



**NATIONAL LABORATORY TEST (NLT)/
LOGICAL OBSERVATION IDENTIFIER
NAMING CODES (LOINC)
V2.14 UPDATE**

IMPLEMENTATION GUIDE

PATCH LR*5.2*334

Version 5.2

July 2007

**Department of Veterans Affairs
VistA Health Systems Design & Development**

Preface

The VHA Information Systems and Technology Architecture (VistA) National Laboratory Test (NLT)/Logical Observation Identifier Naming Codes (LOINC) V2.14 Update Implementation Guide Patch LR*5.2*334 Version 5.2 provides the Department of Veterans Affairs Medical Center (DVAMC) Information Resource Management (IRM) staff and the Laboratory Information Manager (LIM) with a straightforward means for implementing the software application.

Staffing Requirements:

IRM Staff:

An IRM staff person is required for installing and supporting the VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334.

Laboratory Information Manager (LIM):

Implementation of VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 requires interactive input not only from IRMS, but also from an LIM well versed in the VistA Laboratory software application.

Intended Users:

The intended user of this software enhancement is VA Medical Center's LIM staff.

Blood Bank Clearance:

VistA BLOOD BANK SOFTWARE V5.2 DEVICE PRODUCT LABELING STATEMENT

EFFECT ON BLOOD BANK FUNCTIONAL REQUIREMENTS: Patch LR*5.2*334 does not contain any changes to the VISTA BLOOD BANK Software as defined by VHA DIRECTIVE 2004-058 titled VISTA BLOOD BANK SOFTWARE VERSION 5.2.

EFFECT ON BLOOD BANK FUNCTIONAL REQUIREMENTS: Patch LR*5.2*334 does not alter or modify any software design safeguards or safety critical elements functions.

RISK ANALYSIS: Changes made by patch LR*5.2*334 have no effect on Blood Bank software functionality, therefore RISK is none.

VALIDATION REQUIREMENTS BY OPTION: Because of the nature of the changes made, no specific validation requirements exist as a result of installation of this patch.

LOINC Contact Information:

LOINC Copyright Acknowledgement:

LOINC was Copyrighted 1995, 1996, 1997, by Regenstrief Institute and the Logical Observation Identifier Names and Codes (LOINC) Committee. All rights reserved. LOINC is a trademark of the Regenstrief Institute.

LOINC - Interest E- Mail Address:

Loinc-interest@rgmail.regenstrief.org

LOINC Website:

<http://www.regenstrief.org/medinformatics/loinc/>

LOINC New Address:

LOINC c/o Medical Informatics
The Regenstrief Institute, Inc
Health Information and Translational Sciences Bldg. (HITS)
410 West 10th Street, Suite 2000
Indianapolis, IN 46202

Telephone: 317.423.5558

FAX: 317.423.5695

Orientation

This section addresses package-or audience-specific notations or directions (e.g., symbols used to indicate terminal dialogues or user responses).

Screen Captures

The computer dialogue appears in Courier font, no larger than 10 points.

Example : Courier font 10 points

User Response

User entry response appears in boldface type Courier font, no larger than 10 points.

Example: Boldface type

Return Symbol

User response to computer dialogue is followed by the <RET> symbol that appears in Courier font, no larger than 10 points, and bolded.

Example: <RET>

Tab Symbol

User response to computer dialogue is followed by the symbol that appears in Courier font, no larger than 10 points, and bolded.

Example: <Tab>

VistA Software and Documentation Retrieval Locations

VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 Implementation Guide V. 5.2 and software distributions are as follows:

NOTE: All sites are encouraged to use the File Transfer Protocol (FTP) capability. Use the FTP address “download.vista.med.va.gov” (without the quotes) to connect to the first available FTP server where the files are located.

