,D,E,O-Arab disease^LN^23269001^Double heterozygous
sickling disorder^SCT||||||F|||201110281530|

OBX|49|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|44|LA12621-1^Hb disease other than A, C, D, E, H,O-Arab,
S^LN^80141007^Hemoglobinopathy^SCT||||||F|||201110281530|

OBX|50|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|45|LA12622-9^Hb carrier other than C, D, E, S ,O-Arab^LN^123773003^Heterozygous
hemoglobinopathy^SCT||||||F|||201110281530|

OBX|51|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|46|LA16007-9^Hb H-disease^LN^48553001^Hemoglobin H disease^SCT||||||F|||201110281530|

OBX|52|CE|57719-7^Conditions tested for in this newborn screening study [Identifier] in Dried blood
spot^LN|47|LA16207-5^Hemoglobinopathies^LN^80141007^Hemoglobinopathy^SCT||||||F|||201110281530|

OBR|3|18453504|20113040577|57717-1^Newborn screen card data
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|ST|57723-9^Unique bar code number of Current sample^LN||18453504|||N|||F|||201110281530|

OBX|2|NM|8339-4^Body weight Measured --at birth^LN||3560|G||N|||F|||201110281530|

OBX|3|CE|57722-1^Birth plurality of Pregnancy^LN||LA12914-0^Unknown
plurality^LN|||N|||F|||201110281530|
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OBX|4|TX|62323-1^Post-discharge provider ID [Identifier]^LN||P46634|||N|||F|||201110281530|

OBX|5|TX|62324-9^Post-discharge provider name in Provider^LN||MICHEAL THOMPSON,
MD|||N|||F|||201110281530|

OBX|6|TM|57715-5^Birth time^LN||1030|||N|||F|||201110281530|

OBX|7|ST|57716-3^State printed on filter paper card [Identifier] in NBS
card^LN||DE|||N|||F|||201110281530|

OBX|8|ST|57711-4^Unique bar code number of Initial sample^LN||18453495|||N|||F|||201110281530|

OBX|9|CE|57713-0^Infant NICU factors that affect newborn screening interpretation^LN|1|LA12419-
0^Infant in ICU at time of specimen collection^LN|||N|||F|||201110281530|

OBX|10|CE|57713-0^Infant NICU factors that affect newborn screening interpretation^LN|2|LA12420-
8^Systemic antibiotics before NBS specimen^LN|||N|||F|||201110281530|

OBX|11|CE|57713-0^Infant NICU factors that affect newborn screening interpretation^LN|3|LA46-
8^Other^LN|||N|||F|||201110281530|

OBX|12|TX|67703-9^Other infant NICU factors that affect newborn screening interpretation
Narrative^LN||HA/TPN|||N|||F|||201110281530|

OBX|13|CE|57713-0^Infant NICU factors that affect newborn screening interpretation^LN|4|LA16925-
2^Parental Steroid Treatment^LN|||N|||F|||201110281530|

OBX|14|CE|67704-7^Feeding types^LN||LA12418-2^TPN^LN|||N|||F|||201110281530|

OBX|15|CE|67706-2^Maternal factors that affect newborn screening interpretation from mother^LN||LA137-
2^None^LN|||N|||F|||201110281530|

OBR|4|18453504|20113040577|57794-0^Newborn screening test results panel in Dried blood
spot^LN|||201110281530|||||||20111031|||||||20111102|||F|
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OBR|5|18453504|20113040577|53261-4^Amino acid newborn screen
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46733-2^Amino acidemias newborn screen interpretation^LN||LA18592-8^In
range^LN|||N|||F|||201110281530|

OBX|2|CE|57793-2^Amino acidemia disorder suspected [Identifier] in Dried blood spot^LN||LA137-
2^None^LN|||N|||F|||201110281530|

OBX|3|CE|46746-4^Phenylketonuria and variants/Biopterin defects newborn screen
interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 180 µmol/L blood|N|||F|||201110281530|

OBX|4|NM|29573-3^Phenylalanine [Moles/volume] in Dried blood spot^LN||55|µmol/L blood|< 180 µmol/L
blood|N|||F|||201110281530|

OBX|5|NM|35572-7^Phenylalanine/Tyrosine [Molar ratio] in Dried blood spot^LN||1.04|{ratio}|<
2.0|N|||F|||201110281530|

OBX|6|CE|46743-1^Maple syrup urine disease newborn screen interpretation^LN||LA18592-8^In
range^LN|µmol/L blood|< 322 µmol/L blood|N|||F|||201110281530|

OBX|7|NM|53152-5^Alloisoleucine+Isoleucine+Leucine+Hydroxyproline [Moles/volume] in Dried blood
spot^LN||191|µmol/L blood|< 322 µmol/L blood|N|||F|||201110281530|

OBX|8|NM|47799-2^Valine [Moles/volume] in Dried blood spot^LN||135|µmol/L blood|< 220 µmol/L
blood|N|||F|||201110281530|

OBX|9|NM|53154-1^Alloisoleucine+Isoleucine+Leucine+Hydroxyproline/Alanine [Molar
ratio] in Dried blood spot^LN||0.49|{ratio}|< 1.50|N|||F|||201110281530|

OBX|10|NM|53153-3^Alloisoleucine+Isoleucine+Leucine+Hydroxyproline/Phenylalanine [Molar ratio] in
Dried blood spot^LN||3.47|{ratio}|< 3.65|N|||F|||201110281530|
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OBX|11|NM|53151-7^Valine/Phenylalanine [Molar ratio] in Dried blood spot^LN||2.46|{ratio}|< 3.0|N|||F|||201110281530|

OBX|12|CE|46741-5^Homocystinuria and/or other hypermethioninemias newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 72 µmol/L blood|N|||F|||201110281530|

OBX|13|NM|47700-0^Methionine [Moles/volume] in Dried blood spot^LN||21|µmol/L blood|< 72 µmol/L blood|N|||F|||201110281530|

OBX|14|NM|53156-6^Methionine/Phenylalanine [Molar ratio] in Dried blood spot^LN||0.38|{ratio}|< 1.0|N|||F|||201110281530|

OBX|15|CE|46734-0^Citrullinemias/Arginosuccinic aciduria newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 100 µmol/L blood|N|||F|||201110281530|

OBX|16|NM|42892-0^Citrulline [Moles/volume] in Dried blood spot^LN||6.34|µmol/L blood|< 100 µmol/L blood|N|||F|||201110281530|

OBX|17|NM|53062-6^Argininosuccinate [Moles/volume] in Dried blood spot^LN||3.23|µmol/L blood|< 0.77 µmol/L blood|A|||F|||201110281530|

OBX|18|NM|54092-2^Citrulline/Arginine [Molar ratio] in Dried blood spot^LN||0.64|{ratio}|< 5.56|N|||F|||201110281530|

OBX|19|NM|53200-2^Argininosuccinate/Arginine [Molar ratio] in Dried blood spot^LN||0.33|{ratio}|< 0.15|A|||F|||201110281530|

OBX|20|CE|46748-0^Tyrosinemias newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 3.25 µmol/L blood|N|||F|||201110281530|

OBX|21|NM|53231-7^Succinylacetone [Moles/volume] in Dried blood spot^LN||0.12|µmol/L blood|< 3.25 µmol/L blood|N|||F|||201110281530|

OBX|22|NM|35571-9^Tyrosine [Moles/volume] in Dried blood spot^LN||52.7|µmol/L blood|< 209 µmol/L blood|N|||F|||201110281530|

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OBR|6|18453504|20113040577|57087-9^Biotinidase newborn screening
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46761-3^Biotinidase deficiency newborn screen interpretation^LN||LA18592-8^In range^LN|Enzyme
Activity|Normal Enzyme Activity|N|||F|||201110281530|

OBX|2|TX|38478-4^Biotinidase [Presence] in Dried blood spot^LN||NORMAL|Enzyme Activity|Normal Enzyme
Activity|N|||F|||201110281530|

OBR|7|18453504|20113040577|57086-1^Congenital adrenal hyperplasia newborn screening
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46758-9^Congenital adrenal hyperplasia newborn screen interpretation^LN||LA18592-8^In
range^LN|17-OHP:  ng/mL serum|< 40.0 ng/mL|N|||F|||201110281530|

OBX|2|NM|38473-5^17-Hydroxyprogesterone [Mass/volume] in Dried blood spot^LN||3.47|17-OHP:  ng/mL
serum|< 40.0 ng/mL|N|||F|||201110281530|

OBR|8|18453504|20113040577|54090-6^Thyroid newborn screening
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46762-1^Congenital hypothyroidism newborn screen interpretation^LN||LA18592-8^In
range^LN|TSH:  µIU/mL serum|< 20.0 µIU/mL|N|||F|||201110281530|

OBX|2|NM|29575-8^Thyrotropin [Units/volume] in Dried blood spot^LN||4.42|TSH:  µIU/mL serum|< 20.0
µIU/mL|N|||F|||201110281530|

OBR|9|18453504|20113040577|54078-1^Cystic fibrosis newborn screening
panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46769-6^Cystic fibrosis newborn screen interpretation^LN||LA18592-8^In range^LN|IRT: ng/mL
blood|< 70 ng/mL blood|N|||F|||201110281530|
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OBX|2|NM|48633-2^Trypsinogen I Free [Mass/volume] in Dried blood spot^LN||15.48|*IRT:* ng/mL blood|< 70 *ng/mL blood*|N|||F|||201110281530|

OBR|10|18453504|20113040577|57084-6^Fatty acid oxidation newborn screen panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46736-5^Fatty acid oxidation defects newborn screen interpretation^LN||LA18592-8^In range^LN|||N|||F|||201110281530|

OBX|2|CE|57792-4^Fatty acid oxidation conditions suspected [Identifier] in Dried blood spot^LN||LA137-2^None^LN|||N|||F|||201110281530|

OBX|3|CE|46778-7^MCAD newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.5 *µmol/L blood*|N|||F|||201110281530|

OBX|4|NM|53175-6^Octanoylcarnitine (C8) [Moles/volume] in Dried blood spot^LN||0.08|µmol/L blood|< 0.5 µmol/L blood|N|||F|||201110281530|

OBX|5|NM|53176-4^Octanoylcarnitine (C8)/Acetylcarnitine (C2) [Molar ratio] in Dried blood spot^LN||0.01|{ratio}|< 0.02|N|||F|||201110281530|

OBX|6|NM|53177-2^Octanoylcarnitine (C8)/Decanoylcarnitine (C10) [Molar ratio] in Dried blood spot^LN||1.13|{ratio}|< 0.92|A|||F|||201110281530|

OBX|7|NM|45198-9^Decenoylcarnitine (C10:1) [Moles/volume] in Dried blood spot^LN||0.02|µmol/L blood|< 0.18 µmol/L blood|N|||F|||201110281530|

OBX|8|CE|46774-6^Carnitine uptake deficiency newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|> 10.9 *µmol/L blood*|N|||F|||201110281530|

OBX|9|NM|38481-8^Carnitine free (C0) [Moles/volume] in Dried blood spot^LN||16.87|µmol/L blood|> 10.9 µmol/L blood|N|||F|||201110281530|

OBX|10|CE|46754-8^Long Chain Hydroxy Acyl Dehydrogenase/Trifunctional Protein Deficiencies newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.15 *µmol/L blood*|N|||F|||201110281530|

OBX|11|NM|50125-4^3-Hydroxypalmitoylcarnitine (C16-OH) [Moles/volume] in Dried blood spot^LN||0.01|µmol/L blood|< 0.15 µmol/L blood|N|||F|||201110281530|

OBX|12|NM|53201-0^3-Hydroxypalmitoylcarnitine (C16-OH)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot^LN||0.01|{ratio}|< 0.062|N|||F|||201110281530|

OBX|13|CE|46753-0^Very long chain hydroxy acyl dehydrogenase deficiency newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.45 µmol/L blood|N|||F|||201110281530|

OBX|14|NM|53192-1^Tetradecanoylcarnitine (C14) [Moles/volume] in Dried blood spot^LN||0.28|µmol/L blood|< 0.60 µmol/L blood|N|||F|||201110281530|

OBX|15|NM|53191-3^Tetradecenoylcarnitine (C14:1) [Moles/volume] in Dried blood spot^LN||0.13|µmol/L blood|< 0.45 µmol/L blood|N|||F|||201110281530|

OBX|16|NM|53199-6^Palmitoylcarnitine (C16) [Moles/volume] in Dried blood spot^LN||1.55|µmol/L blood|< 5.69 µmol/L blood|N|||F|||201110281530|

OBX|17|NM|53241-6^Stearoylcarnitine (C18) [Moles/volume] in Dried blood spot^LN||0.58|µmol/L blood|< 1.73 µmol/L blood|N|||F|||201110281530|

OBX|18|NM|53202-8^Oleoylcarnitine (C18:1) [Moles/volume] in Dried blood spot^LN||0.88|µmol/L blood|< 2.48 µmol/L blood|N|||F|||201110281530|

OBX|19|NM|53195-4^Tetradecenoylcarnitine (C14:1)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot^LN||0.09|{ratio}|< 0.11|N|||F|||201110281530|

OBR|11|18453504|20113040577|54079-9^Galactosemia newborn screening panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46737-3^Galactosemias newborn screen interpretation^LN||LA18592-8^In range^LN|Enzyme Activity|Normal Enzyme Activity|N|||F|||201110281530|

OBX|2|TX|42906-8^Galactose 1 phosphate uridyl transferase [Enzymatic activity/volume] in Dried blood spot^LN||NORMAL|Enzyme Activity|Normal Enzyme Activity|N|||F|||201110281530|

OBR|12|18453504|20113040577|54081-5^Hemoglobinopathies newborn screening panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46740-7^Hemoglobin disorders newborn screen interpretation^LN||LA18592-8^In range^LN|||N|||F|||201110281530|

OBX|2|CE|71592-0^Hemoglobinopathies conditions suspected [Identifier] in Dried blood spot^LN||LA137-2^None^LN|||N|||F|||201110281530|

OBR|13|18453504|20113040577|64116-7^Hemoglobin observations newborn screening panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|64117-5^Most predominant hemoglobin in Dried blood spot^LN||LA16208-3^Hb F^LN||||||F|||201110281530|

OBX|2|CE|64118-3^Second most predominant hemoglobin in Dried blood spot^LN||LA16209-1^Hb A^LN||||||F|||201110281530|

OBR|14|18453504|20113040577|57085-3^Organic acid newborn screen panel^LN|||201110281530|||||||20111031|||||||20111102|||F|

OBX|1|CE|46744-9^Organic acidemias newborn screen interpretation^LN||LA18592-8^In range^LN|||N|||F|||201110281530|

OBX|2|CE|57791-6^Organic acidemia conditions suspected [Identifier] in Dried blood spot^LN||LA137-2^None^LN|||N|||F|||201110281530|

OBX|3|CE|46749-8^3-Methylcrotonic/Hydroxymethylglutaric/Methylglutaconic newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 1.0 *µmol/L blood*|N|||F|||201110281530|

OBX|4|NM|50106-4^3-Hydroxyisovalerylcarnitine (C5-OH) [Moles/volume] in Dried blood spot^LN||0.07|µmol/L blood|< 1.0 µmol/L blood|N|||F|||201110281530|

