OLIS Mapping Tool User Guide

Nomenclature Toolkit

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Document Control

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1.0 Document Overview

1.1 Purpose of Document

This document provides information on the activities required to use the Ontario Laboratory Information System (OLIS) Mapping Tool and instructions on its installation and use. Use of the OLIS Mapping Tool is optional.

1.2 Intended Audience

This document is primarily intended to be used by laboratory personnel responsible for mapping laboratory tests using the OLIS Mapping Tool.

1.3 Desired Outcomes

Completion of all tasks in this document will result in:

- An understanding of the activities that require completion before use of the OLIS Mapping Tool
- The ability to install the OLIS Mapping Tool
- The ability to use the OLIS Mapping Tool
- The ability to address issues that result from use of the OLIS Mapping Tool

1.4 Reference Documents

- Nomenclature Kick-Off Presentation
- A Guide to the OLIS Nomenclature
- Logical Observation Identifiers Names and Codes (LOINC) User Guide (Refer to <u>http://loinc.org/downloads/files/LOINCManual.pdf</u>)

2.0 Before You Begin

2.1 What is the OLIS Mapping Tool?

The OLIS Mapping Tool is a Microsoft Access based application that aids in the search and mapping¹ of Laboratory Information System (LIS) codes (i.e. local test request (order) ², specimen (source), microorganism names and test result codes) to the OLIS Nomenclature (OLIS Test Requests, Test Results. Microorganism list, Specimen (Source) Nomenclature) (Refer to "A Guide to the OLIS Nomenclature" for more information). The OLIS Mapping Tool imports local files, associates these files with preloaded OLIS Nomenclature and exports mapped files into a variety of formats.

2.2 Why Use the OLIS Mapping Tool?

The OLIS Mapping Tool supports a systematic and comprehensive approach to the mapping of local Laboratory Information System (LIS) codes to the OLIS Nomenclature. The OLIS Mapping Tool automates the mapping process and results in consistent and reliable mapping of local laboratory test request, specimen (source) and test result codes. The OLIS mapping tool directly maps the specimen and microorganism codes.

The benefits of using the OLIS Mapping Tool are it: automatically documents and tracks who performed mapping of the test request, test result codes, microorganism names, Specimen (Source) and when it was performed; allows comments to be added to each record; and can be stored in a format that is consistent with other OLIS Adopters so that it can be more easily interpreted and compared. The OLIS mapping tool allows for the pairing of Test Request and Test Results.

2.3 About the OLIS Mapping Tool

When using the OLIS Mapping Tool, users should be aware of the following:

• It is continually being refined. For this reason, the most current OLIS Mapping Tool must correspond with the most current OLIS Nomenclature

 $^{^1\,\}underline{\text{Mapping}}$ is the process of matching an OLIS code and description to an organization's local code and description.

² An <u>Order</u> is a collective term used to refer to one or more test requests.

- To download the OLIS Mapping Tool, the user must first be registered for access to the OLIS Program Collaboration Portal. Even as a zipped file it is too large to be emailed
- It has known issues that need to be manually addressed (*Refer to Section* 11)

2.4 Expectations

Mapping of local LIS codes is expected to be completed by subject matter experts who understand in detail the methodology and the principle of laboratory procedures. Subject matter experts performing the mapping are responsible for selecting appropriate codes for each test request, test result microorganism, specimen and submit a code request to the OLIS Business Service Desk (BSD) when the correct test code is not available (Refer to "*A Guide to the OLIS Nomenclature*" for more information on this process).

2.5 Pre-Mapping Activities

Before the mapping process can begin, the steps outlined in *Sections 2.5.1-2.5.3* must be completed.

2.5.1 Laboratory Test Dataset Clean-up

Before mapping can occur, the local laboratory test requests, test results, microorganism and specimen datasets must be cleaned. This includes:

- Eliminating any duplicate codes by deleting them or uniquely renaming them. For example:
 - If a single local test request code requires mapping to the same OLIS test request code but with more than one specimen (source) code, only the latter mapping will be retained. To correct this, create a new local source code
- Ensuring that no local test request or test result code is reused
- Populating metadata for each test request or test result code. This includes:
 - > Code mnemonic as well as descriptive name
 - Inactive flag or end date to designate codes that are no longer active (i.e. no longer used as part of new data)
 - Clinical discipline and sub-type (e.g., Hematology with sub-type coagulation)
 - If the code is for a single test or for a group (battery/panel/profile) test. <u>Note</u>: Most group tests will need to be mapped at the level of single tests within group tests

2.5.2 Laboratory Test Dataset Extracts

After the laboratory test requests and test results datasets have been cleaned, an extract (ASCII format or CSV) of the local laboratory datasets must be obtained for

each Clinical discipline of an organization's laboratory information system (LIS). This must take place from the Production or Live system, not the test system. Refer to *Section 4* for information on extracting these files.

2.5.3 Obtain Access to the OLIS Mapping Tool

Registration with eHealth Ontario must be completed in order to obtain access to the OLIS Program Collaboration Portal. Registration can take a few weeks and should begin early to avoid delays in performing mapping activities. Once access credentials are provided, the OLIS Mapping Tool can be downloaded from the OLIS Collaboration Portal. A zipped file will contain the most current version of the OLIS Mapping Tool and the OLIS Nomenclature.

3.0 Installation Guide

3.1 Background

This section provides detailed information on the system requirements for using the OLIS Mapping Tool and the steps required to install and update this Tool. The most current version of the OLIS Mapping Tool must be used to ensure mapping takes place with the most current OLIS test request and test result codes.

3.2 System Requirements

The OLIS Mapping Tool consists of three Microsoft Access 2003 database files listed below.

OLIS_MAP_d.OLIS Results, Requests and Source tablesOLIS_MAP_sMicrosoft Access applicationOLIS_MAP_Local_dlocally mapped tables

Note: These files cannot be renamed or altered.

Microsoft Access must be installed on the computer on which the OLIS Mapping Tool will be used. Installation of these files is a manual process and will require a basic understanding of managing a Microsoft Windows file structure. Table 3-1 provides detailed information on the system requirements for using the OLIS Mapping Tool.

Hardware/Software	Minimum Requirements
Processor	Intel Pentium III or higher
Operating System (OS)	Windows XP
	Windows 2000
	Windows Vista
	Windows Tablet PC
Memory	Min 128 MB
Hard-disk space	100 MB
Browser	IE 6.0 service pack 2 or higher
Installed Software	Microsoft Access 2003, Excel
	2003 and Excel 2003
	(Workbook)

Table 3-1: System	Requirements
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3.3 Installing the OLIS Mapping Tool

To install the OLIS Mapping Tool, a folder of three Microsoft Access 2003 files must be created. This requires following these steps:

- 1. Create the following folder structure: C:\Program Files\ OLIS_MAP
- 2. Copy the three database files into the folder OLIS_MAP
- 3. Create a shortcut to the OLIS_Map_s.mde and place this shortcut at a convenient location such as on the Desktop or Start Menu

To create a shortcut on your Desktop:

- 1. Right-click on the OLIS_Map_s file in the OLIS_MAP folder
- 2. Drag the mouse pointer along the drop-down menu until "Send to" is highlighted
- 3. Left-click on "Desktop"
- 4. Double click on this Desktop shortcut to begin using the OLIS Mapping Tool

3.4 Updating the OLIS Mapping Tool

New versions of the OLIS Nomenclature are released together with an updated version of the OLIS Mapping Tool. Like any update, there is a risk of losing data if the following steps are not followed. The OLIS mapping tool allows for one working version on the computer, so other version must be removed or arhived. Therefore, it is good practice to back up the files and zip them, before installing the updated OLIS Mapping Tool. Previous versions of local test codes, OLIS test codes and mapped codes will all be overwritten when the new OLIS Mapping Tool is installed. Backing up, or exporting the mapped test codes will safeguard the work the user has done in previous mapping sessions. This step is especially important if a user requires a complete listing of test codes to be uploaded to the LIS to OLIS interface (rather than a file that includes only newly mapped test codes).