OIFO’s ANONYMOUS SOFTWARE Directories:

VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 Implementation Guide V 5.2 and software are available at the following Office of Information Field Offices (OIFOs) ANONYMOUS.SOFTWARE directories:

Office Information Field Office:	File Transfer Protocol (FTP) Address:	Directory:
ALBANY	ftp.fo-albany.med.va.gov	[ANONYMOUS.SOFTWARE]
HINES	ftp.fo-hines.med.va.gov	[ANONYMOUS.SOFTWARE]
SALT LAKE CITY	ftp.fo-slc.med.va.gov	[ANONYMOUS.SOFTWARE]

VistA Software and Documentation Retrieval Formats

VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 Implementation Guide V. 5.2 software and documentation files are exported in the following retrieval formats:

File Name	Contents	Retrieval Formats
LR_52_334.KID	LR*5.2*334 KIDS build	ASCII
LAB_52_p334_IMPG.doc	VistA NLT/LOINC V2.14 UPDATE Implementation Guide Patch LR*5.2*334	BINARY
LAB_52_p334_IMPG.pdf	VistA NLT/LOINC V2.14 UPDATE Implementation Guide Patch LR*5.2*334	BINARY

VistA Website Locations:

VistA NLT/LOINC V2.14 UPDATE Implementation Guide Patch LR*5.2*334 V. 5.2 is accessible in Portable Document Format (.pdf) and MS Word (.doc) Format at the following VistA Intranet locations:

VistA Laboratory Version 5.2 Home Page

<http://vista.med.va.gov/ClinicalSpecialties/lab/>

VistA Documentation Library (VDL)

www.va.gov/vdl/

Test Sites

VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 has been tested by the following Veteran Affairs Medical Centers (VAMCs) and VA Health Care System (HCSs):

VA TEST SITES	OPERATING SYSTEM	TEST SITE SIZE
Biloxi Gulf Coast HCS	Cache/VMS	Large
Boston, MA HCS	Cache/VMS	Large/Integrated
El Paso, TX HCS,	Cache/VMS	Small
North Chicago, IL VAMC	Cache/VMS	Medium
Salt Lake, UT VAMC	Cache/VMS	Large
San Antonio, TX VAMC	Cache/VMS	Large/Integrated
Shreveport, LA VAMC	Cache/VMS	Medium
Tucson, AZ HCS	Cache/VMS	Large

Table of Contents

PREFACE -----	I
STAFFING REQUIREMENTS:-----	I
<i>IRM Staff:</i> -----	<i>i</i>
<i>Laboratory Information Manager (LIM):</i> -----	<i>i</i>
<i>Intended Users:</i> -----	<i>i</i>
BLOOD BANK CLEARANCE:-----	I
LOINC CONTACT INFORMATION:-----	II
<i>LOINC Copyright Acknowledgement:</i> -----	<i>ii</i>
<i>LOINC - Interest E- Mail Address:</i> -----	<i>ii</i>
<i>LOINC Website:</i> -----	<i>ii</i>
<i>LOINC New Address:</i> -----	<i>ii</i>
ORIENTATION -----	3
<i>Screen Captures</i> -----	<i>3</i>
<i>User Response</i> -----	<i>3</i>
<i>Return Symbol</i> -----	<i>3</i>
<i>Tab Symbol</i> -----	<i>3</i>
VISTA SOFTWARE AND DOCUMENTATION RETRIEVAL LOCATIONS-----	4
<i>OIFO's ANONYMOUS SOFTWARE Directories:</i> -----	<i>4</i>
<i>VistA Software and Documentation Retrieval Formats</i> -----	<i>4</i>
VISTA WEBSITE LOCATIONS:-----	5
<i>VistA Laboratory Version 5.2 Home Page</i> -----	<i>5</i>
<i>VistA Documentation Library (VDL)</i> -----	<i>5</i>
TEST SITES-----	5
INTRODUCTION -----	9
OVERVIEW-----	9
<i>LAB LOINC file (#95.3),</i> -----	<i>9</i>
<i>WKLD CODE file (#64)</i> -----	<i>9</i>
<i>Enterprise Reference Terminology (ERT)</i> -----	<i>9</i>
<i>Health Data Repository (HDR)</i> -----	<i>10</i>
<i>Print LOINC Code Status [LR LOINC STATUS PRINT] option</i> -----	<i>10</i>
ENHANCEMENTS AND MODIFICATIONS -----	11
LABORATORY TEST FILE (#60):-----	11
WKLD CODE FILE (#64)-----	11
LAB NLT/CPT CODES FILE (#64.81):-----	12
LAB LOINC FILE (#95.3):-----	12
<i>LAB LOINC file (#95.3) New and Modified Fields:</i> -----	<i>12</i>
LAB LOINC COMPONENT FILE (#95.31)-----	13
VISTA LABORATORY NEW AND MODIFIED OPTIONS-----	15
<i>New Option</i> -----	<i>15</i>
Print LOINC Code Status [LR LOINC STATUS PRINT] option (NEW)-----	15
<i>Modified Option</i> -----	<i>15</i>
Map Lab Tests to LOINC Codes [LR LOINC MAP] option-----	15
NLT/LOINC V2.14 UPDATE PATCH LR*5.2*334 IMPLEMENTATION INSTRUCTIONS -----	17
LIM - STEP 1:-----	18
Example #1: List of Deprecated codes.-----	18
Example #2: Mapped Deprecated codes in use.-----	19
LIM - STEP 2:-----	19
LIM - STEP 3:-----	20
LIM - STEP 4:-----	21