OBX|5|NM|53172-3^3-Hydroxyisovalerylcarnitine (C5-OH)/Octanoylcarnitine (C8) [Molar ratio] in Dried blood spot^LN||0.85|{ratio}|< 10.0|N|||F|||201110281530|

OBX|6|CE|46750-6^2-methyl,3-hydroxybutyric Acidemias/Beta-Ketothiolase Deficiency newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.15 *µmol/L blood*|N|||F|||201110281530|

OBX|7|NM|53170-7^Tiglylcarnitine (C5:1) [Moles/volume] in Dried blood spot^LN||0|µmol/L blood|< 0.15 µmol/L blood|N|||F|||201110281530|

OBX|8|CE|46739-9^Glutaric acidemia type 1 newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.18 µmol/L blood|N|||F|||201110281530|

OBX|9|NM|53183-0^Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH) [Moles/volume] in Dried blood spot^LN||0.01|µmol/L blood|< 0.18 µmol/L blood|N|||F|||201110281530|

OBX|10|NM|53184-8^Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/3-Hydroxyisovalerylcarnitine (C5-OH) [Molar ratio] in Dried blood spot^LN||0.12|{ratio}|< 1.0|N|||F|||201110281530|

OBX|11|NM|53185-5^Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/Octanoylcarnitine (C8) [Molar ratio] in Dried blood spot^LN||0.1|{ratio}|< 1.0|N|||F|||201110281530|

OBX|12|NM|53186-3^Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot^LN||0.01|{ratio}|< 0.055|N|||F|||201110281530|

OBX|13|CE|46742-3^Isovaleric Acidemia/2-Methylbutyric Acidemia newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 0.90 *µmol/L blood*|N|||F|||201110281530|

OBX|14|NM|45216-9^Isovalerylcarnitine+Methylbutyrylcarnitine (C5) [Moles/volume] in Dried blood spot^LN||0.08|µmol/L blood|< 0.90 µmol/L blood|N|||F|||201110281530|

OBX|15|NM|53238-2^Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Carnitine.free (C0) [Molar ratio] in Dried blood spot^LN||0|{ratio}|< 0.02|N|||F|||201110281530|

OBX|16|NM|53239-0^Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Acetylcarnitine (C2) [Molar ratio] in Dried blood spot^LN||0.01|{ratio}|< 0.02|N|||F|||201110281530|

OBX|17|NM|53240-8^Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Propionylcarnitine (C3) [Molar ratio] in Dried blood spot^LN||0.23|{ratio}|< 0.33|N|||F|||201110281530|

OBX|18|CE|46747-2^Propionic/Methylmalonic Acidemias newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 4.1 *µmol/L blood*|N|||F|||201110281530|

OBX|19|NM|53160-8^Propionylcarnitine (C3) [Moles/volume] in Dried blood spot^LN||0.33|µmol/L blood|< 4.1 µmol/L blood|N|||F|||201110281530|

OBX|20|NM|53163-2^Propionylcarnitine (C3)/Acetylcarnitine (C2) [Molar ratio] in Dried blood spot^LN||0.04|{ratio}|< 0.2|N|||F|||201110281530|

OBX|21|NM|53164-0^Propionylcarnitine (C3)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot^LN||0.04|{ratio}|< 2.2|N|||F|||201110281530|

OBX|22|CE|46751-4^Other organic acidemias newborn screen interpretation^LN||LA18592-8^In range^LN|µmol/L blood|< 1.0 *µmol/L blood*|N|||F|||201110281530|

OBX|23|NM|50106-4^3-Hydroxyisovalerylcarnitine (C5-OH) [Moles/volume] in Dried blood spot^LN||0.07|µmol/L blood|< 1.0 µmol/L blood|N|||F|||201110281530|

4 Appendix

4.1 State Laboratory Tests Performed

57719-7	CONDITIONS TESTED FOR IN THIS NEWBORN SCREENING STUDY		
	LA12465-3	2MBD (2-MBCD)	
	LA12466-1	3-MCC	
	LA12470-3	ARG	Argininemia
	LA12532-0	BIO	Biotinidase
	LA12474-5	BKT	Mitochondrial 2-methylacetoacetyl-CoA thiolase deficiency - potassium stimulated
	LA12569-2	CIT-I or CIT-II or ASA	
	LA12533-8	CAH	Deficiency of steriod 11-beta-monooxygenase
	LA12537-9	CF	Cystic fibrosis
	LA12538-7	CH	Congenital hypothyroidism
	LA12573-4	CPT-II or CACT	
	LA12487-7	CUD	Renal carnitine transport defect
	LA12493-5	GA-1	Glutaric aciduria
	LA12495-0	GA-II	
	LA12543-7	GALT	Deficiency of UTP-hexose-1-phosphate uridylyltransferase (Classical Galactosemia)
	LA12541-1	GALE	Galactose epimerase deficiency
	LA12542-9	GALK	Galactokinase deficiency
	LA12496-8	HCY	Homocystinuria
	LA12512-2	MET	Hypermethioninemia
	LA16207-5	HGB	Hemoglobinopathies
	LA12499-2	HMG	Hydroxymethylglutaric
	LA12504-9	IBG	(IBCD)
	LA12505-6	IVA	Isovaleryl-CoA dehydrogenase deficiency
	LA12574-2	LCHAD or TFP	

	LA12509-8	MCAD	Medium-chain acyl-coenzyme A dehydorgenase deficiency
	LA12513-0	MSUD	Maple syrup urine disease
	LA12520-5	PKU	Classical phenylketonuria
	LA12500-7	H-PHE	Hyperphenylalanemia
	LA12523-9	PROP	Propionic acidemia
	LA12515-5	MUT	Deficiency of methylmalonyl-CoA mutase
	LA12510-6	MCD	Holocarboxylase synthase deficiency
	LA12524-7	SCAD	Short Chain Acyl-CoA Dehydrogenase Deficiency
	LA12566-8	SCID	Severe Combined Immunodeficiency Syndrome
	LA12572-6	TYR-I or TYR-II or TYR-III	
	LA12531-2	VLCAD	Very long chain acyl-CoA dehydrogenase deficiency

4.2 State test codes mapped to LOINC codes

TESTCODE	LOINC_CODE	TESTNAME	ABBREV	DESCR1	UNITS	EXPECTED
03001	42906-8	GALACTOSEMIA	GAL	Galactose 1 phosphate uridyl transferase [Enzymatic activity/volume] in Dried blood spot	Enzyme Activity	
04001	38478-4	Biotinidase	BIO	Biotinidase [Presence] in Dried blood spot	Enzyme Activity	
07001	54105-2	HB - IEF	HB-IEF	Hemoglobin - IEF	Phenotype	
09001	38473-5	CAH	CAH	17-Hydroxyprogesterone [Mass/volume] in Dried blood spot	17-OHP: ng/mL serum	
07002	54104-5	HB - GILSON	HB-GIL	Hemoglobin - Gilson HPLC		
07003	54104-5	HB - BIORAD	HB-BIORA	Hemoglobin - BioRad HPLC		
07004	54071-6	HB PCR TESTS E	HB-PCR-E	Hb PCR tests		AA
07005	56476-5	HB-PCR BETA S	HB-PCR-S	Hemoblobin PCR beta S		
07006	54073-2	HB-PCR BETA C	HB-PCR-C	Hemoglobin PCR beta C		
06001	47700-0	Methionine	Met	Methionine [Moles/volume] in Dried blood spot	µmol/L blood	< 72 µmol/L
07008	54071-6	HB-PCR BETA E	HB-PCR-E	Hb Beta Gene E mutation		
05001	53152-5	Leucine	Leu	Allosioleucine+Isoleucine+Leucine+Hydroxyproline[Moles/vlu	µmol/L blood	

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TESTCODE	LOINC_CODE	TESTNAME	ABBREV	DESCR1	UNITS	EXPECTED
				me] in Dried blood spot		
05002	47799-2	Valine	Val	Valine [Moles/volume] in Dried blood spot	µmol/L blood	< 220 µmol/L blood
05003	53154-1	Leu/Ala ratio	Leu/Ala	Alloisoleucine+Isoleucine+Leucine+Hydroxyproline/Alanine [Molar ratio] in Dried blood spot		< 1.50
11001	53175-6	C8	C8	Octanoylcarnitine (C8) [Moles/volume] in Dried blood spot	µmol/L	
11002	53176-4	C8/C2 ratio	C8/C2	Octanoylcarnitine (C8)/Acetylcarnitine (C2) [Molar ratio] in Dried blood spot	µmol/L blood	< 0.02
02004	29573-3	Phenylalanine	Phe	Phenylalanine [Moles/volume] in Dried blood spot	µmol/L blood	
02005	35572-7	Phe/Tyr ratio	Phe/Tyr	Phenylalanine/Tyrosine [Molar ratio] in Dried blood spot		< 2.0
02006	DON'T USE	PKU HPLC MS	HPLCMS	Phe	umole	
01003	29575-8	PTSH	PTSH	Thyrotropin [Units/volume] in Dried blood spot	TSH: µIU/mL serum	
12001	48633-2	Immuno Reactive Trypsinogen	IRT	Trypsinogen I Free [Mass/volume] in Dried blood spot	IRT: ng/mL blood	
12002	42892-0	Citrulline (ASA)	CITa	Citrulline [Moles/volume] in Dried blood spot	µmol/L blood	
12003	53062-6	ASA	ASA	Argininosuccinate [Moles/volume] in Dried blood spot	µmol/L blood	< 0.77 µmol/L blood
12004	54092-2	Cit/Arg ratio	Cit/Arg	Citrulline/Arginine [Molar ratio] in Dried blood spot		< 5.56
12005	42892-0	Citrulline (CIT)	CITc	Citrulline [Moles/volume] in Dried blood spot	µmol/L blood	
06002	53156-6	Met/Phe ratio	Met/Phe	Methionine/Phenylalanine [Molar ratio] in Dried blood spot		< 1.0
05004	53153-3	Leu/Phe ratio	Leu/Phe	Alloisoleucine+Isoleucine+Leucine+Hydroxyproline/Phenylalanine [Molar ratio] in Dried blood spot		< 3.65
05005	53151-7	Val/Phe ratio	Val/Phe	Valine/Phenylalanine [Molar ratio] in Dried blood spot		< 3.0
12006	53231-7	Succinylacetone	SUAC	Succinylacetone [Moles/volume] in Dried blood spot	µmol/L blood	< 3.25 µmol/L blood
12007	35571-9	Tyrosine	Tyr	Tyrosine [Moles/volume] in Dried blood spot	µmol/L blood	< 209

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TESTCODE	LOINC_CODE	TESTNAME	ABBREV	DESCR1	UNITS	EXPECTED
						µmol/L blood
12008	50106-4	C5OH	C5OHh	3-Hydroxyisovalerylcarnitine (C5-OH) [Moles/volume] in Dried blood spot	µmol/L blood	< 1.0 µmol/L blood
12009	53172-3	C5OH/C8 ratio	C5OH/C8	3-Hydroxyisovalerylcarnitine (C5-OH)/Octanoylcarnitine (C8) [Molar ratio] in Dried blood spot		< 10.0
12010	53170-7	C5:1	C5:1	Tiglylcarnitine (C5:1) [Moles/volume] in Dried blood spot	µmol/L blood	< 0.15 µmol/L blood
12011	53183-0	C5DC	C5DC	Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH) [Moles/volume] in Dried blood spot	µmol/L blood	< 0.18µmol/L blood
12012	53184-8	C5DC/C5OH ratio	C5DC/C5OH	Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/3-Hydroxyisovalerylcarnitine (C5-OH) [Molar ratio] in Dried blood spot		< 1.0
12013	53185-5	C5DC/C8 ratio	C5DC/C8	Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/Octanoylcarnitine (C8) [Molar ratio] in Dried blood spot		< 1.0
12014	53186-3	C5DC/C16 ratio	C5DC/C16	Glutarylcarnitine (C5-DC)+3-Hydroxydecanoylcarnitine (C10-OH)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot		< 0.055
12015	45216-9	C5	C5	Isovalerylcarnitine+Methylbutyrylcarnitine (C5) [Moles/volume] in Dried blood spot	µmol/L blood	
12016	53238-2	C5/C0 ratio	C5/C0	Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Carnitine.free (C0) [Molar ratio] in Dried blood spot		< 0.02
12017	53239-0	C5/C2 ratio	C5/C2	Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Acetylcarnitine (C2) [Molar ratio] in Dried blood spot		< 0.02
12018	53240-8	C5/C3 ratio	C5/C3	Isovalerylcarnitine+Methylbutyrylcarnitine (C5)/Propionylcarnitine (C3) [Molar ratio] in Dried blood spot		< 0.33
12019	53160-8	C3	C3	propionylcarnitine (C3) [Moles/volume] in dried blood spot	µmol/L blood	
12020	53163-2	C3/C2 ratio	C3/C2	Propionylcarnitine (C3)/Acetylcarnitine (C2) [Molar ratio] in dried blood spot		< 0.2

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TESTCODE	LOINC_CODE	TESTNAME	ABBREV	DESCR1	UNITS	EXPECTED
12021	53164-0	C3/C16 ratio	C3/C16	Propionylcarnitne (C3)/ Palmitoylcarnitine (C16) [molar ratio] in dried blood spot		< 2.2
12022	50106-4	C5OHm	C5OHm	3-Hydroxyisovalerylcarnitine (C5-OH) [Moles/volume] in Dried blood spot	µmol/L blood	< 1.0 µmol/L blood
12023	38481-8	C0	C0	Carnitine free (C0) [Moles/volume] in Dried blood spot	µmol/L blood	> 10.9 µmol/L blood
12025	50125-4	C16OH	C16OH	-Hydroxypalmitoylcarnitine (C16-OH) [Moles/volume] in Dried blood spot	µmol/L blood	< 0.15 µmol/L blood
12026	53192-1	C14	C14	Tetradecanoylcarnitine (C14) [Moles/volume] in Dried blood spot	µmol/L blood	< 0.60 µmol/L blood
12027	53191-3	C14:1	C14:1	Tetradecenoylcarnitine (C14:1) [Moles/volume] in Dried blood spot	µmol/L blood	
12028	53199-6	C16	C16	Palmitoylcarnitine (C16) [Moles/volume] in Dried blood spot	µmol/L blood	< 5.69 µmol/L blood
12029	53241-6	C18	C18	Stearoylcarnitine (C18) [Moles/volume] in Dried blood spot	µmol/L blood	< 1.73 µmol/L blood
12030	53201-0	C16OH/C16 ratio	C16OH/C16	3-Hydroxypalmitoylcarnitine (C16-OH)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot		< 0.062
12031	53202-8	C18:1	C18:1	Oleoylcarnitine (C18:1) [Moles/volume] in Dried blood spot	µmol/L blood	< 2.48 µmol/L blood
11003	53177-2	C8/C10 ratio	C8/C10	Octanoylcarnitine (C8)/Decanoylcarnitine (C10) [Molar ratio] in Dried blood spot		< 0.92
11004	45198-9	C10:1	C10:1	Decenoylcarnitine (C10:1) [Moles/volume] in Dried blood spot	µmol/L blood	< 0.18 µmol/L