To update the OLIS Mapping Tool:

- 1. Export local laboratory test dataset files. Refer to *Section 10* for instructions. Keep these files safe since they will be imported into the new OLIS Mapping Tool
- 2. Create a new folder in the directory C:\Program Files\OLIS_Map and name it "ORIGINAL"
- 3. Copy the existing 3 OLIS Mapping Tool files into this folder C:\Program Files\OLIS_MAP\ORIGINAL (OLIS_MAP s, OLIS_MAP_Local_d, OLIS_MAP_d)

- 4. The original OLIS Mapping Tool files have now been preserved. The user can revert back to the previous version, if needed. The folder "ORIGINAL" may be archived at a later date after it has been established that the updated OLIS Mapping Tool is functioning as expected
- 5. Delete the three OLIS Mapping Tool files from C:\Program Files\OLIS_Map
- 6. Copy the three updated OLIS Mapping Tool files into C:\Program Files\OLIS_Map
- 7. Double click on the OLIS Mapping Tool shortcut icon. If the OLIS Mapping Tool application opens, proceed to the next step. If an error message is received, contact the OLIS BSD
- 8. Import the exported local laboratory test dataset files. Refer to *Section 5* for instructions
- 9. The OLIS Mapping Tool is ready for use

Usage Tip:

The size of the Access files are not an indication of the number of entries that are within a file. As these files are used, they become larger in size due to unformatted space in their data structure. A newly created database can easily amount to being over 1 megabyte in size without data. For this reason, it is recommend that these files are regularly "Compacted and Repaired" to improve performance. To automatically compact and repair a database, complete the following tasks:

- 1. Click on the "Microsoft Office Button", and click "Access Options";
- 2. In the "Access Options" dialog box, click on "Current Database"; and
- 3. Under "Application Options", select the "Compact on Close" check box.

Note: Each time a Microsoft Access file is opened and then closed, the "Date Modified" is updated to the current date in Windows Explorer.

Usage Tip:

If the lower portion of the Mapping screen is not immediately displayed.

Solution: Turn off the Ribbon. This can be done by right clicking on the Microsoft Office Button, and then clicking "Minimize the ribbon".

4.0 Extraction of Local Laboratory Test Datasets

4.1 Background

Before using the OLIS Mapping Tool, an extract of the local laboratory test datasets need to be created. This section provides detailed information on how to create a: Local laboratory test requests dataset extract and; Local laboratory test result dataset extract.

4.2 Extraction of File Specifications

The dataset files must conform to the specifications outlined in the following sections.

4.2.1 File Format

The extract file must be in either MS Excel (97- 2003), or in ASCII delimited file format (e.g., .txt or .csv).

4.2.2 Data Element Headers

The dataset in the extract file should have data element headers (e.g., "Test Code", "Test Name", "Category" etc.) for convenience. However, this is not required for text files, but is mandatory for MS Excel.

4.2.3 Data Separators for ASCII Text files

The data in the extract file must be separated by one of the following text separators:

Tab:

- Semicolon (:)
- Comma
- Space
- Vertical Bar, pipe (|)

4.2.4 Text Qualifiers

Data values within the dataset may have following data qualifiers:

- Double quote (")
- Single quote (')
- None

4.3 Creating a Local Laboratory Test Requests (Orders) Dataset

To facilitate the mapping of test request codes, the local laboratory test requests dataset should each contain the data values in the order outlined in Table 4-1.

If the test request file is in MS Excel format, it must take the form of a (97-2003) worksheet. The files should then be extracted in the order outlined and with the Column headers shown in Table 4-1. Inserted is an Excel template that can be downloaded and used for Test Requests

Order	Metadata/Attribute	Mandatory / Optional	Column heading	Details/ Examples
1	Local Test Code	Mandatory	Local_Code_Mnemonic	BLDCBC15
2	Facility	Optional	Facility	A Mnemonic used to identify different sites within your organisation
3	Local Test Name	Mandatory	Local_Name	CBC
4	Local Test Class Category	Mandatory if applicable	Local_Category	Hematology, Biochemistry, Coagulation, Blood bank, Microbiology, Pathology)
5	OLIS Test Request Code	Mandatory when mapped	OLIS_Code	TR10482-8
6	OLIS Test Request Name	Mandatory when mapped	OLIS_Test_Request_Na me	Leukocyte Count
7	OLIS Specimen Value (Code)	Mandatory when mapped	Specimen_value	PLR
8	OLIS Specimen Description	Mandatory when mapped	Specimen_Description	Pleural Fluid
9	OLIS Specimen Site Modifier	Mandatory when mapped	Specimen_Site_Modifier	Exudate
10	OLIS Comments	To be entered by OLIS	Comments	Used by OLIS. This is a free-text field and is not editable
11	Local Comments	Optional, to be entered by site	Local_Comments	Description of the code (e.g., code used for white count in Pleural Fluid or note to self. It is a free-text field that is used at the user's discretion)
12	Mapping Date	No (auto populated when mapped)	Mapping_Date	yyyy-mm-dd hh:mm:ss
13	Mapping User	No (auto populated when mapped)	Mapping_User	Name of the user that is logged onto the computer

14	Sort key	Mandatory when mapped	Sort_Key	1000.01,1000.02 or 1, 2, 3, 4, etc
15	Group/Panel	No (auto populated when mapped)	Group_or_Panel	CBC256, ELT001, BC
16	Group/Panel Name	No (auto populated when mapped)	Group_Panel_Name	Complete Blood count, Electrolytes, Blood count

Table 4-1: Local Laboratory Test Requests Dataset



Usage Tip:

The spelling of the Metadata descriptors (column headings) is important, for txt or CSV files and the relative order of their association is important. For Excel files the format must be Excel 97-2003 (Excel 2007 file format is not compatible).

If the user has manually mapped local test request codes to the OLIS Test Requests Nomenclature and wants to validate this mapping, the user can populate mapping information in Table 4-1 to load this mapping into the OLIS Mapping Tool. If the user has not previously performed mapping, fields 4 to 13 will be blank. In this case, it must be specified that no data is available for these fields (Refer to the dataset examples below).

4.3.1 Dataset Example 1:

The following dataset example contains data element headers and local data values, a comma (,) as the text separator and a double quote (") as a text qualifier. The "OLIS" fields are empty since the user has not conducted mapping before. However, missing data must be specified with double quotes ("").

"Local Code", "Local Name", "Local Category", "OLIS Code", "OLIS Name", "OLIS" "Spec Code", "OLIS Spec Description", "OLIS Site modifier", "Comments", "Local Comments", "Mapping Date", "Mapping User", "Sort key", "Group/Panel", "Group/Panel Name"

4.3.2 Dataset Example 2:

The following dataset example contains only local data values and a comma as the text separator. There are no data element headers or text qualifiers.

CBC256,CBC,Hematology,,,,,,, HCT829,Hematocrit, Hematology,,,,,, HGB903,Hemoglobin, Hematology,,,,,, MCH902,MCH, Hematology,,,,,,

4.3.3 Dataset Example 3:

The following dataset example contains local and OLIS data values as well as a comma as a text separator. There are no data element headers or text qualifiers.

CBC256,CBC,Hematology,TR10477-8,Complete Blood Count,BLD,Blood,,,,,,, HCT829,Hematocrit, Hematology,TR10480-2,Hematocrit,BLD,Blood,,,,,, HGB903,Hemoglobin, Hematology,TR10481-0,Hemoglobin,BLD,Blood,,,,,,, MCH902,MCH, Hematology,TR10483-6,MCH,BLD,Blood,,,,,,

4.3.4 Dataset Example 4:

Figure 4-1 provides a dataset file example that contains local and OLIS data values for MS Excel format files. The extract template file is inserted under Figure 4-1 for Test Request.