GLOSSARY ----- 23

Introduction

Overview

VistA National Laboratory Test (NLT)/Logical Observation Identifier Naming Codes (LOINC) V2.14 UPDATE Patch LR*5.2*334 software release supports the “VA Unique Identifier (VUID) Implementation” standard, Data Standardization (DS), and the maintenance Enterprise Reference Terminology (ERT) standards via the LAB LOINC file (#95.3) enhancements.

LAB LOINC file (#95.3),

LAB LOINC file (#95.3), protection is significantly enhanced to prevent field editing. All fields are populated by DS authority; therefore, the LAB LOINC file (#95.3) fields are NOT site editable.

LAB LOINC file (#95.3), VA CODE field (#34), characters are expanded to accommodate the **new** VUID fields. These **new** VUID fields are populated by the Master File Server (MFS). The VUID codes are provided to Regenstrief.

LAB LOINC file (#95.3) does not support all fields contained in the LOINC database. However, the LOINC User’s Manual may be referenced for additional fields and details. The LAB LOINC file (#95.3) contents is updated to the Regenstrief issued LOINC version 2.14.

WKLD CODE file (#64)

WKLD CODE file (#64) and several standardized laboratory files associated with the National Laboratory Test (NLT) package and LOINC coding are updated. This allows the use of DEPRECATED CODES when external services might continue to report values using the “old” codes.

Enterprise Reference Terminology (ERT)

Once the site’s VistA files are updated to the Regenstrief issued LOINC version 2.14, a MailMan mail message is automatically sent to the Enterprise Reference Terminology (ERT) team. The ERT team will then manage any future updates to this file. The ERT team will be able to manually initiate a Master File Server (MFS) push through the Vitria Interface Engine (VIE), which will update files with new standardized data. This ERT update relies on VUIDs as a key for inserting the standardized data.

Health Data Repository (HDR)

This software can optionally invoke a post-processing routine as part of the VA Master File Server (MFS) (i.e., if there is a need to perform any necessary cleanup tasks on the standardized file). When the post-processing routine completes its processing or if there was no post-processing routine, the Health Data Repository (HDR) Implementation Managers are notified automatically via another MailMan message. This MailMan message alerts HDR Managers that the site is ready to have VistA Data Extraction Framework (VDEF) triggers turned on for this domain, which enables communication between the site's VistA Server and HDR/IMS database.

Print LOINC Code Status [LR LOINC STATUS PRINT] option

The **new** Print LOINC Code Status [LR LOINC STATUS PRINT] option is exported with this release. This **new** option is use to list and print LOINC deprecated terms. It also provides a list of currently mapped/linked laboratory tests that are linked to LOINC deprecated terms.

Enhancements and Modifications

The VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 software contains enhancements, modifications, file updates, modified and new options releases:

NOTE: The VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 supports the “Veterans Health Administration Unique Identifiers (VUID) standard.” This patch will update the WKLD CODE (#64).