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TESTCODE	LOINC_CODE	TESTNAME	ABBREV	DESCR1	UNITS	EXPECTED
						blood
12032	53195-4	C14:1/C16 ratio	C14:1/C16	Tetradecenoylcarnitine (C14:1)/Palmitoylcarnitine (C16) [Molar ratio] in Dried blood spot		< 0.11
12033	53200-2	Asa/Arg ratio	Asa/Arg	Argininosuccinate/Arginine [Molar ratio] in Dried blood spot		< 0.15
12034	Not reported	C14:1/C2	C14:1/C2		µmol/L blood	<0.025
12035	50157-7	C2	C2	Acetylcarnitine (C2) [Moles/volume] in Dried blood spot	µmol/L blood	> 9.99 µmol/L blood
12024		C3+C16	C3+C16		µmol/L blood	> 1.99 µmol/L blood
12037	53263-6	ACs/Cit ratio	ACs/Cit	Carnitine.free(C0)+Acetylcarnitine(C2)+Propionylcarnitine(C3)+ Palimitoylcarnitine(C16)+Oleylcarnitine(C18:1)+ Stearoylcarnitine(C18)/Citrulline [Molar ratio] in Dried blood spot		> 2.99
00001		Hearing Screening Initial	HSI	Initial Hearing Screening		Pass / Pass
00002		Hearing Screening Repeat	HSR	Repeat Hearing Screening		Pass / Pass
03002	54084-9	TGal	TGal			< 8.0
12036		DF508	DF508	DF508		
03003		Q188R	Q188R	Q188R		
03004		K285N	K285N	K285N		
03005		N314D	N314D	N314D		
03006		S135L	S135L	S135L		

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4.3 State Disorder Codes Mapped to LOINC Answers (table excludes HGB)

4.3.1 Amino Acids

REPTCODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	577106-AAP DISCUSSION
LA12470-3	**Argininemia**						
90009	ARG	Borderline Arginine	Arginine: ~12005 µmol/L	B	LA04259-3	Borderline	Borderline Arginine
90009	ARG	On TPN - Borderline Arginine	Arginine: ~12005 µmol/L	B_TPN	LA12430-7	OoR further DBS testing	On TPN - Borderline Arginine
90009	ARG	Elevated Arginine	Arginine: ~µmol/L	E	LA18593-6	Out of range	Elevated Arginine
90009	ARG	On TPN - Elevated Arginine	Arginine: ~12005 µmol/L	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Arginine
90009	ARG	On TPN - Elevated Arginine	Arginine: ~12005 µmol/L	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Arginine
90009	ARG	Erroneous Result		ERROR			
90009	ARG		Result Held for Review	HELD			
90009	ARG	Within Normal Limits		N	LA18592-8	In Range	
90009	ARG	Within Normal Limits		N2	LA18592-8	In Range	
90009	ARG	Presumptive Positive - Immediate Action	Arginine: ~12005 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90009	ARG	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90009	ARG		PP Report Could not Determine Result	REVIEW			
90009	ARG	Suspicious Result -	Arginine:	SUSP	LA12430-7	OoR further	Suspicious

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REPTCODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	577106-AAP DISCUSSION
		Clinical Exam/Repeat Screen	~12005 µmol/L			DBS testing	Result - Clinical Exam/Repeat Screen
90009	ARG	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90009	ARG	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90009	ARG	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90009	ARG	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90009	ARG	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90009	ARG	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90009	ARG	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90009	ARG	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90009	ARG	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90009	ARG	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90009	ARG	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90009	ARG	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90009	ARG	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90009	ARG	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90009	ARG	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90009	ARG	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90009	ARG	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90009	ARG	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused

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REPTCODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	577106-AAP DISCUSSION
90009	ARG	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90009	ARG	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90009	ARG	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90009	ARG	Within Normal Limits		WNL	LA18592-8	In Range	
LA12569-2	**CIT-I, CIT-II, ASA**						
90006	CIT/ASL	Borderline Citrulline	Citrulline: ~12003 µmol/L	B	LA04259-3	Borderline	Borderline Citrulline
90006	CIT/ASL	On TPN - Borderline Citrulline	Cit: ~12003 µmol/L Cit/Arg: ~12105	B_TPN	LA12430-7	OoR further DBS testing	On TPN - Borderline Citrulline
90006	CIT/ASL	Elevated Citrulline	Citrulline: ~12003 µmol/L	E	LA18593-6	Out of range	Elevated Citrulline
90006	CIT/ASL	On TPN - Elevated Citrulline	Cit: ~12003 µmol/L Cit/Arg: ~12105	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Citrulline
90006	CIT/ASL	On TPN - Elevated Citrulline	Cit: ~12003 µmol/L Cit/Arg: ~12105	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Citrulline
90006	CIT/ASL	Erroneous Result		ERROR			
90006	CIT/ASL		Result Held for Review	HELD			
90006	CIT/ASL	Inconclusive - Prompt Repeat	Citrulline: ~12003 µmol/L Cit/Arg: ~12105	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90006	CIT/ASL	Within Normal Limits		N	LA18592-8	In Range	
90006	CIT/ASL	Within Normal Limits		N2	LA18592-8	In Range	

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90006	CIT/ASL	Presumptive Positive - Immediate Action	Citrulline: ~12003 µmol/L Cit/Arg: ~12105	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90006	CIT/ASL	Testing Referred * Within Normal Limits	REFN		LA18592-8	In Range	Testing Referred * Within Normal Limits
90006	CIT/ASL		PP Report Could not Determine Result	REVIEW			
90006	CIT/ASL	Testing Referred. See comments *	Abnormal	RFAB	LA18593-6	Out of Range	Testing Referred. See comments *
90006	CIT/ASL	Suspicious Result - Clinical Exam/Repeat Screen	Citrulline: ~12003 µmol/L Cit/Arg: ~12105	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90006	CIT/ASL	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90006	CIT/ASL	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90006	CIT/ASL	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90006	CIT/ASL	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90006	CIT/ASL	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90006	CIT/ASL	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90006	CIT/ASL	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90006	CIT/ASL	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90006	CIT/ASL	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding

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90006	CIT/ASL	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90006	CIT/ASL	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90006	CIT/ASL	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90006	CIT/ASL	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90006	CIT/ASL	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90006	CIT/ASL	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90006	CIT/ASL	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90006	CIT/ASL	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90006	CIT/ASL	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90006	CIT/ASL	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90006	CIT/ASL	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90006	CIT/ASL	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90006	CIT/ASL	Within Normal Limits		WNL	LA18592-8	In Range	
90006	CIT/ASL	Elevated Ratio with Normal Citrulline Levels - Repeat	Cit/Arg Ratio: ~12105 Citrulline: ~12003 µmol/L	WNLR	LA11884-6	Indeterminate	Elevated Ratio with Normal Citrulline Levels - Repeat
LA12496-8	**HCY**	**Homocystinuria**					
LA12512-2	**MET**	**Hypermethioninemia**					
90004	HCYS/MET	Borderline Methionine	Methionine: ~12004 µmol/L	B	LA04259-3	Borderline	Borderline Methionine
90004	HCYS/MET	On TPN - Borderline	Methionine:	B_TPN	LA12430-7	OoR further	On TPN -

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		Methionine	~12004 µmol/L Met/Phe: ~12106			DBS testing	Borderline Methionine
90004	HCYS/MET	Elevated Methionine	Methionine: ~µmol/L	E	LA18593-6	Out of range	Elevated Methionine
90004	HCYS/MET	On TPN - Elevated Methionine	Methionine: ~12004 µmol/L Met/Phe: ~12106	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Methionine
90004	HCYS/MET	On TPN - Elevated Methionine	Methionine: ~12004 µmol/L Met/Phe: ~12106	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Methionine
90004	HCYS/MET	Erroneous Result		ERROR			
90004	HCYS/MET		Result Held for Review	HELD			
90004	HCYS/MET	Inconclusive - Repeat	Methionine: ~12004 µmol/L Met/Phe: ~12106	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
90004	HCYS/MET	Within Normal Limits		N	LA18592-8	In Range	
90004	HCYS/MET	Within Normal Limits		N2	LA18592-8	In Range	
90004	HCYS/MET	Presumptive Positive - Immediate Action	Methionine: ~12004 µmol/L Met/Phe: ~12106	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90004	HCYS/MET	Testing Referred * Within Normal Limits	REFN		LA18592-8	In Range	Testing Referred * Within Normal Limits
90004	HCYS/MET		PP Report Could not Determine Result	REVIEW			
90004	HCYS/MET	Testing Referred. See comments *	Abnormal	RFAB	LA18593-6	Out of Range	Testing Referred.

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							See comments *
90004	HCYS/MET	Suspicious Result - Clinical Exam/Repeat Screen	Methionine: ~12004 µmol/L Met/Phe: ~12106	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90004	HCYS/MET	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90004	HCYS/MET	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90004	HCYS/MET	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90004	HCYS/MET	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90004	HCYS/MET	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90004	HCYS/MET	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90004	HCYS/MET	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90004	HCYS/MET	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90004	HCYS/MET	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90004	HCYS/MET	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90004	HCYS/MET	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90004	HCYS/MET	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90004	HCYS/MET	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90004	HCYS/MET	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90004	HCYS/MET	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90004	HCYS/MET	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90004	HCYS/MET	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90004	HCYS/MET	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent

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							Refused
90004	HCYS/MET	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90004	HCYS/MET	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90004	HCYS/MET	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90004	HCYS/MET	Within Normal Limits		WNL	LA18592-8	In Range	
90004	HCYS/MET	Elevated Ratio with Normal Methionine Levels - Repeat	Met/Phe Ratio: ~12106 Methionine: ~12004	WNLR	LA11884-6	Indeterminate	Elevated Ratio with Normal Methionine Levels - Repeat
LA12513-0	**MSUD**						
95001	MSUD	Borderline leucine-isoleucine	Leucine-isoleucine: ~11006 µmol/L	B	LA04259-3	Borderline	Borderline leucine-isoleucine
95001	MSUD	On TPN - Borderline Leucine	Leucine: ~11006 µmol/L Leu/Phe: ~12102	B_TPN	LA12430-7	OoR further DBS testing	On TPN - Borderline Leucine
95001	MSUD	Elevated leucine-isoleucine/Phe ratio	Leucine-isoleucine: ~11006 µmol/L	E	LA18593-6	Out of range	Elevated leucine-isoleucine/Phe ratio
95001	MSUD	On TPN - Elevated Leucine	Leucine: ~11006 µmol/L Ley/Phe: ~12102	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Leucine
95001	MSUD	On TPN - Elevated Leucine	Leucine: ~11006 µmol/L Leu/Tyr: ~12102	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Leucine
95001	MSUD	Erroneous Result		ERROR			
95001	MSUD		Result Held for Review	HELD			
95001	MSUD	Inconclusive - Repeat	Leucine: ~11006 µmol/L Leu/Phe: ~12102	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
95001	MSUD	Within Normal Limits		N	LA18592-8	In Range	

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95001	MSUD	Within Normal Limits		N2	LA18592-8	In Range	
95001	MSUD	Presumptive Positive - Immediate Action	Leucine: ~11006 µmol/L Leu/Phe: ~12102	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
95001	MSUD	Testing Referred * Within Normal Limits	REFN		LA18592-8	In Range	Testing Referred * Within Normal Limits
95001	MSUD		PP Report Could not Determine Result	REVIEW			
95001	MSUD	Testing Referred. See comments *	Abnormal	RFAB	LA18593-6	Out of Range	Testing Referred. See comments *
95001	MSUD	Suspicious Result - Clinical Exam/Repeat Screen	Leucine: ~11006 µmol/L Leu/Phe: ~12102	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
95001	MSUD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
95001	MSUD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
95001	MSUD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
95001	MSUD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
95001	MSUD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
95001	MSUD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
95001	MSUD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
95001	MSUD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
95001	MSUD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
95001	MSUD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation

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95001	MSUD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
95001	MSUD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
95001	MSUD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
95001	MSUD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
95001	MSUD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
95001	MSUD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
95001	MSUD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
95001	MSUD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
95001	MSUD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
95001	MSUD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
95001	MSUD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
95001	MSUD	Within Normal Limits		WNL	LA18592-8	In Range	
95001	MSUD	Elevated Ratio with normal Leucine - Repeat	Leu/Phe Ratio: ~12102 Leucine: ~11006 µmol/L	WNLR	LA11884-6	Indeterminate	Elevated Ratio with normal Leucine - Repeat
LA12520-5	**PKU**	**Classical phenylketonuria**					
LA12500-7	**H-PHE**	**Hyperphenylalanemia**					
92001	PKU			331			Archived
92001	PKU			333			Archived
92001	PKU			3BORD			Archived
92001	PKU		Phe: ~00103 µmol/L Phe/Tyr: ~12103	3CLEL			Archived

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92001	PKU	Abnormal Normal < 15 mg/dL	Elevated	3ELEV			Archived
92001	PKU	Borderline Phenylalanine	Phe: ~00103 µmol/L Phe/Tyr: ~12103	B	LA04259-3	Borderline	Borderline Phenylalanine
92001	PKU	On TPN - Borderline Phenylalanine	Phe: ~00103 µmol/L Phe/Tyr: ~12103	B_TPN	LA12430-7	OoR further DBS testing	On TPN - Borderline Phenylalanine
92001	PKU	Elevated Phenylalanine	Phe: ~00103 µmol/L Phe/Tyr: ~12103	E	LA18593-6	Out of range	Elevated Phenylalanine
92001	PKU	On TPN - Elevated Phenylalanine	Phe: ~00103 µmol/L Phe/Tyr: ~12103	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Phenylalanine
92001	PKU	On TPN - Elevated Phenylalanine	Phe: ~00103 µmol/L Phe/Tyr: ~12103	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Phenylalanine
92001	PKU	Inconclusive - Repeat	Phe: ~00103 µmol/L Phe/Tyr: ~12103	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
92001	PKU	Within Normal Limits		N	LA18592-8	In Range	
92001	PKU	Within Normal Limits		N2	LA18592-8	In Range	
92001	PKU	Presumptive Positive - Immediate Action	Phe: ~00103 µmol/L Phe/Tyr: ~12103	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
92001	PKU	Testing Referred * Within Normal Limits	REFN	LA18592-8		In Range	Testing Referred * Within Normal Limits
92001	PKU		PP Report Could not Determine Result	REVIEW			
92001	PKU	Testing Referred. See comments *	Abnormal	RFAB	LA18593-6	Out of Range	Testing Referred. See comments *
92001	PKU	Suspicious Result - Clinical Exam/Repeat Screen	Phe: ~00103 µmol/L Phe/Tyr: ~12103	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen

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92001	PKU	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
92001	PKU	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
92001	PKU	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
92001	PKU	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
92001	PKU	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
92001	PKU	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
92001	PKU	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
92001	PKU	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
92001	PKU	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
92001	PKU	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
92001	PKU	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
92001	PKU	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
92001	PKU	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
92001	PKU	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
92001	PKU	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
92001	PKU	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
92001	PKU	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
92001	PKU	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
92001	PKU	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
92001	PKU	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
92001	PKU	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet

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92001	PKU	Within Normal Limits		WNL	LA18592-8	In Range	
92001	PKU	Elevated Ratio with Normal Phe levels - Repeat	Phe/Tyr Ratio: ~12103 Phenylalanine: ~00103 µmol/L	WNLR	LA11884-6	Indeterminate	Elevated Ratio with Normal Phe levels - Repeat
LA12572-6	**TYR I, II, III**						
90005	TYR	Borderline Tyrosine	Tyrosine: ~12002 µmol/L	B	LA04259-3	Borderline	Borderline Tyrosine
90005	TYR	On TPN - Borderline Tyrosine	Tyrosine: ~12002 µmol/L Tyr/Phe: ~12104	B_TPN	LA12430-7	OoR further DBS testing	On TPN - Borderline Tyrosine
90005	TYR	Elevated Tyrosine	Tyrosine: ~12002 µmol/L	E	LA18593-6	Out of range	Elevated Tyrosine
90005	TYR	On TPN - Elevated Tyrosine	Tyrosine: ~12002 µmol/L Tyr/Phe: ~12104	E_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Tyrosine
90005	TYR	On TPN - Elevated Tyrosine	Tyrosine: ~12002 µmol/L Tyr/Phe: ~12104	E2_TPN	LA12430-7	OoR further DBS testing	On TPN - Elevated Tyrosine
90005	TYR		Result Held for Review	HELD			
90005	TYR	Inconclusive - Prompt Repeat	Tyrosine: ~12002 µmol/L Tyr/Phe: 12104	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90005	TYR	Within Normal Limits		N	LA18592-8	In Range	
90005	TYR	Within Normal Limits		N2	LA18592-8	In Range	
90005	TYR	Presumptive Positive - Immediate Action	Tyrosine: ~12002 µmol/L Tyr/Phe: ~12104	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90005	TYR	Testing Referred * Within Normal Limits	REFN		LA18592-8	In Range	Testing Referred * Within Normal Limits
90005	TYR			REVIEW			
90005	TYR	Testing Referred. See	Abnormal	RFAB	LA18593-6	Out of Range	Testing

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		comments *					Referred. See comments *
90005	TYR	Suspicious Result - Clinical Exam/Repeat Screen	Tyrosine: ~12002 µmol/L Tyr/Phe: ~12104	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90005	TYR	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90005	TYR	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90005	TYR	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90005	TYR	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90005	TYR	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90005	TYR	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90005	TYR	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90005	TYR	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90005	TYR	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90005	TYR	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90005	TYR	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90005	TYR	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90005	TYR	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90005	TYR	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90005	TYR	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90005	TYR	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale

REPTCODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	577106-AAP DISCUSSION
90005	TYR	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90005	TYR	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90005	TYR	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90005	TYR	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90005	TYR	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90005	TYR	Within Normal Limits		WNL	LA18592-8	In Range	
90005	TYR	Elevated Ratio with Normal Tyrosine - Repeat	Tyr/Phe Ratio: ~12104 Tyrosine: ~12002 µmol/L	WNLR	LA11884-6	Indeterminate	Elevated Ratio with Normal Tyrosine - Repeat

4.3.2 Fatty Acids:

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
LA12573-4	**CPT-II, CACT**						
90205	CPT2/CAT	Borderline AC16	AC16: ~13009 µmol/L	B	LA4259-3	Borderline	Borderline AC16
90205	CPT2/CAT	Elevated AC16	AC16: ~13009 µmol/L	E	LA18593-6	Elevated	Elevated AC16
90205	CPT2/CAT	Inconclusive - Repeat	AC16: ~13009 µmol/L AC18:1: ~13014 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
90205	CPT2/CAT	Within Normal Limits		N	LA18592-8	In Range	
90205	CPT2/CAT	Within Normal Limits		N2	LA18592-8	In Range	

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90205	CPT2/CAT	Presumptive Positive - Immediate Action	AC16: ~13009 µmol/L AC18:1: ~13014 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90205	CPT2/CAT	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90205	CPT2/CAT		PP Report Could not Determine Result	REVIEW			
90205	CPT2/CAT	Suspicious Result - Clinical Exam/Repeat Screen	AC16: ~13009 µmol/L AC18:1: ~13014 µmol/L	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90205	CPT2/CAT	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90205	CPT2/CAT	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90205	CPT2/CAT	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90205	CPT2/CAT	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90205	CPT2/CAT	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90205	CPT2/CAT	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90205	CPT2/CAT	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90205	CPT2/CAT	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90205	CPT2/CAT	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90205	CPT2/CAT	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90205	CPT2/CAT	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90205	CPT2/CAT	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90205	CPT2/CAT	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90205	CPT2/CAT	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90205	CPT2/CAT	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90205	CPT2/CAT	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90205	CPT2/CAT	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90205	CPT2/CAT	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90205	CPT2/CAT	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90205	CPT2/CAT	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90205	CPT2/CAT	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90205	CPT2/CAT	Within Normal Limits		WNL	LA18592-8	In Range	
LA12487-7	**CUD**						
90210	CUD	Abnormal Low AC0	Free Carnitine: ~13000 µmol/L	A	LA12430-7	OoR, 2nd tier testing	Abnormal Low AC0
90210	CUD	Abnormal C0 - 2nd	Free Carnitine: ~13000 µmol/L	A2	LA12430-7	OoR, 2nd tier testing	Abnormal C0 - 2nd
90210	CUD	Abnormal C0 - 2nd	Free Carnitine: ~13000 µmol/L	A2	LA12430-7	OoR, 2nd tier testing	Abnormal C0 - 2nd
90210	CUD	Borderline Low C0	Free Carnitine: ~13000 µmol/L	B	LA4259-3	Borderline	Borderline Low C0
90210	CUD	Inconclusive - Prompt Repeat	AC0: ~13000 µmol/L	INC	LA12430-7		Inconclusive - Prompt Repeat
90210	CUD	Within Normal Limits		N	LA18592-8	In Range	
90210	CUD	Within Normal Limits		N2	LA18592-8	In Range	
90210	CUD	Presumptive Positive - Immediate Action	AC0: ~13000 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90210	CUD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90210	CUD		PP Report Could not Determine Result	REVIEW			0
90210	CUD	Testing Referred. See Comments *	Abnormal	RFAB	LA18944-1	Screen OofR for at least one condition	Testing Referred. See Comments *
90210	CUD	Suspicious Result - Clinical Exam/Repeat Screen	AC0: ~13000 µmol/L	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90210	CUD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90210	CUD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90210	CUD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90210	CUD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90210	CUD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90210	CUD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90210	CUD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90210	CUD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90210	CUD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90210	CUD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90210	CUD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90210	CUD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90210	CUD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90210	CUD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90210	CUD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90210	CUD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90210	CUD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90210	CUD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90210	CUD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90210	CUD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90210	CUD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90210	CUD	Within Normal Limits		WNL	LA18592-8	In Range	
LA12495-0	**GA-II (MADD)**						
90213	GA2/MADD	Borderline AC10	AC10: ~13007 µmol/L	B	LA4259-3	Borderline	Borderline AC10
90213	GA2/MADD	Elevated AC10	AC10: ~13007 µmol/L	E	LA18593-6	Elevated	Elevated AC10
90213	GA2/MADD	Inconclusive - Multiple Borderline Results	AC10 ~13007 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Multiple Borderline Results
90213	GA2/MADD	Inconclusive - Repeat	AC10: ~13007 µmol/L	INC2	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
90213	GA2/MADD	Within Normal Limits		N	LA18592-8	In Range	
90213	GA2/MADD	Within Normal Limits		N2	LA18592-8	In Range	
90213	GA2/MADD	Presumptive Positive - Multiple Elevated Results	AC10: ~13007 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Multiple Elevated Results
90213	GA2/MADD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90213	GA2/MADD		PP Report Could not Determine Result	REVIEW			
90213	GA2/MADD	Suspicious Result - Multiple Bord/Elev Results	AC10: ~13007 µmol/L	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Multiple Bord/Elev Results
90213	GA2/MADD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90213	GA2/MADD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90213	GA2/MADD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90213	GA2/MADD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90213	GA2/MADD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90213	GA2/MADD	Damaged Paper	Unsatisfactory	UDT	LA1620	Unsatisfactory	Damaged Paper

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
					5-9		
90213	GA2/MADD	Blood dark; heated	Unsatisfactory	UHB	LA1620 5-9	Unsatisfactory	Blood dark; heated
90213	GA2/MADD	Does Not Elute	Unsatisfactory	UIE	LA1620 5-9	Unsatisfactory	Does Not Elute
90213	GA2/MADD	Insufficient Feeding	Unsatisfactory	UIF	LA1620 5-9	Unsatisfactory	Insufficient Feeding
90213	GA2/MADD	Incomplete Saturation	Unsatisfactory	UIS	LA1620 5-9	Unsatisfactory	Incomplete Saturation
90213	GA2/MADD	Laboratory Accident	Unsatisfactory	ULA	LA1620 5-9	Unsatisfactory	Laboratory Accident
90213	GA2/MADD	Sample Not Blood	Unsatisfactory	UNB	LA1620 5-9	Unsatisfactory	Sample Not Blood
90213	GA2/MADD	No Sample	Unsatisfactory	UNS	LA1620 5-9	Unsatisfactory	No Sample
90213	GA2/MADD	Collection Kit Expired	Unsatisfactory	UOK	LA1620 5-9	Unsatisfactory	Collection Kit Expired
90213	GA2/MADD	Sample Too Old	Unsatisfactory	UOL	LA1620 5-9	Unsatisfactory	Sample Too Old
90213	GA2/MADD	Blood Pale	Unsatisfactory	UPB	LA1620 5-9	Unsatisfactory	Blood Pale
90213	GA2/MADD	Insufficient Quantity	Unsatisfactory	UQN	LA1620 5-9	Unsatisfactory	Insufficient Quantity
90213	GA2/MADD	Parent Refused	Unsatisfactory	URF	LA1620 5-9	Unsatisfactory	Parent Refused
90213	GA2/MADD	Unknown Identity	Unsatisfactory	UUI	LA1620 5-9	Unsatisfactory	Unknown Identity
90213	GA2/MADD	Uneven Saturation	Unsatisfactory	UUS	LA1620 5-9	Unsatisfactory	Uneven Saturation
90213	GA2/MADD	Blood Received Wet	Unsatisfactory	UWB	LA1620 5-9	Unsatisfactory	Blood Received Wet
90213	GA2/MADD	Within Normal Limits		WNL	LA1859 2-8	In Range	
LA12574-2	**LCHAD or TFP**						
90207	LCHAD/TFP	Borderline AC16OH	AC16-OH: ~13010 µmol/L	B	LA4259-3	Borderline	Borderline AC16OH
90207	LCHAD/TFP	Elevated AC16OH	AC16-OH: ~13010 µmol/L	E	LA1859 3-6	Elevated	Elevated AC16OH

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90207	LCHAD/TFP	Inconclusive - Prompt Repeat	AC16-OH: ~13010 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90207	LCHAD/TFP	Within Normal Limits		N	LA18592-8	In Range	
90207	LCHAD/TFP	Within Normal Limits		N2	LA18592-8	In Range	
90207	LCHAD/TFP	Presumptive Positive - Immediate Action	AC16-OH: ~13010 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90207	LCHAD/TFP	Testing Referred *	Normal	REFN	LA18592-8	In Range	Testing Referred *
90207	LCHAD/TFP		PP Report Could not Determine Result	REVIEW			
90207	LCHAD/TFP	Suspicious Result - Clinical Exam/Repeat Screen	AC16-OH: ~13010 µmol/L	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90207	LCHAD/TFP	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90207	LCHAD/TFP	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90207	LCHAD/TFP	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90207	LCHAD/TFP	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90207	LCHAD/TFP	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90207	LCHAD/TFP	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90207	LCHAD/TFP	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90207	LCHAD/TFP	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90207	LCHAD/TFP	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90207	LCHAD/TFP	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90207	LCHAD/TFP	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90207	LCHAD/TFP	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90207	LCHAD/TFP	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90207	LCHAD/TFP	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90207	LCHAD/TFP	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90207	LCHAD/TFP	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90207	LCHAD/TFP	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90207	LCHAD/TFP	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90207	LCHAD/TFP	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90207	LCHAD/TFP	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90207	LCHAD/TFP	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90207	LCHAD/TFP	Within Normal Limits		WNL	LA18592-8	In Range	
LA12509-8	**MCAD**						
90001	MCAD	Borderline AC8	AC8: ~11001 µmol/L	B	LA4259-3	Borderline	Borderline AC8
90001	MCAD	Inconclusive, Borderline C10:1 *	C8- ~11001 µmol/L C10:1- ~13012 µmol/L	B_CMS	LA12430-7	OoR further DBS testing	Inconclusive, Borderline C10:1 *
90001	MCAD	Elevated	AC8: ~11001 µmol/L	E	LA18593-6	Elevated	Elevated
90001	MCAD	Inconclusive - Elevated C10:1 *	C8- ~11001 µmol/L C10:1- ~13012 µmol/L	E_CMS	LA12430-7	OoR further DBS testing	Inconclusive - Elevated C10:1 *
90001	MCAD	Inconclusive, Elevated C10:1 *	C8- ~11001 µmol/L C10:1- ~13012 µmol/L	E2_CMS	LA12430-7	OoR further DBS testing	Inconclusive, Elevated C10:1 *
90001	MCAD	Erroneous Result		ERROR			
90001	MCAD		Result Held for Review	HELD			
90001	MCAD	Inconclusive - Prompt Repeat	AC8: ~11001 µmol/L AC6: ~13016 µmol/L AC10:1: ~13012 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90001	MCAD	Inconclusive - Repeat	AC8: ~11001 µmol/L AC6: ~13016 µmol/L AC10:1: ~13012 µmol/L	INC2	LA12430-7	OoR further DBS testing	Inconclusive - Repeat