	A	В	C	D	E	F	G	H I	J	K	L	M	N	0	Р	Q
1	Local_Code_Mnemonic	Facility	Local_Name	Local_Category	OLIS_Code	OLIS_Tes	Specimen_Valu	e Specimen Specim	en Comment	Local_Co	Mapping_Date	Mapping_	Sort_Key	Group_Or	Group_Pr	anel_Name
2	2GTT		2h GLUCOSE TOLERANCE TEST	CHEMISTRY	TR10213-7	Glucose 7	I SER/PLAS	Serum/Plasma			2012-10-03 11:45:19	Lisa				
3	5GTT		5h GLUCOSE TOLERANCE TEST	CHEMISTRY	TR10216-0	Glucose 7	ESER/PLAS	Serum/Plasma			2012-10-03 11:45:19	Lisa.				
4	DIAL24		24 h DIALYSATE	CHEMISTRY	TR11801-8	Chemistry	DIAF	Dialysis fluid			2012-10-03 11:45:19	Lisa.				
5	ACET		ACETAMINOPHEN	CHEMISTRY	TR10122-0	Acetamin	SER/PLAS	Serum/Plasma			2012-10-03 11:45:19	Lisa				
6	ALB		ALBUMIN (PLASMA)	CHEMISTRY	TR10010-7	Albumin	PLAS	Plasma			2012-10-03 11:45:19	Lisa				

Figure 4-1: Test Requests Dataset File Example



4.4 Creating a Local Laboratory Test Results Dataset

To facilitate the mapping of test result codes, the local test results dataset should contain the data values in the order presented in Table 4-2:

Order	Metadata/attribute	Mandatory/ Optional	Column heading	Details/ Examples
1	Local Test Code	Mandatory	Local_Code_Mnemonic	ERYBLD, 26ERY, 2873, 3894-9
2	Local Name	Mandatory	Local_Name	Erythrocytes, Leukocytes

3	Local Units of	Optional	Local_Units	X 10e3/mm3, mmol/l, mg
	Measure			
4	Local Method	Optional	Local_Method	Manual, ELISA, RIA
5	Local Category	Optional	Local_Category	Hematology, Urinalysis
6	Local LOINC Code	Optional	Local_LOINC_Code	789-8, 790-6, 26453-1
7	OLIS LOINC Code	Optional	OLIS_Code	790-6,
8	OLIS LOINC Full	Optional	OLIS_LOINC_Fully_Sp	ERYTHROCYTES:NCNC:P
	Name		ecified_Name	T:BLD:QN:MANUAL
				COUNT
9	Comments	Optional	Comments	Used by OLIS. This is a free-
				text field and should not be
				edited
10	Local Comments	Optional	Local_Comments	This is a free text field that
				can be used to make notes or
				to explain mapping
11	Mapping Date	Optional	Mapping_Date	yyyy-mm-dd hh:mm:ss
12	Mapping User	Optional	Mapping_User	Name of the user that is
				logged onto the computer
13	Sample Value	Optional	Sample_Value	23 mg/L. Postive etc
14	Sort key	Optional	Sort key	100.01, 100.02 or 1,2,3,4 etc
15	Data Type	Optional	Data_Type	HL7 datatype, TXT, NM, SN
				etc
16	Code System	Optional	Code_System	Facility that is sending the
				code
17	Group_Panel_Name	No (auto		
		populated when		
		mapped)		
18	Sample Value	Optional	Sample_Value	3.3 mg/L, negative, Positive
		1		etc

Table 4-2: Local Laboratory Test Results Dataset

<u>Note</u>: The spelling of the Metadata descriptors (row column headings) is not important, but the relative order of their association is important. For Excel files the format must be Excel 97-2003 (Excel 2007 file format is not compatible).

4.4.1 Dataset Example 1:

The following dataset contains, data element headers and data values, a comma (,) as the text separator (delimiter), and a double quote (") as the text qualifier. In this example, the "Local LOINC Codes", "OLIS LOINC Codes" and "OLIS Full Name" fields have no values (""). However, these fields must still be included in the file to maintain the file structure.

"Local_Code_Mnemonic","Local_LOINC_Code", "Local_Name","Local_Category", "Local_Units", "Local_Method","OLIS_Code", "OLIS_LOINC_Fully_Specified_Name", "Comments", "Local_Comments", "Mapping_Date", "Mapping_User", "Sort_Key", "Data_Type", "Code_system", "Group_Panel_Name", "Sample_Value"

4.4.2 Dataset Example 2:

The following dataset contains data values but does not include data element headers. The file also contains a comma as the text separator but does not contain any text qualifiers. In this example, the "Local LOINC Codes", "OLIS LOINC Codes" and "OLIS Full Name" fields have no values (""). However, these fields must still be included in the file to maintain the file structure.

ERY1,Erythrocytes,x10e3/mm3,Man,Hem,,,,,,,,,,, PLT2,Thrombocytes,x10e3/mm3,Man,Hem,,,,,,,,,, EOS2,Eosinophils,x10e3/mm3,Man,Hem,,,,,,,,,,,

4.4.3 Dataset Example 3:

The following dataset contains data values but no data element headers. The file also contains a comma as the text separator but does not contain a text qualifier. The "Local LOINC Code" field is empty but still needs to be included (between the two commas) to maintain file structure.

Note: The spaces between individual records have been provided for readability purpose only.

ERY1,Erythrocytes,x10e3/mm3,Man,Hem,,790-6,ERYTRHOCYTES:NCNC:PT:BLD:QN:MANUAL COUNT,,,,,,,,

PLT2, Thrombocytes, x10e3/mm3, Man, Hem, ,778-1, ,,,,,,,,,,

ERYTRHOCYTES:NCNC:PT:BLD:QN:MANUAL COUNT,,,,,,,,,, EOS2,Eosinophils,x10e3/mm3,Man,Hem,,712-0, EOSINOPHILS:NCNC:PT:BLD:QN:MANUAL COUNT,,,,,,,,,,

4.4.4 Dataset Example 4:

Figure 4-4 provides a dataset file example that contains dataset column headers for Excel (97-2003). This file can be obtained from the OLIS Program Coordinator, on request or downloaded from the embedded file under Figure 4-2

A	B	С	D	E	F	G	Н	1	J	К	
Local_Code	e_Mnerr Local_Name	Local_Units	Local_Meth	hoc Local_Catego	Local_LOINC_C	COLIS_Code	e OLIS_LOINC_Fully_Specified_Name	Comments	Local_Comments	Mapping_Date	Mapp
ERY1	Erythrocytes	x10e3/mm3	Man	Hem		26453-1	Erythrocytes:NCnc:PtBld:Qn	Check with site	Done in Chem	2010-09-03 00:59:05	anil.p:
LYM5	Lymphocytes	x10e3/mm3	Man	Hem		11130-2	Lymphocytes B:NCnc:Pt:Bld:Qn			2010-09-10 00:36:20	anil.p

Figure 4-2: Test Results Dataset File Example (Excel)



4.5 Creating a Local Laboratory Microorganism Dataset.

To facilitate the mapping of Microorganism codes, the local Microorganism dataset should contain the data values in the order presented in Table 4-3:

Order	Metadata/attribute	Mandatory/	Column heading	Details/ Examples
1	Local Code	Mandatory	Local_Code	ABIO_Defectiva, 2873, 3894- 9
2	Local Organism Name	Mandatory	Local_Organism_Name	Abiotrophia defectiva, Abiotrophia sp
3	OLIS Microorganism Code	Mandatory when mapped	OLIS_Microorganism_Code	M01554
4	Microorganism Name	Mandatory when mapped	Microorganism_Name	Abiotrophia defectiva
5	Microorganism Type	Mandatory when mapped	Microorganism_Type	Bacteria
6	Comments	Optional	Comments	Used by OLIS. This is a free- text field and should not be edited
7	Local Comments	Optional	Local_Comments	This is a free text field that can be used to make notes or to explain mapping
9	Mapping Date	Mandatory when mapped	Mapping_Date	yyyy-mm-dd hh:mm:ss
9	Mapping User	Mandatory when mapped	Mapping_User	Name of the user that is logged onto the computer

4.5.1 Dataset Example 1:

The following dataset contains, data element headers and data values, a comma (,) as the text separator (delimiters), and a double quote (") as the text qualifier. In this example, the "Local Microorganism Code", "Local Microorganism Name" fields have values. However, these fields must still be included in the file to maintain the file structure.