LABORATORY TEST file (#60):

The screen has been removed from the NATIONAL VA LAB CODE field (#64), of the LABORATORY TEST file (#60). This change will permit the use of suffixed WKLD CODE in the NATIONAL VA LAB CODE field (#64), of the LABORATORY TEST file (#60).

WKLD CODE file (#64)

The WKLD CODE file (#64) has been updated. Several laboratory standardized files associated with the National Laboratory Test (NLT) package and Logical Observation Identifier Naming Codes (LOINC) coding has been replaced. (See list below)

FILE #	FILE NAME	UPDATE METHOD
64	WKLD CODE	Updated
64.061	LAB ELECTRONIC CODES	Replaced
64.062	LAB ELECTRONIC SUBTYPES	Replaced
64.2	WKLD SUFFIX CODES	Replaced
64.22	WKLD ITEM FOR COUNT	Replaced
64.3	WKLD INSTRUMENT MANUFACTURER	Replaced
64.81	LAB NLT/CPT CODES	Replaced
95.3	LAB LOINC	Replaced
95.31	LAB LOINC COMPONENT	Replaced

LAB NLT/CPT CODES file (#64.81):

The LAB NLT/CPT CODES file (#64.81), is **enhanced** by adding the **new** DEFAULT LOINC CODE field (#64.8117,26). This **new** field is use for sending default LOINC code for installation at target systems. Default LOINC codes are to be used if no specific method is available.

LAB LOINC file (#95.3):

The VistA Laboratory software package LAB LOINC file (#95.3) contents will be updated to the Regenstrief issued LOINC version 2.14. Protection has been significantly **enhanced** to prevent field editing of the file. All fields will be populated by the DS authority; there are no fields in this file that are site editable. Once the Facility's LAB LOINC (#95.3) file has been updated, a MailMan mail message is automatically sent to the Enterprise Reference Terminology (ERT) team. The ERT team will then manage any future updates to this file. The ERT team will be able to manually initiate a Master File Server (MFS) push through the Vitria Interface Engine (VIE), which will update files with new standardized data. This ERT update relies on VUIDs as a key for inserting the standardized data. LAB LOINC file (#95.3) is **enhanced** to allow selection of National Laboratory Test (NLT) and Logical Observation Identifier Naming Codes (LOINC) coding. However, the LAB LOINC file (#95.3) **does not** support all fields stored in the LOINC database.

LAB LOINC file (#95.3) New and Modified Fields:

NOTE: Whenever a **new** LOINC database is distributed the **new** fields are populated.

- LAB LOINC file (#95.3) added the **new** Master Entry for VUID field (#99.98). This **new** field identifies the Master entry for a VUID associated with a Term/Concept.
- LAB LOINC file (#95.3) added the **new** VUID field (#99.99). VHA Unique ID (VUID). A unique meaningless integer assigned to reference terms VHA wide.
- LAB LOINC file (#95.3) added the **new** EFFECTIVE DATE/TIME sub-file (#99.991) including the **new** Effective DATE/TIME field (95.3099,.01) and STATUS field (95.3099,.02), with a date/time stamp and a status of 'active' or 'inactive' in the files being standardized. This **new** sub-file also stores VUID related EFFECTIVE DATE/TIME and the STATUS and EFFECTIVE DATE/TIME for each Enterprise Reference Terminology (ERT).

- LAB LOINC file (#95.3), STATUS field (#20), is **modified** by adding the **new** cross-reference 'List of Status'. This **new** cross reference provides a listing of LOINC codes that have status update. Deprecated or superseded status is indicated by DEL in this field (otherwise blank). This field is used to mark terms as the database evolves. LOINC codes will not ever be reused nor will they be removed from the database, they will instead be cross-referenced to superseding terms in the MAP TO field (#21), LOINC term MAP_TO.
- LAB LOINC file (#95.3), VA CODE field (#34) is **modified** to increase the field length from 10 to 30 characters and to prevent editing of this field. This field is used to store Enterprise Reference Terminology (ERT) assigned VA Unique Identifier (VUID) code numbers. The VUID code numbers are provided to Regenstrief for inclusion in future Regenstrief LOINC download text files. The VA CODE field (#34) contains the assigned ERT VUID code for specific LOINC codes. VUID code numbers are assigned by the VA Master File Server (MFS).