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNE MONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90001	MCAD	Within Normal Limits		N	LA18592-8	In Range	
90001	MCAD	Within Normal Limits		N2	LA18592-8	In Range	
90001	MCAD	Presumptive Positive - Immediate Action	AC8: ~11001 µmol/L AC6: ~13016 µmol/L AC10:1: ~13012 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90001	MCAD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90001	MCAD		PP Report Could not Determine Result	REVIEW			
90001	MCAD	Suspicious Result - Clinical Exam/Repeat Screen	AC8: ~11001 µmol/L AC6: ~13016 µmol/L AC10:1 ~13012 µmol/L	SUSP	LA12430-7	OoR further DBS testing	Suspicious Result - Clinical Exam/Repeat Screen
90001	MCAD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90001	MCAD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90001	MCAD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90001	MCAD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90001	MCAD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90001	MCAD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90001	MCAD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90001	MCAD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90001	MCAD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90001	MCAD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90001	MCAD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90001	MCAD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90001	MCAD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90001	MCAD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90001	MCAD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90001	MCAD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90001	MCAD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90001	MCAD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90001	MCAD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90001	MCAD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90001	MCAD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90001	MCAD	Within Normal Limits		WNL	LA18592-8	In Range	
LA12524-7	**SCAD**						
90208	SCAD/IBCD	Borderline AC4	AC4: ~13002 µmol/L	B	LA4259-3	Borderline	Borderline AC4
90208	SCAD/IBCD	Elevated AC4	AC4: ~13002 µmol/L	E	LA18593-6	Elevated	Elevated AC4
90208	SCAD/IBCD	Inconclusive - Prompt Repeat	AC4: ~13002 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90208	SCAD/IBCD	Within Normal Limits		N	LA18592-8	In Range	
90208	SCAD/IBCD	Within Normal Limits		N2	LA18592-8	In Range	
90208	SCAD/IBCD	Presumptive Positive - Immediate Action	AC4: ~13002 µmol/L	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90208	SCAD/IBCD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90208	SCAD/IBCD		PP Report Could not Determine Result	REVIEW			
90208	SCAD/IBCD	Suspicious Result - Clinical Exam/Repeat Screen	AC4: ~13002 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90208	SCAD/IBCD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90208	SCAD/IBCD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90208	SCAD/IBCD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90208	SCAD/IBCD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90208	SCAD/IBCD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90208	SCAD/IBCD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90208	SCAD/IBCD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90208	SCAD/IBCD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90208	SCAD/IBCD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90208	SCAD/IBCD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90208	SCAD/IBCD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90208	SCAD/IBCD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90208	SCAD/IBCD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90208	SCAD/IBCD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90208	SCAD/IBCD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90208	SCAD/IBCD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90208	SCAD/IBCD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90208	SCAD/IBCD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90208	SCAD/IBCD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90208	SCAD/IBCD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
90208	SCAD/IBCD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90208	SCAD/IBCD	Within Normal Limits		WNL	LA18592-8	In Range	
LA12531-2	**VLCAD**						
90204	VLCAD	Borderline AC14:1	AC14:1: ~13008 µmol/L	B	LA4259-3	Borderline	Borderline AC14:1
90204	VLCAD	Elevated AC14:1	AC14:1: ~13008 µmol/L	E	LA18593-6	Elevated	Elevated AC14:1
90204	VLCAD	Inconclusive - Prompt Repeat	AC14:1: ~13008 µmol/L AC16OH: ~13010 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90204	VLCAD	Within Normal Limits		N	LA18592-8	In Range	
90204	VLCAD	Within Normal Limits		N2	LA18592-8	In Range	
90204	VLCAD	Presumptive Positive - Immediate Action	AC14:1: ~13008 µmol/L AC16OH: ~13010 µmol/L	PP	LA12430-7	OofR, immediate 2nd tier testing	Presumptive Positive - Immediate Action
90204	VLCAD	Insufficient Quantity	Unsatisfactory	QN			Insufficient Quantity
90204	VLCAD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90204	VLCAD		PP Report Could not Determine Result	REVIEW			
90204	VLCAD	Suspicious Result - Clinical Exam/Repeat Screen	AC14:1: ~13008 µmol/L AC16OH: ~13010 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90204	VLCAD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90204	VLCAD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90204	VLCAD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90204	VLCAD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90204	VLCAD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90204	VLCAD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90204	VLCAD	Blood dark; heated	Unsatisfactory	UHB	LA1620	Unsatisfactory	Blood dark; heated

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57710-6 AAP Discussion*
					5-9		
90204	VLCAD	Does Not Elute	Unsatisfactory	UIE	LA1620 5-9	Unsatisfactory	Does Not Elute
90204	VLCAD	Insufficient Feeding	Unsatisfactory	UIF	LA1620 5-9	Unsatisfactory	Insufficient Feeding
90204	VLCAD	Incomplete Saturation	Unsatisfactory	UIS	LA1620 5-9	Unsatisfactory	Incomplete Saturation
90204	VLCAD	Laboratory Accident	Unsatisfactory	ULA	LA1620 5-9	Unsatisfactory	Laboratory Accident
90204	VLCAD	Sample Not Blood	Unsatisfactory	UNB	LA1620 5-9	Unsatisfactory	Sample Not Blood
90204	VLCAD	No Sample	Unsatisfactory	UNS	LA1620 5-9	Unsatisfactory	No Sample
90204	VLCAD	Collection Kit Expired	Unsatisfactory	UOK	LA1620 5-9	Unsatisfactory	Collection Kit Expired
90204	VLCAD	Sample Too Old	Unsatisfactory	UOL	LA1620 5-9	Unsatisfactory	Sample Too Old
90204	VLCAD	Blood Pale	Unsatisfactory	UPB	LA1620 5-9	Unsatisfactory	Blood Pale
90204	VLCAD	Insufficient Quantity	Unsatisfactory	UQN	LA1620 5-9	Unsatisfactory	Insufficient Quantity
90204	VLCAD	Parent Refused	Unsatisfactory	URF	LA1620 5-9	Unsatisfactory	Parent Refused
90204	VLCAD	Unknown Identity	Unsatisfactory	UUI	LA1620 5-9	Unsatisfactory	Unknown Identity
90204	VLCAD	Uneven Saturation	Unsatisfactory	UUS	LA1620 5-9	Unsatisfactory	Uneven Saturation
90204	VLCAD	Blood Received Wet	Unsatisfactory	UWB	LA1620 5-9	Unsatisfactory	Blood Received Wet
90204	VLCAD	Within Normal Limits		WNL	LA1859 2-8	In Range	

4.3.3 Organic Acids:

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
LA12466-1	3MCC						

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
LA12499-2	HMG						
90209	3-MCC/HMG	Borderline AC5OH	AC5OH: ~13005 µmol/L	B	LA4259-3	Borderline	Borderline AC5OH
90209	3-MCC/HMG	Elevated AC5OH	AC5OH: ~13005 µmol/L	E	LA18593-6	Elevated	Elevated AC5OH
90209	3-MCC/HMG	Inconclusive - Repeat	AC5OH: ~13005 µmol/L AC5-3M-DC: ~13015 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
90209	3-MCC/HMG	Within Normal Limits		N	LA18592-8	In Range	
90209	3-MCC/HMG	Within Normal Limits		N2	LA18592-8	In Range	
90209	3-MCC/HMG	Presumptive Positive - Immediate Action	AC5OH: ~13005 µmol/L AC5-3M-DC: ~13015 µmol/L	PP	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
90209	3-MCC/HMG	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90209	3-MCC/HMG		PP Report Could not Determine Result	REVIEW			
90209	3-MCC/HMG	Suspicious Result - Clinical Exam/Repeat Screen	AC5OH: ~13005 µmol/L AC5-3M-DC: ~13015 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90209	3-MCC/HMG	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90209	3-MCC/HMG	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90209	3-MCC/HMG	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90209	3-MCC/HMG	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90209	3-MCC/HMG	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90209	3-MCC/HMG	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90209	3-MCC/HMG	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90209	3-MCC/HMG	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90209	3-MCC/HMG	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90209	3-MCC/HMG	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90209	3-MCC/HMG	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90209	3-MCC/HMG	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90209	3-MCC/HMG	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90209	3-MCC/HMG	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90209	3-MCC/HMG	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90209	3-MCC/HMG	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90209	3-MCC/HMG	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90209	3-MCC/HMG	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90209	3-MCC/HMG	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90209	3-MCC/HMG	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90209	3-MCC/HMG	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90209	3-MCC/HMG	Within Normal Limits		WNL	LA18592-8	In Range	
LA12474-5	BKT						
90215	BKT	Borderline AC5:1	AC5:1: ~13004 µmol/L	B	LA4259-3	Borderline	Borderline AC5:1
90215	BKT	Elevated AC5:1	AC5:1: ~13004 µmol/L	E	LA18593-6	Elevated	Elevated AC5:1
90215	BKT	Inconclusive - Prompt Repeat	AC5:1: ~13004 µmol/L AC5OH: ~13005 mol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90215	BKT	Within Normal Limits		N	LA18592-8	In Range	
90215	BKT	Within Normal Limits		N2	LA18592-8	In Range	
90215	BKT	Presumptive Positive - Immediate Action	AC5:1: ~13004 µmol/L AC5OH: ~13005 mol/L	PP	LA12431-5	OofR, immediate 2nd tier testing	Presumptive Positive - Immediate Action
90215	BKT	Testing Referred * Within Normal		REFN	LA18592	In Range	Testing Referred *

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
		Limits			-8		Within Normal Limits
90215	BKT		PP Report Could not Determine Result	REVIEW			
90215	BKT	Suspicious Result - Clinical Exam/Repeat Screen	AC5:1: ~13004 µmol/L AC5OH: ~13005 mol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90215	BKT	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90215	BKT	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90215	BKT	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90215	BKT	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90215	BKT	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90215	BKT	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90215	BKT	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90215	BKT	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90215	BKT	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90215	BKT	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90215	BKT	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90215	BKT	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90215	BKT	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90215	BKT	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90215	BKT	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90215	BKT	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90215	BKT	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90215	BKT	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90215	BKT	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90215	BKT	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90215	BKT	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90215	BKT	Within Normal Limits		WNL	LA18592-8	In Range	
LA12493-5	**Glutaric aciduria**						
90010	GA-1	Borderline AC5-DC	AC5DC: ~11008 µmol/L	B	LA4259-3	Borderline	Borderline AC5-DC
90010	GA-1	Internal Standard value out of range	BAD_IS			Internal Standard value out of range	
90010	GA-1	Elevated AC5-DC	AC5DC: ~11008 µmol/L	E	LA18593-6	Elevated	Elevated AC5-DC
90010	GA-1	Erroneous Result		ERROR			Erroneous Result
90010	GA-1		Result Held for Review	HELD			
90010	GA-1	Inconclusive - Prompt Repeat	AC5DC: ~11008 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90010	GA-1	Within Normal Limits		N	LA18592-8	In Range	
90010	GA-1	Within Normal Limits		N2	LA18592-8	In Range	
90010	GA-1	Presumptive Positive - Immediate Action	AC5DC: ~11008 µmol/L	PP	LA12431-5	OofR, immediate 2nd tier testing	Presumptive Positive - Immediate Action
90010	GA-1	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90010	GA-1		PP Report Could not Determine Result	REVIEW			
90010	GA-1	Suspicious Result - Clinical Exam/Repeat Screen	AC5DC: ~11008 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90010	GA-1	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90010	GA-1	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90010	GA-1	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90010	GA-1	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90010	GA-1	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90010	GA-1	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90010	GA-1	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90010	GA-1	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90010	GA-1	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90010	GA-1	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90010	GA-1	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90010	GA-1	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90010	GA-1	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90010	GA-1	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90010	GA-1	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90010	GA-1	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90010	GA-1	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90010	GA-1	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90010	GA-1	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90010	GA-1	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90010	GA-1	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90010	GA-1	Within Normal Limits		WNL	LA18592-8	In Range	Within Normal Limits
LA12523-9	**PROP**						
LA12515-5	**MUT**						
LA12510-6	**MCD**						
90201	PPA/MMA/MCD	Borderline AC3	AC3: ~13001 µmol/L	B	LA4259-3	Borderline	Borderline AC3
90201	PPA/MMA/MCD	Elevatred AC3	AC3: ~13001 µmol/L	E	LA18593-6	Elevated	Elevatred AC3
90201	PPA/MMA/MCD	Inconclusive - Repeat	AC3: ~13001 µmol/L AC3-2M-DC: ~13013 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Repeat
90201	PPA/MMA/MCD	Within Normal Limits		N	LA18592-8	In Range	
90201	PPA/MMA/MCD	Within Normal Limits		N2	LA18592-8	In Range	
90201	PPA/MMA/MCD	Presumptive Positive - Immediate Action	AC3: ~13001 µmol/L	PP	LA12431-5	OofR, immediate 2nd tier testing	Presumptive Positive - Immediate Action
90201	PPA/MMA/MCD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90201	PPA/MMA/MCD		PP Report Could not Determine Result	REVIEW			
90201	PPA/MMA/MCD	Suspicious Result - Clinical Exam/Repeat Screen	AC3: ~13001 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90201	PPA/MMA/MCD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90201	PPA/MMA/MCD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90201	PPA/MMA/MCD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90201	PPA/MMA/MCD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90201	PPA/MMA/MCD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90201	PPA/MMA/MCD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90201	PPA/MMA/MCD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90201	PPA/MMA/MCD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90201	PPA/MMA/MCD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90201	PPA/MMA/MCD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90201	PPA/MMA/MCD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90201	PPA/MMA/MCD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90201	PPA/MMA/MCD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90201	PPA/MMA/MCD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90201	PPA/MMA/MCD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90201	PPA/MMA/MCD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90201	PPA/MMA/MCD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90201	PPA/MMA/MCD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90201	PPA/MMA/MCD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90201	PPA/MMA/MCD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90201	PPA/MMA/MCD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90201	PPA/MMA/MCD	Within Normal Limits		WNL	LA18592-8	In Range	
LA12504-9	**IBG**						
90208	SCAD/IBCD	Borderline AC4	AC4: ~13002 µmol/L	B	LA4259-3	Borderline	Borderline AC4
90208	SCAD/IBCD	Elevated AC4	AC4: ~13002 µmol/L	E	LA18593-6	Elevated	Elevated AC4
90208	SCAD/IBCD	Inconclusive - Prompt Repeat	AC4: ~13002 µmol/L	INC	LA12430	OoR further DBS testing	Inconclusive - Prompt

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					-7		Repeat
90208	SCAD/IBCD	Within Normal Limits		N	LA18592-8	In Range	
90208	SCAD/IBCD	Within Normal Limits		N2	LA18592-8	In Range	
90208	SCAD/IBCD	Presumptive Positive - Immediate Action	AC4: ~13002 µmol/L	PP	LA12431-5	OofR, immediate 2nd tier testing	Presumptive Positive - Immediate Action
90208	SCAD/IBCD	Testing Referred * Within Normal Limits		REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits
90208	SCAD/IBCD		PP Report Could not Determine Result	REVIEW			
90208	SCAD/IBCD	Suspicious Result - Clinical Exam/Repeat Screen	AC4: ~13002 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90208	SCAD/IBCD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90208	SCAD/IBCD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90208	SCAD/IBCD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90208	SCAD/IBCD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90208	SCAD/IBCD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90208	SCAD/IBCD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90208	SCAD/IBCD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90208	SCAD/IBCD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90208	SCAD/IBCD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90208	SCAD/IBCD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90208	SCAD/IBCD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90208	SCAD/IBCD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90208	SCAD/IBCD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90208	SCAD/IBCD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90208	SCAD/IBCD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90208	SCAD/IBCD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90208	SCAD/IBCD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90208	SCAD/IBCD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90208	SCAD/IBCD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90208	SCAD/IBCD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90208	SCAD/IBCD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90208	SCAD/IBCD	Within Normal Limits		WNL	LA18592-8	In Range	
LA12505-6	**IVA**						
LA12465-3	**2MBD (2-MBCD)**						
90203	IVA/2MBCD	Borderline AC5	AC5: ~13003 µmol/L	B	LA4259-3	Borderline	Borderline AC5
90203	IVA/2MBCD	Inconclusive - Borderline C5 *	C5: ~13003 µmol/L	B_CMS	LA12430-7	OoR further DBS testing	Inconclusive - Borderline C5 *
90203	IVA/2MBCD	Elevated AC5	AC5: ~13003 µmol/L	E	LA18593-6	Elevated	Elevated AC5
90203	IVA/2MBCD	Inconclusive - Elevated AC5 *	AC5: ~13003 µmol/L	E_CMS	LA12430-7	OoR further DBS testing	Inconclusive - Elevated AC5 *
90203	IVA/2MBCD	Inconclusive - Elevated C5 *	C5: ~13003 µmol/L	E2_CMS	LA12430-7	OoR further DBS testing	Inconclusive - Elevated C5 *
90203	IVA/2MBCD	Inconclusive - Prompt Repeat	AC5: ~13003 µmol/L	INC	LA12430-7	OoR further DBS testing	Inconclusive - Prompt Repeat
90203	IVA/2MBCD	Within Normal Limits		N	LA18592-8	In Range	
90203	IVA/2MBCD	Within Normal Limits		N2	LA18592-8	In Range	
90203	IVA/2MBCD	Presumptive Positive - Immediate	AC5: ~13003 µmol/L	PP	LA12430	OofR, immediate 2nd tier	Presumptive Positive -