Local Code, Local Organism Name, OLIS Microorganism Code, Microorganism Name, Microorganism Type, Comments, Local Comments, Mapping Date, Mapping User ABIO_DEFECTIVA,Abiotrophia defectiva,,,,,,, ABIO_SPECIES,Abiotrophia sp.,,,,,, ABSIDIA_CORYMBIFERA,Absidia corymbifera,,,,,,, ABSIDIA_SP,Absidia sp.,,,,, ACANTHAMOEBA,Acanthamoeba sp.,,,,,,

4.5.2 Dataset Example 2:

Table 4-3 provides a dataset file example that contains dataset column headers for Excel (97-2003). This file can be obtained from the OLIS Program Coordinator, on request or downloaded from the embedded file below



4.6 Creating a Local Laboratory Specimen (Source) Dataset.

To facilitate the mapping of Specimen (Source) codes, the local Specimen dataset should contain the data values in the order presented in Table 4-6:

Order	Metadata/attribute	Mandatory/ Optional	Column heading	Details/ Examples
1	Local Specimen Code	Mandatory	Local_Code_Mnemonic	24HU,
2	Local Specimen Description	Mandatory	Local_Description	Urine, 24 Hour
3	Local Comments	Optional	Local_Comments	This is a free text field that can be used to make notes or to explain mapping
3	Specimen Value	Mandatory when mapped	Specimen_Value	24H
4	OLIS Specimen Description	Mandatory when mapped	Specimen_Description	Urine 24 Hour
5	Specimen Comments	Mandatory when mapped	Specimen_Comments	Used by OLIS. This is a free- text field and should not be edited
9	Mapping Date	Mandatory when mapped	Mapping_Date	yyyy-mm-dd hh:mm:ss
9	Mapping User	Mandatory when mapped	Mapping_User	Name of the user that is logged onto the computer

Table 4-6: Local Laboratory Specimen (Source) Dataset

4.6.1 Dataset Example 1:

The following dataset contains, data element headers and data values, a comma (,) as the text separator (delimiters), and a double quote (") as the text qualifier. In this example, all fields have been populated.

"Local SpecimenCode", "Local Specimen Description", "Local Comments", "Specimen Value", "OLIS Specimen Description", "Specimen Comments", "Mapping Date", "Mapping User"

Example 1

"24 Hours", "24 Hours – Urine", "24H", "24H", "Urine 24 Hour", "", "2011-09-07 16:36:07", "tammy.chan"

4.6.2 Dataset Example 2:

The following dataset contains, data element headers and data values, a comma (,) as the text separator (delimiters), and no text qualifier. In this example, only the mandatory fields have been populated, the "Local Specimen Code", "Local Specimen Description". The first line contains the header.

Local_Code_Mnemonic,Local_Description, Local_Comments, Specimen_Value,Specimen_Description, Specimen_Comments,Mapping_Date,Mapping_User

24 Hours,24 Hours - Urine,,,,,

Sputum,SPT,,,,,

Leukocytes,WBC,,,,,

Blood, BLD,,,,,

4.6.3 Dataset Example 3:

Table 4.6 provides a dataset file example that contains dataset column headers for Excel (97-2003). This file can be obtained from the OLIS Program Coordinator, on request or downloaded from the embedded file below in this document.



5.0 Importing and Managing Local Laboratory Test Datasets

5.1 Background

This section provides detailed information on the steps required to import and manage local laboratory test datasets.

5.2 The OLIS Mapping Tool Main Menu

When starting the OLIS Mapping Tool application, a Security Warning screen is displayed (Figure 5-1): The image on the left would be seen when using Access 2007. If Access 2003 is used the image on the right would be seen.



Figure 5-1: Security Warning Screen

In Access 2007 select "Options" and select " Enable this content" from Security Alert window (Fig 5.2)to proceed to the Main Menu screen display (Figure 5-3).

In Access 2003 select "Open" from Security Alert window (Fig 5.2)to proceed to the Main Menu screen display (Figure 5-3).



Figure 5-2: Security Warning Screen



Figure 5-3: OLIS Mapping Tool Main Menu Screen

The Main Menu screen provides links to the following functions:

- 1. Import Local Codes: Used to import both the local laboratory test requests, test results, Microorganism and specimen (source) dataset into the OLIS Mapping Tool
- 2. Map Request Codes: Used to start or continue mapping between the imported local test requests dataset and the OLIS Test Requests Nomenclature
- 3. Map Result Codes: Used to start or continue mapping between the imported local test results dataset and the OLIS Test Results Nomenclature
- 4. Map Microorganism Codes: Used to start or continue mapping between the imported local Microorganism dataset and the OLIS Microorganism Nomenclature.
- 5. Map Specimen Codes: Used to start or continue mapping between the imported local Specimen dataset and the OLIS Specimen (Source) Nomenclature.
- 6. Show Test Request, Result Link: This provides a view of the Test request and the Test results as in OLIS by filename.
- Show mapped Nomenclature Codes: This provides a view of mapping of all imported codes (Test Request, Test result, Microorganisms, and specimens). It will be used by the OLIS team to compare mapping across multiple sites and multiple domains
- 8. Export Local Codes: Used to export mapped, unmapped or all test codes.
- 9. Manage Local Files: Used to view, delete or change names of imported files.
- 10. Exit This Database: Used to exit the OLIS Mapping Tool

Usage Tip:

If the Navigation Pane is accidentally opened (as shown on the left side in Figure 5-

3), minimize the window by clicking the Shutter bar Open/Close Button . The upper portion of the screen displays the MS Access ribbon. To minimize this ribbon,

right click the Microsoft Office Button ^(B). The lower portion of the Main Menu screen will be fully displayed.

🗐 OLIS Main Switchboard	x
OLIS New state	Anna Mana an
OLIS Nomencia	ature Mapper
	Import Local Codes
	Map Test Request Codes
	Map Test Result Codes
	Map Microorganism Codes
	Map Specimen Codes
	Show Test Request, Result Links
	Export Local Codes
	Manage Local Files
	Exit this database
	Connect Files
	(Contaria
	(Ontano



5.3 Importing Local Datasets

Before mapping local test result and test request codes to the OLIS Nomenclature it is important to import the entire list of local LIS test request and test result codes into the OLIS Mapping Tool. On subsequent mapping exercises, when additional test codes are added to the local LIS, it may be appropriate to append them to the existing list of mapped test codes, or to import only the new test codes that require mapping into the OLIS Mapping Tool. This will depend on the LIS file maintenance protocol since some LIS interfaces allow the entire mapping file to be replaced when new mapping test codes are generated. Other systems require only the changes that are used by the file maintenance protocol. The approach used in the file maintenance protocol will determine whether a comprehensive list of mapping to OLIS codes is prepared or if an incremental (changed) version of the test codes is prepared.