NOTE: The LOINC download file is a text file used to populate all VA supported LOINC code data fields in LAB LOINC file (#95.3). The LOINC download text file is **not** stored in VistA. A special routine reads the LOINC download text file and then populates LAB LOINC file (#95.3) VA supported fields.

NOTE: Reference the LOINC User's Manual for more field details.

LAB LOINC COMPONENT file (#95.31)

The LAB LOINC COMPONENT file (#95.31), DISPLAY field (#2) is **modified** to increase the field length to 40 characters. This field displays the name of the component or analyte measured.

Example: LOINC Terms/Numbers and VistA LAB LOINC file (#95.3) Field Names/Numbers

#:	LOINC Term:	VistA Name:
1	LOINC_NUM	CODE field (#.01) + CHECK DIGIT field (#15)
2	COMPONENT	COMPONENT field (#1) + LAB LOINC COMPONENT file (#95.31)
3	PROPERTY	PROPERTY field (#2)
4	TIME_ASPECT	TIME ASPECT field (#3)
5	SYSTEM	SYSTEM field (#4)
6	SCALE_TYPE	SCALE TYPE field (#5)
7	METHOD_TYPE	METHOD TYPE field (#6)
9	CLASS	CLASSTYPE field (#41)
10	SOURCE	SOURCE field (#8)
14	DT_LAST_CH	DATE LAST CHANGED field (#22)
15	CHNG_REAS	CHANGE REASON field (#24)
16	CHNG_TYPE	CHANGE TYPE field (#23)
19	STATUS	STATUS field (#20)
20	MAP_TO	MAP TO field (#21)
23	VA_CD	VA CODE field (#34)
59	SHORTNAME	SHORTNAME field (#81)

VistA Laboratory New and Modified Options

This software release exports the following new and modified options:

New Option

Print LOINC Code Status [LR LOINC STATUS PRINT] option (NEW)

This **new** option will provide a list of LOINC deprecated terms. The option will also provide a list of currently mapped/linked laboratory tests that are linked to LOINC deprecated terms.

Modified Option

Map Lab Tests to LOINC Codes [LR LOINC MAP] option

The Map Lab Tests to LOINC Codes [LR LOINC MAP] option allows you to map Vista lab tests to LOINC codes. This option allows you to enter the Result NLT Code for a lab test and/or LEDI HL7 Code for a specimen so that the test can be mapped to a LOINC code. With patch LR*5.2*334, modification of NATIONAL VA LAB CODE field (#64) of the LABORATORY TEST file (#60), the user is able to select suffixed WKLD CODE as test's NLT order code.

This option is **modified** to allow usage of the suffixed WKLD CODES stored in LABORATORY TEST file (#60), NATIONAL VA LAB CODE field (#64). This option is located on the LOINC Main Menu [LRLOINC].

NLT/LOINC V2.14 Update Patch LR*5.2*334 Implementation Instructions

This section of the VistA NLT/LOINC V2.14 UPDATE Implementation Guide Patch LR*5.2*334 provides the Laboratory Information Manager (LIM) task-oriented approaches and step-by-step instructions and examples for using the **new** Print LOINC Code Status [LR LOINC STATUS PRINT] option and the **modified** Map Lab Tests to LOINC Codes [LR LOINC MAP] option.

NOTE: If your site is a HOST LEDI SITE, changing of any NLT or LOINC codes should be coordinated the COLLECTION SITE to ensure that both sites agree on the NLT and LOINC mappings.

NOTE: It is highly recommend that LEDI HOST SITES changing LOINC or NLT codes coordinate changes with the LEDI COLLECTION SITES to ensure that BOTH SITES agree with the LOINC and NLT Codes mapping changes.

NOTE: In some instances DEPRECATED LOINC codes stored in LAB LOINC file (#95.3), MAP TO field (#21), will have suggested replacement LOINC code populated.