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
		Action			-7	testing	Immediate Action
90203	IVA/2MBCD	Testing Referred * Within Normal Limits	REFN	LA18592-8	In Range	Testing Referred * Within Normal Limits	
90203	IVA/2MBCD		PP Report Could not Determine Result	REVIEW			0
90203	IVA/2MBCD	Suspicious Result - Clinical Exam/Repeat Screen	AC5: ~13003 µmol/L	SUSP	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Suspicious Result - Clinical Exam/Repeat Screen
90203	IVA/2MBCD	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
90203	IVA/2MBCD	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90203	IVA/2MBCD	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90203	IVA/2MBCD	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90203	IVA/2MBCD	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90203	IVA/2MBCD	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
90203	IVA/2MBCD	Blood dark; heated	Unsatisfactory	UHB	LA16205-9	Unsatisfactory	Blood dark; heated
90203	IVA/2MBCD	Does Not Elute	Unsatisfactory	UIE	LA16205-9	Unsatisfactory	Does Not Elute
90203	IVA/2MBCD	Insufficient Feeding	Unsatisfactory	UIF	LA16205-9	Unsatisfactory	Insufficient Feeding
90203	IVA/2MBCD	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90203	IVA/2MBCD	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90203	IVA/2MBCD	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90203	IVA/2MBCD	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90203	IVA/2MBCD	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90203	IVA/2MBCD	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90203	IVA/2MBCD	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*57708-0 OAP Discussion*
90203	IVA/2MBCD	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90203	IVA/2MBCD	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90203	IVA/2MBCD	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
90203	IVA/2MBCD	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90203	IVA/2MBCD	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
90203	IVA/2MBCD	Within Normal Limits		WNL	LA18592-8	In Range	

4.3.4 Chemistry and Molecular:

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
57087-9	**Biotinidase Deficiency Screening Panel**						
90113	BIO	Presumptive Positive	Biotinidase: ~00105 MRU	ABN	LA12431-5	OoR, 2nd tier testing	Presumptive Positive
90113	BIO	Presumptive Positive	Biotinidase: ~00105 MRU	ABN2	LA12431-5	OoR, 2nd tier testing	Presumptive Positive
90113	BIO	Borderline Activity	Biotinidase: ~00105 MRU	BOR	LA12430-7	OoR, further DBS testing	Borderline Activity
90113	BIO	Borderline Activity	Biotinidase: ~00105 MRU	BOR2	LA12431-5	OoR, 2nd tier testing	Borderline Activity
90113	BIO		Result Held for Review	HELD			
90113	BIO	No interpretation available *	Biotinidase: ~00105 MRU	NINF			Not Infant
90113	BIO	Within Normal Limits		NOR	LA18592-8	In Range	
90113	BIO	Within Normal Limits		NOR2	LA18592-8	In Range	
90113	BIO		PP Report Could not Determine Result	REVIEW			

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
90113	BIO	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
90113	BIO	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
90113	BIO	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
90113	BIO	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
90113	BIO	Damaged in Transport	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged in Transport
90113	BIO	Blood dark; heated	Unsatisfactory	UHB			
90113	BIO	Does Not Elute	Unsatisfactory	UIE			
90113	BIO	Insufficient Feeding	Unsatisfactory	UIF			
90113	BIO	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
90113	BIO	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
90113	BIO	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
90113	BIO	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
90113	BIO	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
90113	BIO	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
90113	BIO	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
90113	BIO	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
90113	BIO	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
90113	BIO	Abnormal Level - Transfused Specimen	Biotinidase: ~00105 MRU	UTABN	LA16205-9	Unsatisfactory	Abnormal Level - Transfused Specimen
90113	BIO	Borderline Activity - Transfused Specimen	Biotinidase: ~00105 MRU	UTBOR	LA16205-9	Unsatisfactory	Borderline Activity - Transfused Specimen
90113	BIO	Transfused Specimen	Inconclusive	UTRAN	LA16205-9	Unsatisfactory	Transfused Specimen
90113	BIO	Unknown Identity	Unsatisfactory	UUI	LA16205	Unsatisfactory	Unknown Identity

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
					-9		
90113	BIO	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
90113	BIO	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
57086-1	**Congenital adrenal hyperplasia newborn screening panel**						
99001	CAH	Inconclusive - Borderline 17-OHP	17OHP: ~00109 ng/mL serum	BOR	LA12430-7	OoR, further DBS testing	Inconclusive - Borderline 17-OHP
99001	CAH	Presumptive Positive - Immediate Action	17OHP: ~00109 ng/mL serum	EL	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
99001	CAH		Result Held for Review	HELD			
99001	CAH	Presumptive Positive - Immediate Action	17OHP: > 200 ng/mL serum	HSTD	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
99001	CAH	Inconclusive - Borderline	17OHP: ~00109 ng/mL serum	LBOR	LA18592-8	In Range	Inconclusive - Borderline
99001	CAH	Presumptive Positive - Immediate Action	17OHP: ~00109 ng/mL serum	LEL	LA12430-7	OoR, further DBS testing	Presumptive Positive - Immediate Action
99001	CAH	Within Normal Limits		LNOR	LA18592-8	In Range	
99001	CAH	Within Normal Limits		NOR	LA18592-8	In Range	
99001	CAH		PP Report Could not Determine Result	REVIEW			
99001	CAH	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
99001	CAH	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
99001	CAH	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
99001	CAH	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
99001	CAH	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
99001	CAH	Damaged in Transport	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged in Transport
99001	CAH	Blood dark; heated	Unsatisfactory	UHB			

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
99001	CAH	Does Not Elute	Unsatisfactory	UIE			
99001	CAH	Insufficient Feeding	Unsatisfactory	UIF			
99001	CAH	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
99001	CAH	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
99001	CAH	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
99001	CAH	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
99001	CAH	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
99001	CAH	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
99001	CAH	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
99001	CAH	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
99001	CAH	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
99001	CAH	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
99001	CAH	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
99001	CAH	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
99001	CAH	Inconclusive - Borderline 17-OHP	17OHP: ~00109 ng/mL serum	VLBOR	LA18592-8	In Range	Inconclusive - Borderline 17-OHP
99001	CAH	Presumptive Positive - Immediate Action	17OHP: ~00109 ng/mL serum	VLEL	LA18592-8	In Range	Presumptive Positive - Immediate Action
99001	CAH	Within Normal Limits		VLNOR	LA18592-8	In Range	
54078-1	**Cystic Fibrosis newborn screening panel**						
99005	CF	Borderline IRT - Repeat Screen	IRT: ~00107 ng/mL blood	B	LA12430-7	OoR, further DBS testing	Borderline IRT - Repeat Screen
99005	CF	Suspicious - DNA Testing Initiated	IRT: ~00107 ng/mL blood	B2	LA12431-5	OoR, 2nd tier testing	Suspicious - DNA Testing Initiated

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
99005	CF	Clearly Elevated IRT - Repeat Screen	IRT: ~00107 ng/mL blood	CE	LA18593-6	Out of Range	Clearly Elevated IRT - Repeat Screen
99005	CF	Presumptive Positive - DNA Testing Initiated	IRT: ~00107 ng/mL blood	CE2	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - DNA Testing Initiated
99005	CF	Clearly Elevated IRT, DNA testing initiated	IRT: ~00107 ng/mL blood	CE-DNA	LA12431-5	OoR, 2nd tier testing	Clearly Elevated IRT, DNA testing initiated
99005	CF	Elevated IRT - Repeat Screen	IRT: ~00107 ng/mL blood	E	LA12430-7	OoR, further DBS testing	Elevated IRT - Repeat Screen
99005	CF	Presumptive Positive - DNA Testing Initiated	IRT: ~00107 ng/mL blood	E2	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - DNA Testing Initiated
99005	CF	IRT in High 3% - Repeat before 2 weeks of age	IRT: ~00107 ng/mL blood	H3	LA11884-6	Indeterminate	IRT in High 3% - Repeat before 2 weeks of age
99005	CF	Inconclusive - DNA Testing Initiated	IRT: ~00107 ng/mL blood	H3_2	LA11884-6	Indeterminate	Inconclusive - DNA Testing Initiated
99005	CF		Result Held for Review	HELD			
99005	CF	Inconclusive - DNA Testing Initiated	IRT: ~00107 µmol/L blood	INC	LA11884-6	Indeterminate	Inconclusive - DNA Testing Initiated
99005	CF	Within Normal Limits		N	LA18592-8	In Range	
99005	CF	Within Normal Limits	Within Normal Limits	N2	LA18592-8	In Range	
99005	CF	Negative Screening Test. If no symptoms, follow Clinically.	No Mutation Found	NMF	LA18592-8	In Range	Negative Screening Test. If no symptoms, follow Clinically.
99005	CF	Presumptive Positive - DNA Testing Initiated	IRT: ~00107 n/mL blood	PP	LA12430-7	OoR, 2nd tier testing	Presumptive Positive - DNA Testing Initiated
99005	CF		PP Report Could not Determine Result	REVIEW			
99005	CF	Suspicious Result - DNA Testing Initiated	IRT: ~00107 ng/mL blood	SUSP	LA12430-7	OoR, 2nd tier testing	Suspicious Result - DNA Testing Initiated
99005	CF	>60 days at collection - Too Old for Reliable Testing	Unsatisfactory	U60	LA16205-9	Unsatisfactory	>60 days at collection - Too Old for Reliable Testing
99005	CF	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
99005	CF	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
99005	CF	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
99005	CF	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
99005	CF	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
99005	CF	Damaged in Transport	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged in Transport
99005	CF	Blood dark; heated	Unsatisfactory	UHB			
99005	CF	Does Not Elute	Unsatisfactory	UIE			
99005	CF	Insufficient Feeding	Unsatisfactory	UIF			
99005	CF	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
99005	CF	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
99005	CF	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
99005	CF	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
99005	CF	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
99005	CF	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
99005	CF	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
99005	CF	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
99005	CF	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
99005	CF	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
99005	CF	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
99005	CF	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
99005	CF	Within Normal Limits	Within Normal Limits	WNL	LA18592-8	In Range	
99006	CF-DNA	Within Normal Limits		WNL	LA18592-8	In Range	
99006	CF-DNA	Probable for CF, Refer to CF	Two Different Mutations	2HE	LA12431	OoR, 2nd tier testing	Probable for CF, Refer

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
		Clinic	Found	T	-5		to CF Clinic
99006	CF-DNA	CF Possible, Refer for Sweat Test	One Mutation Found	HET	LA12431-5	OoR, 2nd tier testing	CF Possible, Refer for Sweat Test
99006	CF-DNA	Positive for CF, Refer to CF Clinic	Homozygous Mutation	MUT	LA12431-5	OoR, 2nd tier testing	Positive for CF, Refer to CF Clinic
99006	CF-DNA	Negative Screening Test. If no symptoms, follow Clinically.	No Mutations Found	NMF	LA18592-8	In Range	Negative Screening Test. If no symptoms, follow Clinically.
99006	CF-DNA		PP Report Could not Determine Result	REVIEW			
99006	CF-DNA	Pending	Pending	PEND			
99006	CF-DNA	CF still possible, Refer for Sweat test	No Mutations Found	NMFCE2	LA12431-5	OoR, 2nd tier testing	CF still possible, Refer for Sweat test
99006	CF-DNA	Inconclusive, Repeat IRT Screen	No Mutations Found	NMFCE	LA12430-7	OoR, further DBS testing	Inconclusive, Repeat IRT Screen
99006	CF-DNA	Unable to identify all mutations*	Indeterminate Findings	INDET	LA11884-6	Indeterminate	Unable to identify all mutations*
99006	CF-DNA	43 out of 44 mutations analyzed *	No Mutations Found*	NMF*	LA18592-8	In Range	43 out of 44 mutations analyzed *
99006	CF-DNA	43 out of 44 mutations analyzed *	One Mutation Found*	HET*	LA12431-5	OoR, 2nd tier testing	43 out of 44 mutations analyzed *
54090-6	**Thyroid newborn screening panel**						
91001	CH	Inconclusive - Repeat Requested	TSH: ~00102 µU/mL serum	BORD	LA12430-7	OofR, requiring further DBS testing for at least 1 condition	Inconclusive - Repeat Requested
91001	CH	Clearly Elevated, Critical	TSH: ~00102 µU/mL serum	CE	LA12431-5	OoR, 2nd tier testing	Clearly Elevated, Critical
91001	CH	Lab must review	Erroneous Result	ERROR			
91001	CH		Result Held for Review	HELD			
91001	CH	Clearly Abnormal TSH	TSH: > 200 µU/mL serum	HSTD	LA12431-5	OoR, 2nd tier testing	Clearly Abnormal TSH
91001	CH	Within Normal Limits		LT0	LA18592-8	In Range	
91001	CH	Within Normal Limits		NOR	LA18592-8	In Range	