To import:

1. Open the Import Local Code screen by selecting "Import Local Codes" menu option on the Main Menu screen (Figure 5-4):

	💷 Import Local Codes	×
	Import Local Codes	
1	Test Request O Test Result O Microorganism O Specimen	
2	O Excel	
3	⊙ Tab O Semicolon O Comma O Space O Vertical Bar	
	First Row Contains Column Headers TextQualifier (None)	
4	Folder	
5	File Name	
		_
	Next Cancel	
	6	

Figure 5-2: Import Local Codes Screen

- 2. Click on the appropriate option to specify:
 - a) "Label 1" Whether a dataset file of "Test Request", "Test Result", "Microorganism" or "Specimen (Source) codes is being imported
 - Note: if the wrong option is selected (e.g., "Test Result" is selected to import a test request file or vice-versa, the Tool will not raise an error. However, the headers displayed in the "Preview Local Test Request Codes" screen will not correctly correspond to the data elements beneath the heading
 - b) 'Label 2" Whether the file format is text (ASCII) or Excel (97 -2003) spreadsheets.
 - c) "Label 3" The separator (for ASCII text files only) used in the local laboratory test dataset file.
- 3. If the first row in the dataset file contains the data element headers (column headers), select the appropriate check box.
- 4. For ASCII text files, specify which text qualifier, if any, is used in the file. The default is "None". The OLIS Mapping Tool allows single quotation marks or double quotation marks as text qualifiers
- 5. Select the folder location of the local laboratory test dataset file (Figure 5-5) and click the Browse icon

Import L	ocal C Loc	odes cal Co	des					×
⊙ Test Re	quest	O Test F	Result	Ом	icroorganism	O Spe	cimen	
O Excel		• Text f	File					
💿 Tab	() s	emicolon		omma	O Space	O Verti	cal Bar	
First Row	Contai	ns Column I	Headers		TextQualifie	r {None}	~	
Folder								
File Name								
		Next			Cancel			

Figure 5-5: Location of Local Laboratory Test Dataset File

A windows file browser will open (Figure 5-5). Browse and select the appropriate dataset file. Click the "Open Folder" button

Browse		3
Look in:	😂 Sample local files 🛛 🕑 🎲 📂 🖽 🗸	
My Recent Documents	test request sample,txt LTest Requestssamplefile.xls	
Desktop		
My Documents		
Mu Computer		
my compater	File name: test request sample.txt Open	J
My Network	Files of type: All Files (",") Cancel □ Open as read-only □]

Figure 5-6: Windows File Browser

Click the "Next" button to preview the dataset that will be imported (Figure 5-5). If the user wishes to cancel importation of the file and return to the Main Menu, select the "Cancel" button

Usage Tip:
When the file name for the local test request codes is typed incorrectly, an error
window will appear, alerting the user that 2 parameters are required.
Microsoft Office Access
Too few parameters. Expected 2.
ОК
Solution: Use the column header (<i>Refer to Section 4</i>).

- 7. The "Preview Local Test Request Codes" screen appears when the local laboratory test requests dataset is selected (Figure 5-7 provides a preview of the local laboratory test requests dataset from a subset of a laboratory's blood testing codes). Complete the following steps:
 - Preview the contents of the file selected in the previous step
 - Type or paste the name of the file (that was selected in the previous step) into the "File Name" text box
 - Note: the Mapping Tool will not automatically populate the name of the file that was selected in the "Import Local Codes" screen. If the user wants to rename the file selected in the "Import Local Codes" screen, type the revised file name

			-	OLC Desired Constant Constant					1	Manajar Bala Manajar Har
local Code Inemonic	Local Name	Local Category	ULIS CODE	Name	Value	Description	Ste Modifier	Comments	Comments	Mapping Date Mapping User
BC256	CBC	Hematology					1			
107829	Hematocrit	Hematology				, Fo import yo	our Local te:	st codes, y	ou are requ	uired
IGB903	Hemoglobin	Hematology				o type in a F	File Name,	and then s	elect Impo	nt
SME023	Smear	Hematology			1			1		
(OR223	Morphology	Hematology			1		1	1		
.KC	WBC count	Hematology	1				1	1	1	1 1
				- /			4	1	<u> </u>	1

Figure 5-3: Local Test Request Codes Preview Screen

Confirm the import of the file by clicking on "Import". The "Import Complete" notification appears, acknowledging the success of the task (Figure 5-8)



Figure 5-4: Confirmation Notification

Usage Tip:

When importing data from an Excel spreadsheet file, if the column headers for the Excel file are not specified exactly, "#name?" will appear.

nemonic	Local Name	Local Category	OLIS Code	OLIS Request Name	Specimen Value	Specimen Description	Specimen Site Modifier	Comments	Local Comments	Mapping Date	Mapping User
20	TOBRAMYCIN PEAK	Chemistry	TR10681-5	Tryptase	SER	Serum	#Name?	com1	user com1	2010-09- 09	shar
512	GENTAMICIN PEAK	Chemistry	TR10207-9	Gentamicin Peak	SER	Serum	#Name?	com2	user com2	2010-09- 09	shar
521	AMIKACIN PEAK	Chemistry	TR10025-5	Amikacin Peak	SER	Serum	#Name?	com3	user com3	2010-09- 09	shar
30	RH GENOTYPE+A	Immunohematol ogy	TR11565-9	RH Genotype	SER	Whole blood	#Name?	com4	user com4	2010-09- 09	shar
18	CHOLINESTER ASE-RBC	Chemistry	TR10123-8	Cholinesterase	SER	Erythrocyt es	#Name?	com5	user com5	2010-09- 09	shar
41	ALANINE TRANSAMINA	Chemistry	TR10009-9	Alanine Aminotransami	SER	Serum	#Name?	com6	user com6	2010-09- 09	shar
14 ,	ALBUMIN	Chemistry	TR10010-7	Albumin	SER	Serum	#Name?	com7	user com7	2010-09- 09	shar

<u>Note:</u> To cancel importation, click on "Back" instead of "Import". The "Preview Local Test Request Codes" window will disappear and the user will return to the "Import Local Codes" screen.

The "Preview Local Test Result Codes" screen appears when the local laboratory test results dataset is selected (Figures 5-8 provides a preview of the local laboratory test results dataset from a subset of a laboratory's blood testing codes). The same process applies for the importing of the local laboratory test results dataset; the only difference is that now the preview screen will display the data element headers that are specific to result code.

Preview	Local lest	Result Co	odes _{Fir}	File Name Test result Hem										
local Code Inemonic	Local Name	Local Units	Local Method	Local Category	Local LOINS Sode	OLIS LOINC Code	OLIS LOINC Full Name	Comments	Local Comments	Mapping Date	Mapping User			
RY1	Erythrocytes	x10e3/mm3	Man	Hem										
91.72	Thrombocytes	x10e3/mm3	Man	Hem										
0\$2	Ecsinophils	x10e3/mm3	Man	Hem	Toimp	To import your Local test codes, you are required								
BASO1	Basophils	x10e3/mm3	Man	Hem	to type	to type in a File Name, and then select Import								
VEUS	Neutrophils	x10e3/mm3	Man	Hem		/				1				
YMS	Lymphocytes	x10e3/mm3	Man	Hem				1	1	1	1			

Figure 5-5: Local Test Result Codes Preview Screen

In the Preview screen, imported data can be viewed, but cannot be modified. To modify data, the user will need to modify the data in the Source file on the local computer and then re-import the file into the OLIS Mapping Tool. Alternatively, data values can be modified in the OLIS Mapping Tool within the "Map Test Request" or "Map Test Result" screens.

- 8. Before importing the files, specify the file name that will be used in the OLIS Mapping Tool. The OLIS Mapping Tool will not automatically accept the name of the file from a local computer. Make the file name as descriptive as possible
- 9. Select "IMPORT" to import the appropriate local laboratory test results dataset into the OLIS Mapping Tool or "BACK" to return to the Import "Local Codes" screen

5.4 Managing Local Files

The user can view a list of imported datasets by examining the "Manage Local Files" screen by selecting the "Manage Local Files" button from the "Main Menu" (Figure 5-9):
	Manage Local File	s			Exit to Main Scre
	File Name	File Load Date	File Type	-	
	Request Hem Lab	9/2/2010 4:53:16 PM	Request		
Select a File	Sunnybrook Hem	4/22/2010 3:11:17 PM	Result		
	Test result Hem	9/2/2010 4:58:57 PM	Result		
scroll through –					

Figure 5-6: Manage Local Files Screen

The "Manage Local Files" screen displays the imported dataset "File Name", "File Load Date" and the "File Type". The File Name is the only one that can be changed. To change the File Name, click on the "File Name" field and type the revised file name. The File Name changes are automatically saved.