LIM - Step 1:

Use the **new** Print LOINC Code Status [LR LOINC STATUS PRINT] option to **list** DEPRECATED CODES and MAPPED DEPRECATED codes in use.

Example #1: List of Deprecated codes.

```

Select LOINC Main Menu Option: LOINC Mapping Utility Menu<ENTER>

Select LOINC Mapping Utility Menu Option: Print LOINC Code Status<ENTER>

    Select one of the following:

        L           List of Deprecated codes
        M           Mapped Deprecated codes in use

Enter response: L<ENTER>   List of Deprecated codes
Select Device: <ENTER>   UCX/TELNET

List of deprecated codes      Page: 1

282-4    IMIPENEM+CILASTATIN:SUSC:PT:ISLT:QN:MLC
283-2    IMIPENEM+CILASTATIN:SUSC:PT:ISLT:ORDQN:MIC
284-0    IMIPENEM+CILASTATIN:SUSC:PT:ISLT:ORDQN:AGAR DIFFUSION
285-7    IMIPENEM+CILASTATIN:SUSC:PT:ISLT+SER:ORD:SBT
591-8    LEGIONELLA SP:PRID:PT:SPTC:NOM:ORGANISM SPECIFIC CULTURE
592-6    LEGIONELLA SP:PRID:PT:SPTT:NOM:ORGANISM SPECIFIC CULTURE
689-0    NEISSERIA GONORRHOEAE:ACNC:PT:CVX:ORD:ORGANISM SPECIFIC CULT
752-6    NEUTROPHILS:NCNC:PT:BLD:QN:AUTOMATED COUNT
830-0    A VARIANT SUBTYPE:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
831-8    A VARIANT SUBTYPE:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
832-6    A VARIANT SUBTYPE:ACNC:PT:SER:ORD:AGGL RBC
833-4    A VARIANT NOS AG:ACNC:PT:RBC~BPU:ORD:AGGL RBC
834-2    A VARIANT NOS AG:ACNC:PT:RBC~DONOR:ORD:AGGL RBC
835-9    A VARIANT SUBTYPE:ACNC:PT:RBC~PATIENT:ORD:AGGL RBC
845-8    A1 B AB:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
846-6    A1 B AB:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
847-4    A1 B AB:ACNC:PT:SER:ORD:AGGL RBC
851-6    A2 AB:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
852-4    A2 AB:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
853-2    A2 AB:ACNC:PT:SER:ORD:AGGL RBC
857-3    A2 B AB:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
858-1    A2 B AB:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
859-9    A2 B AB:ACNC:PT:SER:ORD:AGGL RBC
863-1    A3 AB:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
864-9    A3 AB:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
865-6    A3 AB:ACNC:PT:SER:ORD:AGGL RBC
869-8    A3 B AB:ACNC:PT:SER/PLAS~BPU:ORD:AGGL RBC
870-6    A3 B AB:ACNC:PT:SER/PLAS~DONOR:ORD:AGGL RBC
871-4    A3 B AB:ACNC:PT:SER:ORD:AGGL RBC
    
```

Example #2: Mapped Deprecated codes in use.

```

Select LOINC Main Menu Option: LOINC Mapping Utility Menu<ENTER>
Select LOINC Mapping Utility Menu Option: Print LOINC Code Status<ENTER>
    Select one of the following: <ENTER>
        L          List of Deprecated codes
        M          Mapped Deprecated codes in use
Enter response: M <ENTER> Mapped Deprecated codes in use
Select Device:<ENTER>UCX/TELNET

List of mapped LOINC deprecated codes      Page: 1
+++++
Test Name: [9] PLT
ORDER NLT Code LOINC Default
NLT Code: Platelet Count Whole Blood 85570.0000
5907-1 PLATELETS:NCNC:PT:BLD:QN:AUTOMATED COUNT

Test Name: [9] PLT
RESULT NLT Code LOINC Default
NLT Code: Platelet Count Whole Blood 85570.0000
5907-1 PLATELETS:NCNC:PT:BLD:QN:AUTOMATED COUNT
+++++
Test Name: [22] PLT (ESTM)
ORDER NLT Code LOINC Default
NLT Code: Platelet Estimate 85109.0000
12243-2 PLATELETS:MORPH:PT:BLD:NOM:MICROSCOPY LIGHT

List of mapped LOINC deprecated codes      Page: 2

Test Name: [22] PLT (ESTM)
RESULT NLT Code LOINC Default
NLT Code: Platelet Estimate 85109.0000
12243-2 PLATELETS:MORPH:PT:BLD:NOM:MICROSCOPY LIGHT
    
```