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91001	CH		PP Report Could not Determine Result	REVIEW			
91001	CH	Presumptive Positive - Immediate Action	TSH: ~00102 µU/mL serum	SE	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
91001	CH	Suspicious - Repeat Testing	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TAB	LA12430-7	OoR, further DBS testing	Suspicious - Repeat Testing
91001	CH	Clearly Abnormal - Critical	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TACE	LA12431-5	OoR, 2nd tier testing	Clearly Abnormal - Critical
91001	CH	Inconclusive - Repeat Requested	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TAN	LA12430-7	OoR, further DBS testing	Inconclusive - Repeat Requested
91001	CH	Presumptive Positive, Immediate Action	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TASE	LA12431-5	OoR, 2nd tier testing	Presumptive Positive, Immediate Action
91001	CH	Suspicious - Repeat Testing	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TBB	LA12430-7	OoR, further DBS testing	Suspicious - Repeat Testing
91001	CH	Presumptive Positive - Critical	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TBCE	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Critical
91001	CH	TSH Normal, T4 Borderline	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TBN	LA12430-7	OoR, further DBS testing	TSH Normal, T4 Borderline
91001	CH	Presumptive Positive - Immediate Action	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TBSE	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
91001	CH	Inconclusive, Repeat Testing	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TNB	LA12430-7	OoR, further DBS testing	Inconclusive, Repeat Testing
91001	CH	Presumptive Positive - Immediate Action	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TNCE	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
91001	CH	T4 & TSH Within Normal Limits		TNN	LA18592-8	In Range	
91001	CH	Inconclusive - Repeat Requested	TSH: ~00102 µU/mL serum T4: ~00101 µg/dL serum	TNSE	LA12430-7	OoR, further DBS testing	Inconclusive - Repeat Requested
91001	CH	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
91001	CH	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
91001	CH	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
91001	CH	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
91001	CH	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
91001	CH	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
91001	CH	Blood dark; heated	Unsatisfactory	UHB			
91001	CH	Does Not Elute	Unsatisfactory	UIE			
91001	CH	Insufficient Feeding	Unsatisfactory	UIF			
91001	CH	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
91001	CH	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
91001	CH	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
91001	CH	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
91001	CH	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
91001	CH	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
91001	CH	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
91001	CH	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
91001	CH	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
91001	CH	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
91001	CH	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
91001	CH	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
54079-9	**Galactosemia newborn screening panel**						
93001	GAL	Abnormal GALT	GALT: ~00104 U/gm Hb	ABN	LA18593-6	Out of Range	Abnormal GALT
93001	GAL	Abnormal GALT	GALT: ~00104 U/gm Hb	ABN2	LA18593-6	Out of Range	Abnormal GALT
93001	GAL	Borderline GALT	GALT: ~00104 U/gm Hb	BOR	LA4259-3	Borderline	Borderline GALT
93001	GAL	Borderline GALT	GALT: ~00104 U/gm Hb	BOR2	LA4259-3	Borderline	Borderline GALT

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
93001	GAL	Presumptive Positive - Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GBA	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
93001	GAL	Inconclusive - Prompt Repeat	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GBB	LA12430-7	OoR, further DBS testing	Inconclusive - Prompt Repeat
93001	GAL	Inconclusive - Repeat Requested	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GBN	LA12430-7	OoR, further DBS testing	Inconclusive - Repeat Requested
93001	GAL	Clearly Abnormal - Critial, Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GCA	LA12431-5	OoR, 2nd tier testing	Clearly Abnormal - Critial, Immediate Action
93001	GAL	Presumptive Positive - Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GCB	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
93001	GAL	Inconclusive - Repeat Requested	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GCN	LA12430-7	OoR, further DBS testing	Inconclusive - Repeat Requested
93001	GAL	Clearly Abnormal - Critical, Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GEA	LA12431-5	OoR, 2nd tier testing	Clearly Abnormal - Critical, Immediate Action
93001	GAL	Inconclusive - Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GEB	LA12430-7	OoR, further DBS testing	Inconclusive - Immediate Action
93001	GAL	Inconclusive - Repeat Requested	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GEN	LA12430-7	OoR, further DBS testing	Inconclusive - Repeat Requested
93001	GAL	Presumptive Positive - Immediate Action	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GNA	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Action
93001	GAL	Inconclusive - Prompt Repeat	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	GNB	LA12430-7	OoR, further DBS testing	Inconclusive - Prompt Repeat
93001	GAL	Within Normal Limits		GNN	LA18592-8	In Range	
93001	GAL	Inconclusive - GALT Heat Labile Enzyme	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	HEAT-B	LA11884-6	Indeterminate	Inconclusive - GALT Heat Labile Enzyme
93001	GAL	Borderline GALT - Heat labile enzyme	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	HEAT-C	LA11884-6	Indeterminate	Borderline GALT - Heat labile enzyme
93001	GAL	Abnormal GALT - Heat labile enzyme Repeat Screen	GALT: ~00104 U/gm Hb T.Gal: ~00112 mg/dL	HEAT-R	LA11884-6	Indeterminate	Abnormal GALT - Heat labile enzyme Repeat Screen
93001	GAL		Result Held for Review	HELD			
93001	GAL	Within Normal Limits		NOR	LA18592-8	In Range	
93001	GAL	Within Normal Limits		NOR2	LA18592-8	In Range	
93001	GAL		PP Report Could not Determine Result	REVIEW			

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93001	GAL	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
93001	GAL	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
93001	GAL	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
93001	GAL	Damaged Paper	Unsatisfactory	UDP	LA16205-9	Unsatisfactory	Damaged Paper
93001	GAL	Damaged Paper	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged Paper
93001	GAL	Blood dark; heated	Unsatisfactory	UHB			
93001	GAL	Does Not Elute	Unsatisfactory	UIE			
93001	GAL	Insufficient Feeding	Unsatisfactory	UIF			
93001	GAL	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
93001	GAL	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
93001	GAL	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
93001	GAL	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
93001	GAL	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
93001	GAL	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
93001	GAL	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
93001	GAL	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
93001	GAL	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
93001	GAL	Transfused Specimen	Inconclusive	UTRAN	LA16205-9	Unsatisfactory	Transfused Specimen
93001	GAL	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity
93001	GAL	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
93001	GAL	Blood Received Wet	Unsatisfactory	UWB	LA16205	Unsatisfactory	Blood Received Wet

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
					-9		
62333-0	**Severe Combined Immunodeficiency Screening Panel**						
99810	SCID	Assay Interference	Unsatisfactory	UAI	LA16205-9	Unsatisfactory	Assay Interference
99810	SCID	Clotted Blood	Unsatisfactory	UCC	LA16205-9	Unsatisfactory	Clotted Blood
99810	SCID	Contaminated	Unsatisfactory	UCF	LA16205-9	Unsatisfactory	Contaminated
99810	SCID	Double Application	Unsatisfactory	UDA	LA16205-9	Unsatisfactory	Double Application
99810	SCID		Unsatisfactory	UDP	LA16205-9	Unsatisfactory	
99810	SCID	Damaged in Transit	Unsatisfactory	UDT	LA16205-9	Unsatisfactory	Damaged in Transit
99810	SCID	Dark Blood; Heated	Unsatisfactory	UHB			
99810	SCID	Does Not Elute	Unsatisfactory	UIE			
99810	SCID	Incomplete Saturation	Unsatisfactory	UIS	LA16205-9	Unsatisfactory	Incomplete Saturation
99810	SCID	Laboratory Accident	Unsatisfactory	ULA	LA16205-9	Unsatisfactory	Laboratory Accident
99810	SCID	Sample Not Blood	Unsatisfactory	UNB	LA16205-9	Unsatisfactory	Sample Not Blood
99810	SCID	No Sample	Unsatisfactory	UNS	LA16205-9	Unsatisfactory	No Sample
99810	SCID	Collection Kit Expired	Unsatisfactory	UOK	LA16205-9	Unsatisfactory	Collection Kit Expired
99810	SCID	Sample Too Old	Unsatisfactory	UOL	LA16205-9	Unsatisfactory	Sample Too Old
99810	SCID	Blood Pale	Unsatisfactory	UPB	LA16205-9	Unsatisfactory	Blood Pale
99810	SCID	Insufficient Quantity	Unsatisfactory	UQN	LA16205-9	Unsatisfactory	Insufficient Quantity
99810	SCID	Parent Refused	Unsatisfactory	URF	LA16205-9	Unsatisfactory	Parent Refused
99810	SCID	Unknown Identity	Unsatisfactory	UUI	LA16205-9	Unsatisfactory	Unknown Identity

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC DESCRIPTION	*COMMENTS / DISCUSSION*
99810	SCID	Uneven Saturation	Unsatisfactory	UUS	LA16205-9	Unsatisfactory	Uneven Saturation
99810	SCID	Blood Received Wet	Unsatisfactory	UWB	LA16205-9	Unsatisfactory	Blood Received Wet
99810	SCID	Within Normal Limits		WNL	LA18592-8	In Range	
99810	SCID	Analysis not valid. Recollect specimen	DNA failed to amplify	INVALD	LA16205-9	Unsatisfactory	Analysis not valid. Recollect specimen
99810	SCID	Within Normal Limits		NOR	LA18592-8	In Range	
99810	SCID	Suspicious, Repeat Testing	Borderline TREC Copies	SUSP1	LA12431-5	OoR, 2nd tier testing	Suspicious, Repeat Testing
99810	SCID	Presumptive Positive - Immediate Repeat	Low TREC copies	PP1	LA12431-5	OoR, 2nd tier testing	Presumptive Positive - Immediate Repeat
99810	SCID	Presumptive Positive for SCID - Immediate Referral	No/Low TREC copies	ALERT	LA12431-5	OoR, 2nd tier testing	Presumptive Positive for SCID - Immediate Referral
99810	SCID	Suspicious for Leukopenia Disorder - Refer for Confirmation.	Borderline TREC copies	SUSP2	LA12431-5	OoR, 2nd tier testing	Suspicious for Leukopenia Disorder - Refer for Confirmation.
99810	SCID	Presumptive Positive for Lymphopenic Disorder - Refer for Confirmation.	Low TREC copies	PP2	LA12431-5	OoR, 2nd tier testing	Presumptive Positive for Lymphopenic Disorder - Refer for Confirmation.
99810	SCID		REVIEW RESULTS	REVIEW			
99810	SCID	Inconclusive - Early Gestation, Repeat after 38 weeks gestation	Low TREC Levels	INC-A	LA12430-7	OoR, further DBS testing	Inconclusive - Early Gestation, Repeat after 38 weeks gestation
99810	SCID	Inconclusive - Early Gestation, Repeat after 38 weeks gestation	Borderline TREC copies	INC-B	LA12430-7	OoR, further DBS testing	Inconclusive - Early Gestation, Repeat after 38 weeks gestation

4.4 Mnemonics by Interpretations Loinc Answers with Hierarchy

Mnemonic	REPTCODE	Answer Code	Description	Hierarchy	Status
C8BD		LA12431-5	Out of range requiring immediate second-tier testing for at least one condition	0	4- Abnormal
CONTAM		LA16205-9	Specimen unsatisfactory for at least one condition	6	5-Unsuitable
FAS		LA12430-7	Out of range requiring further filter paper testing for at least one condition	2	Borderline

4.4.1 Mnemonics by Conditions Suspected

Mnemonic	REPTCODE	Answer Code	Description	SNOMEDCT	SNOMED Description	Status
C8BD		LA12575-9	MCAD or SCAD or GA-2(MADD)	none		4- Abnormal
CONTAM		N/A				5-Unsuitable
FAS		LA12606-2	Hb S (sickle)-carrier	16402000	Sickle Cell Trait	Borderline

4.4.2 HEMOGLOBIN PREDOMINANCE

Mnemonic	REPTCODE	PREDOMINANCE	ANSWERCODE	Description	Status
FAS		1	LA16208-3	Hb F	Borderline
FAS		2	LA16209-1	Hb A	Borderline
FAS		3	LA13007-2	Hb S	Borderline

OR

Mnemonic	LACode.1	Descrp.1	LAcode2	Descrp2	LAcode3	Descrp3	LAcode4	Descrp4	LAcode5	Descrp5	Status	Hb Unidentified
FAS	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S					Borderline	
FACV	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C	LA16223-2	Hb unidentifi			Borderline	64122-5

								ed				

4.4.3 Results populated whenever unidentified hemoglobin is present.

64122-5 Hemoglobins that can be presumptively identified based on available controls in dried blood spot

LOINC ANSWER	Description
LA16208-3	Hb F
LA16209-1	Hb A
LA16223-2	Hb unidentified
LA16208-3	Hb F
LA16209-1	Hb A
LA13002-3	Hb C
LA13003-1	Hb D
LA13005-6	Hb E
LA13007-2	Hb S
LA16215-8	Hb Constant Spring
LA16213-3	Hb Bart's - low level
LA16214-1	Hb Bart's - highly elevated

4.4.4 HIERARCHY for 57130-7 Newborn Screening Report- Overall Interpretation

NLM Seq	Description	LOINIC Code	Hierarchy	Status
1	All screening is in range for the conditions tested	LA12428-1	7	1
2	Screen is borderline for at least one condition	LA12429-9	4	
3	Screen is indeterminate for at least one condition	LA18943-3	5	2

NLM Seq	Description	LOINIC Code	Hierarchy	Status
4	Screen is out of range for at least one condition	LA18944-1	3	7
5	Out of range requiring further dried blood spot testing for at least one condition	LA12430-7	2	7
6	Out of range requiring immediate second-tier testing for at least one condition	LA12431-5	0	3
7	Out of range requiring deferred follow-up for at least one condition	LA18594-4	1	3
8	Screening not done due to parental refusal	LA14133-5	8	REFUSE
9	One or more tests pending	LA16204-2	9	5
10	Specimen unsatisfactory for at least one condition	LA16205-9	6	6

4.4.5 HIERARCHY for Panel Interpretations

- 46733-2- Amino acidemias newborn screen interpretation
- 46736-5- Fatty acid oxidation newborn screen interpretation
- 46744-9- Organic acidemias newborn screen interpretation

NLM Seq	Description	LOINIC Code	NBS Priority	Status
1	In range	LA18592-8	7	1
2	Borderline	LA4259-3	4	
3	Indeterminate	LA11884-6	5	
4	Out of range	LA18593-6	3	
5	Out of range requiring further dried blood spot testing for at least one condition	LA12430-7	2	

NLM Seq	Description	LOINIC Code	NBS Priority	Status
6	Out of range requiring immediate second-tier testing for at least one condition	LA12431-5	0	4
7	Out of range requiring deferred follow-up for at least one condition	LA18594-4	1	4
8	One or more tests pending	LA16204-2	8	3
9	Specimen unsatisfactory for at least one condition	LA16205-9	6	5

4.4.6 Mapping of conditions suspected codes by LOINC and Status

Code	Description	Status	Description
57131-5	Newborn conditions with positive markers [Identifier] in Dried blood spot	4	Abnormal
57720-5	Newborn conditions with equivocal markers [Identifier] in Dried blood spot		Inconclusive Borderline
57793-2	Amino acidemia disorder suspected [Identifier] in Dried blood spot	4 5	Inconclusive Abnormal Unsuitable Borderline
57792-4	Fatty acid oxidation conditions suspected [Identifier] in Dried blood spot	4 5	Inconclusive Abnormal Unsuitable Borderline
71592-0	Hemoglobinopathis conditions suspected [Identifier] in Dried blood spot	4 5	Inconclusive Abnormal Unsuitable Borderline

57791-6	Organic acidemia conditions suspected [Identifier] in Dried blood spot	4 5	Inconclusive Abnormal Unsuitable Borderline

4.5 State HGB Disorders Mapped to LOINC Answers

54081-5	Hemoglobinopathies newborn screening panel		
	64116-7	Hemoglobin observations newborn screening panel	
		64117-5	Most predominant hemoglobin in Dried blood spot
		64118-3	Second most predominant hemoglobin in Dried blood spot
		64119-1	Third most predominant hemoglobin in Dried blood spot
		64120-9	Fourth most predominant hemoglobin in Dried blood spot
		64121-7	Fifth most predominant hemoglobin in Dried blood spot