Use the record navigation toolbar located at the bottom left corner of the screen to navigate between screens in case the list of data files outnumbers the maximum number of data files that can be displayed per screen.

If the user wants to delete a dataset, select the dataset (File Name) by clicking on any field within the row and then click the "Trash" icon located at the bottom right corner of the screen. Once the "Trash" icon has been clicked a warning message will appear prompting the user to confirm the deletion (Figure 5-10). To confirm deletion, click the "Yes" button. Click the "No" button to cancel the deletion. Do not click on "Help" button since it has been disabled.



Figure 5-7: Warning Message

To exit the "Manage Local Files" screen, click on the Close (X).

6.0 Mapping Laboratory Codes

6.1 Background

Once the Test Request, Test result, Microorganism and Specimen (source) dataset has been imported in the OLIS Mapping Tool, mapping of local Specimen codes can take place with the OLIS Specimen (Source) Nomenclature. This section will provide steps for proceed with the mapping

- 1. Import Specimen (Source) codes. This is a required input for the mapping the Local Test Request Codes. The mapping from the local specimen file is required during the Test Request mapping
- 2. Import Test Request code: This is a requirement before mapping the Local Test Request Codes. The mapping from the local specimen file is a requirement.
- 3. Import Test result codes
- 4. Import Microorganism codes
- 5. Map Specimen (Source) codes
- 6. Map Test Request codes
- 7. Map Test result codes
- 8. Map Microorganism codes

7.0 Mapping Laboratory Specimen (Source) Codes

7.1 Background

Once the Specimen (source) dataset has been imported in the OLIS Mapping Tool, mapping of local Specimen codes can take place with the OLIS Specimen (Source) Nomenclature. This section will provide detailed information on how to map local Specimen codes using the OLIS Mapping Tool.

7.2 Map Specimen Codes to OLIS Specimen Codes Screen

To start mapping the local laboratory Specimen (source) dataset to the OLIS Microorganism Nomenclature select "Map Specimen Codes" from the Main Menu. The following screen will appear (Figure 7-1):

	Man Local Specimen Codes	to OUS Specimen Nor	nenclature - OUS	Nomenclature Man	= X
	map cour opermen cours	to ous speaner nor		a contenentarie map	
- Ear Home					
Map Local Specimen Co	des to OLIS Specimen Codes		Local Code	24 Hours	N •
File TestSpecimen	×	<u> </u>	Local Description	24 Hours - Urine	
View 1 O AI (Mapped O Unmapped				3
			OILIS Specimen	248	
Search 4 *24H*		A X	Code	e*ii	6
Value Ret			Specimen	Urine 24 Hour	
ABS	· · · · · · · · · · · · · · · · · · ·		Specimen		
Select All			Comments		
Deselect AL			Updated by	tammy.chan On 2011-08-17 16:55	
ARTC			_		
5 000			L	Map Undo Clear OLIS record	
Snecimen Value	OLIS Specimen Description	- Specimen In Origin	al HI 7 Table Inc	C OLIS Specimen Comments	
24H	Urine 24 Hour	• opecimen_in_origi			
ABS	Abscess			0	
AMN	Amniotic fluid			0	
7 ANGI	Catheter Tip, Angio			0	
ANTW	Lavage, Antral			0	
ARTC	Catheter Tip, Arterial			0	
ASC	Ascitic Fluid			0	
Record: H < 1 of 184 + H H	K No Filter Search			•	
Record: H 4 1 of 3 + H H	Filtered Search				
Form View					Ciltored .

Figure 7-1: Map Local Specimen Codes to OLIS Specimen (Source) Codes Screen

This screen consists of 7 sections:

- 1: Data File
- 3 Exit
- 5: Search List
- 7: Navigation

- 2: Local Code Display
- 4: Search Criteria
- 6: OLIS Specimen Details

7.3 Map Specimen Codes to OLIS Specimen (Source) Codes Screen

The Data "File" section displays the name of the dataset file currently selected (Figure 7-2). Only the test results dataset files are displayed. To select a different Specimen dataset file, click on the drop down list:

File Anil Test 1	n Codes
	~
View Anil Test 1 9/1/2011 1:49:06	PM 🚯
TestSpecimen 8/17/2011 4:55:1	1 PM

Figure 7-1: List of Imported Laboratory Specimen Datasets

The buttons in the "View" section will filter the data contained in the dataset (Figure 7-3):

- All: Enables the selection of all records within the dataset
- Mapped: Enables selection of records that have already been mapped to the OLIS Nomenclature
- Unmapped: Enables selection of records that have not yet been mapped to the OLIS Nomenclature

Map Loca	al Specimen	Codes to OLI	S Specimen Codes
File	TestSpecimen		~
View	II 💿	O Mapped	O Unmapped

Figure 7-3: Data Field Section

7.4 Local Code Section

The Local Code section displays the details of the local laboratory Specimen codes from the imported local laboratory Specimen dataset (Figure 7-4).

Local Code	24 Hours
Local Description	24 Hours - Urine

Figure 7-4: Local Specimen Code Display Section

This section contains the following fields:

- 1. Local Code: A local mnemonic
- 2. Local Name: The Specimen that is locally described
- 3. Trash: Deletes the currently displayed local Specimen dataset (Figure 7-5). Clicking this button will not delete the entire dataset. It will delete only the displayed record. When the "Trash" button is clicked, the user is prompted

to confirm the deletion. Select the "Yes" button to confirm the deletion or the "No" button to cancel the deletion



Figure 7-5: Confirm Record Deletion

7.5 Search Criteria Section

The information displayed in the search section is used to define the search criteria needed to find the corresponding test result in the OLIS Specimen (Source) Nomenclature (Figure 7-6). This section is analogous to the Search Criteria section found on the Specimen (Source) Mapping section, except that the data values within the List Boxes are those from OLIS Specimen (Source) Nomenclature. As a default setting, all Values selected.



Figure 7-6: Search Criteria Section

Usage Tip:

When mapping local test request or test result codes or Specimen (source) to the OLIS Nomenclature, the Search function treats a blank category as a valid entry.

Solution: When searching, either select all categories or include blank entries.

The Search Criteria section consists of:

- 1. Searching: The local laboratory test name automatically populates this field and has a proceeding and trailing asterisk
- 2. Value: To select one or more OLIS Specimen type to search against
 - To select an additional Values, hold down the Control key and click the additional desired values

- To select a range of Values, click the first desired category. Hold down the Shift key and click the last desired category
- 3. Binocular Icon: To start the search; and \lfloor
- 4. Clear Icon: To clear the search results.

"Select All" and "Deselect All" are used to select or deselect all values in the List Box.

7.5.1 "Search Expression" Field Section

The parameters entered into the Search Expression field searches against the fields listed below in OLIS Specimen (Source) Nomenclature (Figure 7-7).

Search	**

Figure 7-7: Search Expression Field Section

This search takes place in the following order:

- Specimen Value
- OLIS Specimen Description

The OLIS Mapping Tool searches multiple parameters by placing a wildcard (*) before the first and the after the last search parameter. By placing asterisks between parameters (terms) regardless of the number of parameters, the search will return a large set of records. The search is not case sensitive. Please make sure that the search criteria are specified in above order. It is not necessary to specify the search criteria for all fields. However, those that are specified must be listed in the order mentioned above (see examples below).

<u>Note:</u> Although the local laboratory Specimen name is automatically inserted between the asterisks, the user can edit this name if the name is not appropriate or descriptive. When a user enters multiple search criteria, always precede the first search parameter with a wild card.