LIM - Step 2:

Use Example #2 above to review the list of mapped LOINC deprecated codes to ensure that the codes with the status of Deprecated (DEL) are **not** used in the current mapping of LOINC codes.

If deprecated LOINC codes are currently in use, the deprecated code should be replaced after coordinating the change with any sites you are supporting in your role as a referral site.

LIM - Step 3:

Please reference the LOINC User's Manual for fields not supported in LAB LOINC file (#95.3) database.

The following LOINC terms and fields are imported and supported within the VistA LOINC database.

NOTE: Field “(#X)” refers to the fields in LAB LOINC file (#95.3) where data is stored.

#	LOINC Terms	LAB LOINC file (#95.3) Field Names/Numbers
1	LOINC_NUM	CODE field (#.01) + CHECK DIGIT field (#15)
2	COMPONENT	COMPONENT field (#1) + LAB LOINC COMPONENT file (#95.31)
3	PROPERTY	PROPERTY field (#2)
4	TIME_ASPECT	TIME ASPECT field (#3)
5	SYSTEM	SYSTEM field (#4)
6	SCALE_TYPE	SCALE TYPE field (#5)
7	METHOD_TYPE	METHOD TYPE field (#6)
9	CLASS	CLASSTYPE field (#41)
10	SOURCE	SOURCE field (#8)
14	DT_LAST_CH	DATE LAST CHANGED field (#22)
15	CHNG_REAS	CHANGE REASON field (#24)
16	CHNG_TYPE	CHANGE TYPE field (#23)
19	STATUS	STATUS field (#20)
20	MAP_TO	MAP TO field (#21)
23	VA_CD	VA CODE field (#34)
59	SHORTNAME	SHORTNAME field (#81)

NOTE: LOCAL TERMS **not** included in the installed files should be formally requested by notifying the National Laboratory Test Coordinator using the form provided on the VistA Laboratory website: <http://vista.med.va.gov/ClinicalSpecialties/lab/> and the VistA Documentation Library (VDL) www.va.gov/vdl/. Forward your completed 'Request Form' to the Exchange distribution group: VHAISD LAB NLT_LOINC.

LIM - Step 4:

Use the **modified** Map Lab Tests to LOINC Codes [LR LOINC MAP] option to **map** Lab Tests to LOINC codes. This option is located on the LOINC Main Menu [LRLOINC].

Example: How to map Lab Tests to LOINC codes.

```
Select *SITE SYNONYM* Lab liaison menu Option: LNC<ENTER> LOINC Main Menu

Select *SITE SYNONYM* LOINC Main Menu Option: ?<ENTER>
  1 Specimen HL7 Codes Print
  2 Topography Print With/Without LEDI HL7 Codes
  3 Add/Edit Topography Specimen HL7 Code
  4 Lab Tests With/Without Result NLT Codes Print
  5 National Laboratory File ...
  6 Extract VistA Lab Test Names
  7 Map Lab Tests to Default LOINC Code
  8 Map Lab Tests to LOINC Codes
  9 Map/Unmap Antimicrobial Default LOINC Code
 10 LOINC Mapping Utility Menu ...

Select *SITE SYNONYM* LOINC Main Menu Option:8<ENTER> Map Lab Tests to LOINC Codes

VistA Lab Test to Link/Map to LOINC : 175<ENTER> GLUCOSE FBS
...OK? Yes//<ENTER> (Yes)

Notice the possible selection of .XXXX

+Glucose Quant 84330.0000
Default LOINC Already Mapped to: <ENTER>
2344-0 GLUCOSE:MCNC:PT:FLU:QN<ENTER>
RESULT NLT CODE: Glucose Quant// ?<ENTER>
Enter the workload procedure code for this test.
Answer with WKLD CODE, or PROCEDURE, or PRINT NAME, or SYNONYM
Do you want the entire 5705-Entry WKLD CODE List? ^9999<ENTER>
Choose from: <ENTER>
100000 Bilirubin Qual Feces~DU PONT ACA 82250.3035
100001 Bilirubin Total and Direct~DU PONT ACA 82249.3035
100002 Lactic Acid~DU PONT ACA 83620.3035
```