REPT CODE	NAME	MNEMONIC	DISORDER RESULT TEXT	DESCR1	MOST PREDOMINATE		2ND MOST PREDOMINATE		3rd MOST PREDOMINATE		4th MOST PREDOMINATE	
97001	HGB	A	Hgb F not found	A only	LA16209-1	Hb A	-	-	-	-	-	-
97001	HGB	AC	Probable C Trait	AC	LA16209-1	Hb A	LA13002-3	Hb C	-	-	-	-
97001	HGB	ACF	Probable C Trait	ACF	LA16209-1	Hb A	LA13002-3	Hb C	LA16208-3	Hb F	-	-
97001	HGB	AE	Probable E Trait	AE	LA16209-1	Hb A	LA13005-6	Hb E			-	-
97001	HGB	AF	A>F Abn Hb not found	AF	LA16209-1	Hb A	LA16208-3	Hb F			-	-
97001	HGB	AFBUAI	Inconclusive - Transfused Specimen	AFBart's	LA16209-1	Hb A	LA16208-3	Hb F	LA16213-3	Hb Bart's	-	-
97001	HGB	AFC	Probable C Trait	AFC	LA16209-1	Hb A	LA16208-3	Hb F	LA13002-3	Hb C	-	-
97001	HGB	AFCUAI	Inconclusive, Transfused Specimen	AFC	LA16209-1	Hb A	LA16208-3	Hb F	LA13002-3	Hb C	-	-
97001	HGB	AF-EA2	Band in HbE/A2 region		LA16209-1	Hb A	LA16208-3	Hb F	LA13005-6	Hb E	-	-
97001	HGB	AFS	Probable S Trait	AF light S band	LA16209-1	Hb A	LA16208-3	Hb F	LA13007-2	Hb S	-	-
97001	HGB	AFSCAI	Inconclusive -	AFSC	LA16209-1	Hb A	LA16208-3	Hb F	LA13007-2	Hb S	LA13002-3	Hb C

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			Transfused Specimen									
97001	HGB	AFSUAI	Inconclusive - Transfused Specimen	AFS	LA16209-1	Hb A	LA16208-3	Hb F	LA13007-2	Hb S		
97001	HGB	AS	Probable S Trait	AS	LA16209-1	Hb A	LA13007-2	Hb S				
97001	HGB	ASF	Probable S Trait	ASF	LA16209-1	Hb A	LA13007-2	Hb S	LA16208-3	Hb F		
97001	HGB	AXF	Unknown Variant(s)	AXF	LA16209-1	Hb A	LA16223-2	Unknown Hgb	LA16208-3	Hb F		
97001	HGB	F	Probable Disease	F only	LA16208-3	Hb F						
97001	HGB	FAA2	FA, Abnormal Hb not found	FA with A2 band	LA16208-3	Hb F	LA16209-1	Hb A	LA16211-7	Hb A2		
97001	HGB	FAB	Probable alpha thalassemia	FA Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16213-3	Hb Bart's		
97001	HGB	FAB>AF	Abnormal Hemoglobin Not Found	AF	LA16209-1	Hb A	LA16208-3	Hb F				
97001	HGB	FAB»AF	Abnormal Hemoglobin Not Found	AF	LA16209-1	Hb A	LA16208-3	Hb F				
97001	HGB	FAB»FA	Abnormal Hemoglobin Not Found	FA	LA16208-3	Hb F	LA16209-1	Hb A				
97001	HGB	FABEL	Possible H Disease	FA with heavy B	LA16208-3	Hb F	LA16209-1	Hb A	LA16214-1	Hb Bart's - highly elevated		
97001	HGB	FABELR	Possible H Disease	FA with heavy B	LA16208-3	Hb F	LA16209-1	Hb A	LA16214-1	Hb Bart's - highly elevated		
97001	HGB	FABR	Probable alpha thalassemia	FA Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16213-3	Hb Bart's		
97001	HGB	FABUAI	Inconclusive - Transfused Specimen	FAB	LA16208-3	Hb F	LA16209-1	Hb A	LA16213-3	Hb Bart's		
97001	HGB	FAC	Probable C Trait	FAC	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C		
97001	HGB	FACB	Probable C trait, alpha thalassemia	FAC Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C	LA16213-3	Hb Bart's
97001	HGB	FACBR	Probable C trait, alpha thalassemia	FAC Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C	LA16213-3	Hb Bart's
97001	HGB	FACR	Probable C Trait	FAC	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C		
97001	HGB	FACX	Probable C trait plus unknown variant	FACX	LA16208-3	Hb F	LA16209-1	Hb A	LA13002-3	Hb C	LA16223-2	Unknown Hgb

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REPT CODE	NAME	MNEMONIC	DISORDER RESULT TEXT	DESCR1	MOST PREDOMINATE		2ND MOST PREDOMINATE		3rd MOST PREDOMINATE		4th MOST PREDOMINATE	
97001	HGB	FADB	Probable D trait, alpha thalassemia	FAD Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16217-4	Hb D/G	LA16213-3	Hb Bart's
97001	HGB	FADBR	Probable D trait, alpha thalassemia	FAD Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16217-4	Hb D/G	LA16213-3	Hb Bart's
97001	HGB	FADG	Probable D or G Trait	FAD or G	LA16208-3	Hb F	LA16209-1	Hb A	LA16217-4	Hb D/G		
97001	HGB	FADGR	Probable D or G Trait	FAD or G	LA16208-3	Hb F	LA16209-1	Hb A	LA16217-4	Hb D/G		
97001	HGB	FAE	Probable E Trait	FAE	LA16208-3	Hb F	LA16209-1	Hb A	LA13005-6	Hb E		
97001	HGB	FA-EA2	Possible E trait	FA with E/A2 band	LA16208-3	Hb F	LA16209-1	Hb A	LA13005-6	Hb E		
97001	HGB	FAEB	Probable E trait, alpha thalassemia	FAE Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13005-6	Hb E	LA16213-3	Hb Bart's
97001	HGB	FAEBR	Probable E trait, alpha thalassemia	FAE Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13005-6	Hb E	LA16213-3	Hb Bart's
97001	HGB	FAER	Probable E Trait	FAE	LA16208-3	Hb F	LA16209-1	Hb A	LA13005-6	Hb E		
97001	HGB	FAS	Probable S Trait	FAS	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S		
97001	HGB	FASB	Probable S trait, alpha thalassemia	FAS Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S	LA16213-3	Hb Bart's
97001	HGB	FASBR	Probable S trait, alpha thalassemia	FAS Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S	LA16213-3	Hb Bart's
97001	HGB	FASBUT	Inconclusive - Transfused Specimen	FASB	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S	LA16213-3	Hb Bart's
97001	HGB	FASR	Probable S Trait	FAS	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S		
97001	HGB	FASUAI	Inconclusive - Transfused Specimen	FAS	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S		
97001	HGB	FASX	Probable S Trait	FASX	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S	LA16223-2	Unknown Hgb
97001	HGB	FAX	Unknown Variant(s)	FAX	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb		
97001	HGB	FAXB	Unknown Variant(s) alpha thalassemia	FAX Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb	LA16213-3	Hb Bart's
97001	HGB	FAXBR	Unknown Variant(s) alpha thalassemia	FAX Bart's	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb	LA16213-3	Hb Bart's
97001	HGB	FAXC	Unknown Variant, C trait	FAXC	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb	LA13002-3	Hb C
97001	HGB	FAXR	Unknown Variant(s)	FAX	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb		

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REPT CODE	NAME	MNEMONIC	DISORDER RESULT TEXT	DESCR1	MOST PREDOMINATE		2ND MOST PREDOMINATE		3rd MOST PREDOMINATE		4th MOST PREDOMINATE	
97001	HGB	FAXS	Unknown variant(s), S trait	FAXS	LA16208-3	Hb F	LA16209-1	Hb A	LA16223-2	Unknown Hgb	LA13007-2	Hb S
97001	HGB	FC	Probable CC Disease	FC	LA16208-3	Hb F	LA13002-3	Hb C				
97001	HGB	FCA	Hb C greater than Hb A	FCA	LA16208-3	Hb F	LA13002-3	Hb C	LA16209-1	Hb A		
97001	HGB	FCA-EG	Hb C greater than Hb A	FCA*	LA16208-3	Hb F	LA13002-3	Hb C	LA16209-1	Hb A		
97001	HGB	FCB-EG	Possible CC Disease	FCB*	LA16208-3	Hb F	LA13002-3	Hb C	LA16213-3	Hb Bart's		
97001	HGB	FC-EG	Possible CC Disease	FC*	LA16208-3	Hb F	LA13002-3	Hb C				
97001	HGB	FCR	Probable CC Disease	FC	LA16208-3	Hb F	LA13002-3	Hb C				
97001	HGB	FCX	Probable CC Disease, unknown band	FCX	LA16208-3	Hb F	LA13002-3	Hb C	LA16223-2	Unknown Hgb		
97001	HGB	FE	Probable EE Disease	FE	LA16208-3	Hb F	LA13005-6	Hb E				
97001	HGB	FEB	Probable E trait, alpha thalassemia	FE Bart's	LA16208-3	Hb F	LA13005-6	Hb E	LA16213-3	Hb Bart's		
97001	HGB	F-EG	Possible Disease	F only*	LA16208-3	Hb F						
97001	HGB	FER	Probable EE Disease	FE	LA16208-3	Hb F	LA13005-6	Hb E				
97001	HGB	FLA4	Equivocal	F light A	LA16208-3	Hb F	LA16209-1	Hb A				
97001	HGB	FLAS	Equivocal	F - light A &S bands	LA16208-3	Hb F	LA16209-1	Hb A	LA13007-2	Hb S		
97001	HGB	FR	Probable Disease	F only	LA16208-3	Hb F						
97001	HGB	FS	Probable SS Disease	FS	LA16208-3	Hb F	LA13007-2	Hb S				
97001	HGB	FSA	Hb S greater than Hb A	FSA	LA16208-3	Hb F	LA13007-2	Hb S	LA16209-1	Hb A		
97001	HGB	FSA-EG	Hb S greater than Hb A	FSA*	LA16208-3	Hb F	LA13007-2	Hb S	LA16209-1	Hb A		
97001	HGB	FSB	Probable SS Disease	FS Bart's	LA16208-3	Hb F	LA13007-2	Hb S	LA16213-3	Hb Bart's		
97001	HGB	FSBR	Probable SS Disease	FS Bart's	LA16208-3	Hb F	LA13007-2	Hb S	LA16213-3	Hb Bart's		
97001	HGB	FSC	Probable SC Disease	FSC	LA16208-3	Hb F	LA13007-2	Hb S	LA13002-3	Hb C		
97001	HGB	FSCB	Probable SC Disease, Questionable Alpha Thalassemia	FSC & Barts	LA16208-3	Hb F	LA13007-2	Hb S	LA13002-3	Hb C	LA16213-3	Hb Bart's
97001	HGB	FSCR	Probable SC Disease	FSC	LA16208-3	Hb F	LA13007-2	Hb S	LA13002-3	Hb C		

REPT CODE	NAME	MNEMONIC	DISORDER RESULT TEXT	DESCR1	MOST PREDOMINATE		2ND MOST PREDOMINATE		3rd MOST PREDOMINATE		4th MOST PREDOMINATE	
97001	HGB	FSD	Probable SD Disease	FSD	LA16208-3	Hb F	LA13007-2	Hb S	LA16217-4	Hb D/G		
97001	HGB	FSEB	Abnormalities Found	FSE Bart's	LA16208-3	Hb F	LA13007-2	Hb S	LA13005-6	Hb E	LA16213-3	Hb Bart's
97001	HGB	FSEBR	Abnormalities Found	FSE Bart's	LA16208-3	Hb F	LA13007-2	Hb S	LA13005-6	Hb E	LA16213-3	Hb Bart's
97001	HGB	FS-EG	Possible SS Disease	FS*	LA16208-3	Hb F	LA13007-2	Hb S				
97001	HGB	FSR	Probable SS Disease	FS	LA16208-3	Hb F	LA13007-2	Hb S				
97001	HGB	FSX	Probable Disease, Unknown Varient	FSX	LA16208-3	Hb F	LA13007-2	Hb S	LA16223-2	Unknown Hgb		
97001	HGB	FSXR	Probable Disease, Unknown Varient	FSX	LA16208-3	Hb F	LA13007-2	Hb S	LA16223-2	Unknown Hgb		
97001	HGB	FX	Unknown Variant(s)	FX	LA16208-3	Hb F	LA16223-2	Unknown Hgb				
97001	HGB	FXA	Equivocal, Unknown Varient	FXA	LA16208-3	Hb F	LA16223-2	Unknown Hgb	LA16209-1	Hb A		
97001	HGB	NOR	FA, Normal		LA16208-3	Hb F	LA16209-1	Hb A				
97001	HGB	NORA	Hgb A only, Normal		LA16209-1	Hb A						
97001	HGB	NORAF	AF, Normal		LA16209-1	Hb A	LA16208-3	Hb F				
97001	HGB	RNORAF	AF, Normal		LA16209-1	Hb A	LA16208-3	Hb F				

4.6 State Hearing Results Mapped to LOINC Answers

REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC Description	*57710-6 AAP Discussion*
99201	Hear	HEARING PASSED		HEPASS	LA10392-1	Pass	HEARING PASSED
99201	Hear	HEARING NOT PERFORMED	HEARING NOT USED	HENP	LA07304-4	**Not performed**	HEARING NOT PERFORMED
99201	Hear	HEARING INCOMPLETE	HEARING INCOMPLETE	HEMISS	LA07304-4	**Not performed**	**HEARING INCOMPLETE**
99201	Hear	HEARING FAILED	HEARING FAILED	HEFAIL	LA10393-9	Refer	HEARING FAILED
99202	ABR	ABR Pass	ABR Pass	HEPASS	LA10392-1	Pass	

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REPT CODE	NAME	DESCR1	DISORDER RESULT TEXT	MNEMONIC	LOINC CODE	LOINC Description	*57710-6 AAP Discussion*
99202	ABR	ABR Not Performed	ABR Not Performed	HENP	LA07304-4	**Not performed**	ABR Not Performed
99202	ABR	Incomplete as of blood collection date.	ABR Incomplete	HEMISS	LA07304-4	**Not performed**	Incomplete as of blood collection date.
99202	ABR	ABR - Failed Hearing Results / Abnormal	ABR Fail	HEFAIL	LA10393-9	Refer	ABR - Failed Hearing Results / Abnormal
99203	OAE	OAE Pass	OAE Pass	HEPASS	LA10392-1	Pass	
99203	OAE	OAE Not Performed	OAE Not Performed	HENP	LA07304-4	**Not performed**	OAE Not Performed
99203	OAE	Incomplete as of blood collection date.	OAE Incomplete	HEMISS	LA07304-4	**Not performed**	**Incomplete as of blood collection date.**
99203	OAE	OAE - Failed Hearing Results / Abnormal	OAE Fail	HEFAIL	LA10393-9	Refer	OAE - Failed Hearing Results / Abnormal
DEMOGRAPHIC ENTRIES							
	If not performed	Technical Problem			**LA7497-6**	**Equipment failure**	
	If not performed	Parent refusal			**LA19827-7**	**parental refusal based on relgious beleifs**	
					LA19828-5	**parental refusal for reasons other than religious beleifs**	
	If not performed	NICU			**LA19823-6**	**Infant in NICU**	