7.5.1.1 Search Example 1

Entered parameter: "*ur* (Figure 7-8).

<u>Search List Result:</u> The Search List will return a set of records where "ur* are specified

		-						
Map Local	Specimen Co	des to OLIS	Specimen Codes		Local Code	24 Hours		
File To	estSpecimen		*		Local Departmention	24 Hours Urise		
View		Contract of	Olloward		Local Description	24 Hours - Onne		
	C All	J Mapped	O Unmapped		Local Comments	24H		
				66 😿	OLIS Specimen	24H		
Search	*ur*				Code	Union O.4 Union		
Value	24H		~		Description	Urine 24 Hour		
	ABS				Specimen			
Select All	AMN				Comments			
	ANTW				Updated by	tammy.chan	On 2011-09-07 16:36	
Deselect All	ARTC							_
	ASC		×		[Map Undo	Clear Clear	d]
								_
🗾 Specii	men_Value 🚽	OLIS_Sp	ecimen_Description	 OLIS_Specin 	nen_Comments	-		
24H		Urine 24 Hour						
BRN		Burn						
CUR		Curettage						
INCI		Site, Incision/S	Surgical					
PLR		Pleural fluid (th	ioracentesis fld)					
SPBP		Suprapubic bla	idder puncture					
UR		Urine						
URC		Urine clean cat	tch					
URINM		Urine, Midstrea	am					
URNS		Urine sediment	t					
URT		Urine catheter						
URTH		Urethra						
URTIM		Urine Timed Co	ollection					
USPEC		Source, Unspe	cified					
Perordi Id. 4	1 of 14 ► ► ►	Filtered	Search					

Figure 7-8: Example 1 Search List (14 records returned)

7.5.1.2 Search Example 2

Entered parameter: "*urines* (Figure 7-9).

<u>Search List Results</u>: The search List will return a set of records where nothing is found

Map Loc	al Specimen Co	odes to OLIS	Specimen Codes		Local Code	24 Hours	
File	TestSpecimen		*		Local Description	24 Hours - Urine	
View		O Mapped	O Unmapped				
					Local Comments	24H	
Carach	* kinos*			MA 📉	OLIS Specimen	24H	
Search	-ornes -					Urine 24 Hour	
Value	24H		~		Description		_
	AMN				Specimen		
Select All	ANGI				commenta		
Deselect All	ANTW				Updated by	tammy.chan On 2011-09-07 1	16:36
	ASC		~			Map Updo Clear OLIS	record
Spe	cimen Value	1 OLIS SI	ecimen Description	- OLIS Specin	en Comments	•	
	-			_ '	-		
Record: 14	4 > > > > > > > > > > > > > > > > > > >	🛛 🖌 🖌 Filtered	Search				

Figure 7-9: Example 1 Search List (No records returned)

7.5.2 Search Icons

The "Search" (Binoculars) button is used to execute a search against OLIS Specimen (Source) after the search criteria have been entered into "Searching" field (Figure 7-10).



Figure 7-10: Search (Binocular) Button

7.5.3 Remove Filter Icon

The "Clear Search Criteria filter" button removes any filtering criteria entered in the "Searching" field or selected in list boxes (Figure 7-13). When the icon is clicked, the Search List section will display all records from the OLIS Specimen (source) Nomenclature.



Figure 7-11: Remove Filter Button

7.6 Search List Section

The Search List section displays the returned set of query results (Figure 7-12). By default, this section displays all OLIS Test Results Nomenclature records. When search parameters are defined in the "Search" field and the "Search" button is clicked, the Search List will display only search results that correspond to the query parameters. To sort, the default setting is on the LOINC Code field.

Map Lo	cal Specimen Co	des to OLIS Spec	cimen Codes		Local Code	24 Hours		P
File	TestSpecimen		~		Local Description	24 Hours - Urine		
View	O All (O Mapped	Unmapped		Local Comments	24H		
Search	*24*			M 🛪	OLIS Specimen Code	24H		
Value	BLDV		~		Specimen Description	Urine 24 Hour		
Select All	BLIST				Specimen Comments			
Deselect Al					Updated by	tammy.chan	On 2011-09-07 16:36	
	BRO		~			Map Undo	Clear OLIS record	1
🗾 Sp	ecimen_Value ຄ	7 OLIS_Specime	en_Description 🖓	OLIS_Specim	en_Comments	·		
24H	ф	Urine 24 Hour						
	-							

Figure 7-12: Search List Section (correct record returned)

Columns within the Search List can be hidden, reordered, frozen and sorted upon. To view column options, right click on the desired column and select the appropriate option (Figure 7-13). The order of sorted results will not be retained once the screen is closed.

	Map Local Specimen Codes to OLIS Specimen Nomenclature - OLIS Nomenclature Map	x
Home Map Local Specimen Cool File TestSpecimen View Image: All	es to OLIS Specimen Codes Image: Specimen Codes Local Code 24 Hours Image: Specimen Codes Local Description 24 Hours - Urine Image: Specimen Codes Local Code 24 Hours - Urine Image: Specimen Codes Local Comments 24 Hours - Urine	.]
Search ®Ur* Value BLDV BUST BON Select All BPU Deselect All BPU BRN BRN	OLIS Specimen Code 24H Specimen Description Specimen Comments Urine 24 Hour Updated by tammy.chan On 2011-09-07 16:36	
Specimen_Value 17 24H BRN CUR INCI PLR	OLIS_Specimen_Description Image: Constraint of the second secon	
UR UR URC URINM URNS URT URTH URTH USPEC	Suprapublic bladder puncture	
Record: I4 7 of 14 ► H ⊨0 Record: I4 1 of 3 ► H ⊨0 Form View	Equals Equals Equals "Urine" Does Not Equal Does Not Equal "Urine" Begins With Contains "Urine" Dges Not Begin With Does Not Contain "Urine" Contains	·d;

Figure 7-2: Search List Column Options

7.7 Mapped Code Section

The Mapped Code section includes the local laboratory Microorganism Name and corresponding OLIS Microorganism Nomenclature information (Figure 7-14).

OLIS Specimen	24H	
Specimen	Urine 24 Hour	
Description Specimen		k l
Comments		
Updated by	tammy.chan	On 2011-09-07 16:36
	Map Undo	Clear OLIS record

Figure 7-14: Mapped Code Section

The Mapped Code section consists of the following:

- 1. OLIS Specimen Code: Displays the OLIS Code that has been mapped to the local laboratory Specimen (Source) code displayed in Local Code field. This field cannot be edited. The field appears empty if the user has not performed mapping before
- 2. Comments: Used to capture the reasoning for the mapping. This is a freetext field and is editable
- 3. Updated by: The name of person performing the mapping (automatically populated based on the Windows login userID of the person logged onto the computer) is captured along with the time and date the mapping was performed. If the mapping process is divided amongst multiple staff members, this feature provides a means of assessing "who mapped what and when"
- 4. Buttons:
 - Map: Used to map the OLIS Specimen (source) to the local laboratory Specimen (source). Mapping can also be performed by double-clicking any of the fields within a record on the Search List section
 - Undo: Used to return to the value of the mapped OLIS record to the last previously mapped value
 - Clear: Used to clear all details from the Mapped Code section
 - OLIS Record: Used to display all the details of the OLIS Specimen (source) record mapped or OLIS Specimen (source) record selected in the Search List screen (Figure 7-15)

OLIS Specimen		x
OLIS Specimen		1 +
OLIS Specimen code	24H	
Specimen Description	Urine 24 Hour	
In Original HL7 Table Ind	0	
Specimen Comments		

Figure 7-15: Details of the OLIS Specimen (Source) Record Screen

7.7.1 Mapping Specimen (Source)

To map a local laboratory Specimen (Source) to OLIS Specimen (Source) Nomenclature record:

- 1. Use the "Searching" field to narrow down the number of records displayed in the Search List (Figure 7-16)
- 2. Select the OLIS result record by clicking it once
- 3. Click the "Map" button

<u>Note:</u> Double clicking the record in the Search List will automatically map the OLIS Nomenclature record to the local laboratory test result record

Usage Tip:

Duplicate entries in the local test mnemonic are not recognized. Only the first entry will be mapped.