Glossary

The following glossary of terms relates to the VistA NLT/LOINC V2.14 UPDATE Patch LR*5.2*334 software release:

Glossary of Terms	Definitions
API:	Application Programming Interface. This is the definition (calling conventions) by which one application can get services from another application.
CHDR:	Clinical Data Repository/Health Data Repository (Interoperability Project)
Deploying:	The process of pushing terminology and content from the development to the production environment.
Deprecated Term:	Outdated or inactivate LOINC term or interpretation.
Domain:	A subset of medicine, a natural grouping of clinical acts (e.g., demographics, vital signs, laboratory, pharmacy).
DS:	Data Standardization
DTS:	Distributed Terminology Server
ERT:	Enterprise Reference Terminology
ETS (also VETS):	Enterprise Terminology Services
HCS:	Health Care System
HDI:	Health Data and Informatics
HDR:	Health Data Repository
HDR IMS	Health Data Repository – Interim Messaging Solution
ID:	Identifier
Interface Terminology:	As opposed to reference terminology, this is a format of the terminology that aims at facilitating its access and use by end-users.
LOINC:	Logical Observation Identifier Names and Codes. LOINC is a terminology generally accepted as the exchange standard for laboratory results. It was introduced in 1994 by the Regenstrief Institute (Clem McDonald & Stan Huff).
Mapping:	Mappings are sets of relationships of varying complexity established between two vocabularies in order to allow automated translation or connection between them. More specific concepts can generally be mapped accurately to more general concepts. Mappings cannot be used to add specificity to information that was captured at a more generic level.
MFS:	Master File Server

Glossary of Terms	Definitions
NDF:	National Drug File
NDF-RT:	National Drug File – Reference Terminology
NPAD:	National Person Administrative Database
NLT:	National Laboratory Test
RPC:	Remote Procedure Call.
SNOMED-CT:	Maintained and distributed by the College of American Pathologists, the Systematized Nomenclature of Medicine - Clinical Terminology was first introduced in 1965. Free license thru NLM.
Standardization:	The process of defining, creating, deploying, and maintaining a common terminology resource (i.e., content and services) to all current and future VHA applications.
TDE:	Terminology Development Environment
Template:	An HL7 template is a data structure, based on the HL7 Reference Information Model that expresses the data content needed in a specific clinical or administrative context. Templates are drawn from the RIM and make use of HL7 vocabulary domains. Templates have been described as constraints on HL7 artifacts. A template is a structured aggregation of one or more archetypes, with optional order, used to represent clinical data.
Terminology:	Set of terms, definitions, relationships of a specialized subject area. The terms which are characterized by special reference within a discipline are called the 'terms' of the discipline, and collectively, they form the terminology, those which function in general reference over a variety of languages are simply 'words', and their totality 'the vocabulary' [Sager]. See also vocabulary.
Terminology Server:	An application and a machine whose function is to provide access to terminology content thru a published set of standardized services.
Translation:	Once two terminologies have been mapped to each other, then a translation between the two is possible (e.g., given this code from terminology A what is the corresponding code in terminology B).

Glossary of Terms	Definitions
VA:	Veterans Affairs
Validation Date:	The date the data standard was last reviewed by the Domain Action Team to ensure the continued utility and accuracy of the standard.
VHA:	Veterans Health Administration
VIE:	Vitria Interface Engine
VistA:	Veterans Integrated System of Technological Architecture
VUID:	VHA Unique Identifier - these are meaningless numbers that are automatically assigned to concepts, properties, and relationships in a terminology to facilitate their access and manipulation by computers.
WKLD:	workload