Solution: Be certain to remove or rename duplicate local test mnemonic entries before starting the mapping task.

Map Loc	al Specimen	Codes to OLIS	Specimen Codes			Local Code	24 Hours		N *
File	TestSpecimen		~			Local Description	24 Hours - Urine		
View	IIA 💿	O Mapped	O Unmapped			Local Comments	24H		
]	
Search	*74*				M 🛪 🛛	OLIS Specimen Code	24H		
Value	BLDV					Specimen	Urine 24 Hour		
	BLIST					Specimen			
Select All	BPH					Comments			
Deselect All	BPU BRN					Updated by	anil.patel	On 2011-09-08 14:16	
	BRO		*				Map Undo	Clear OLIS record	
Sne	cimen Value	f97 0115 9	Specimen Description	37	OUS Sper	rimen Commente			
24H	cimen_value	Urine 24 Hou	r	•	OLIO_OPEC	en_comments	•		
Record: I	<1 of 1 → →	Filtered	Search						

Figure 7-16: Map Local Microorganism Codes to OLIS Microorganism Codes Screen

The mapped LOINC code value from the Search List section appears in the "OLIS Code" field. Click the "Undo Mapping" button to undo the mapping action and the previous value (if available) will appear in the "OLIS Code" and "OLIS Specimen Description" field. Clicking the "Clear" button will clear values from both the "OLIS Code" and the "OLIS Specimen Description".

7.8 Navigation Section

The Record Navigation section contains two rows (Figure 7-17). The first row is used to navigate between the OLIS test result records within the Search List. It is not necessary to use the first row since the same goal can be achieved by using the vertical scroll bar.

The second row is used to navigate between imported dataset records.

Record: I	4 🕨 🕨 🕨	of 11 (Filtered)
Record: I	7 🕨 🕨 🕨	of 8

Figure 7-17: Record Navigation Section

The details outlined below pertain to the second Navigation row:

• The field within the Record Navigation section displays the user's current record location within the imported dataset

- The Record Navigation section also displays the total number of records within a dataset as "[current record position] of [total number of records]"
- The "|<" and "|>" buttons allow the user to navigate to the first and the last record (respectively) in the dataset
- The "<" and ">" buttons allow the user to navigate to the previous and the next record (respectively) in the dataset

7.9 Exit Section

The Exit section is located at the top right portion of the Mapping screen and contains the Exit button (Figure 7-18) used to exit the Mapping screen and return to the Main Menu screen



Figure 7-18: Exit Button

8.0 Mapping Laboratory Test Request Codes

8.1 Background

Once the local laboratory test requests dataset has been imported into the OLIS Mapping Tool, mapping of local test request codes can take place with the OLIS Test Requests Nomenclature. This section provides detailed information on how to map test request codes using the OLIS Mapping Tool.

8.2 Map Local Test Request (Order Codes) to OLIS Test Request Codes Screen

To start mapping of the local laboratory test requests dataset to the OLIS Test Requests Nomenclature, select "Map Request Codes" from the Main Menu. The following screen will appear (Figure 8-1):

CBC256 CBC 2 Hematology TR10477-8 Complete Blood Count			3
CBC 2 Hematology TR10477-8 Complete Blood Count			4
rematology			4
FR10477-8 Complete Blood Count		1	
		i i	
3LD 🗸	Blood	-	
/enous?		6	
ani.patel	On 2011-08-31 12:01:24	j	
Map Undo st Categ(- Test Request	Clear OLIS record	Sta 🔺	
Fetal Status	ACTIVE	_	
bug/Tox Enzyme	ACTIVE		
Enzyme Endocrine	ACTIVE		
		•	
		-	
	LD Indo erous? Ini.patel Map Undo st_Categr - Test, Request Fetal Status Fetal Status Enzyme Enzyme Endocrine	LD Blood enous? Inl.patel On 2011-08-31 12:01:24 Map Undo Clear OLIS record st_Categr Fetal Status ACTIVE Fetal Status ACTIVE Enzyme ACTIVE Enzyme ACTIVE Endocrine ACTIVE	LD Blood enous? ni.patel On 2011-08-31 12:01:24 Mao Undo Clear OLIS record st_Catego Test_Request_Sub_Ca Validation_Sta Fetal Status ACTIVE Fetal Status ACTIVE Enzyme ACTIVE Enzyme ACTIVE Enzyme ACTIVE Endocrine ACTIVE

Figure 8-1: Map Local Order Codes to OLIS Request Codes Screen

The "Map Test Request Codes" screen consists of 7 sections:

- 1: Data File
- 3: Exit
- 5: Search Criteria
- 7: Test Request Navigation
- 9: View and Link Test Result.

- 2: Local Code Display
- 4: View Test result list
- 6: Mapped code display
- 8: Search List

Usage Tip:

"Comments" associated with an OLIS test request is not visible on the "Map Local Order Codes to OLIS Request Codes" screen.

> **Solution:** Click the OLIS record button to view details.

8.2.1 Data File Section

The "Data File" section displays the name of the dataset file currently selected (Figure 8-2). Only the local laboratory test requests dataset files are displayed.

Fie	Request Hem La	×		
View	() All	O Mapped	O Unmapped	

Figure 8-2: Data File Section

To select a different dataset file, click on the drop down list (Figure 8-3):

Map Local Order Codes to OLIS Request Codes										
File	Request Heme Lab 3									
View	result micro sensitivities	24/03/2007 10:39:57 PM								
	result micro	24/03/2007 10:39:23 PM								
	requests micro	24/03/2007 10:38:54 PM								
	Request Heme Lab 3	24/03/2007 9:49:04 PM								

Figure 8-3: List of Imported Datasets

The buttons in the "View" section will filter the data contained in the dataset according to the following:

- All: Enables the selection of all records within the dataset
- Mapped: Enables selection of records that have already been mapped to the OLIS Nomenclature
- Unmapped: Enables selection of records that have not yet been mapped to the OLIS Nomenclature

8.3 Local Code Display Section

The "Local Code Display" screen displays details of the local test requests from the imported local laboratory test requests dataset (Figure 8-4). Only one test request record will be displayed at a time.

Local Code	ABO
Local Name	ABO/RH Type
Local Category	
Local Comments	

Figure 8-4: Local Code Display Section

To select another test request record from the local dataset, use the navigation bar at the very bottom of the screen. <u>Note:</u> There are two navigation bars. The upper one is used to navigate through the Search Results.

This section contains the following fields:

- 1: Local Code: The local mnemonic
- 2: Local Name: The name associated with the mnemonic

- 3: Local Category: Local category, if assigned
- 4: Local Comments: Description of the code

5: Trash: Deletes the currently displayed local test request data. Clicking this button will not delete the entire dataset. It will delete only the displayed record. When the "Trash" button is clicked, the user is prompted to confirm the deletion (Figure 8-5). Select the "Yes" button to confirm the deletion or the "No" button to cancel the deletion



Figure 8-5: Confirm Record Deletion

8.4 Search Criteria Section

The information displayed in "Search Criteria" screen is used to define the search criteria needed to find the corresponding test request in the OLIS Test Requests Nomenclature (Figure 8-6). As a default setting, all categories and sub-categories are selected as well as an active validation status of "Active".



Figure 8-6: Search Criteria Section

Usage Tip:

When mapping local test request or test result codes to the OLIS Nomenclature, the Search function treats a blank category or sub-category as a valid entry.

> Solution: When searching, either select all categories or include blank entries.

The Search Criteria section consists of:

1. Searching: The local name automatically populates this field and has a proceeding and trailing asterisk

- 2. Category: To select one or more OLIS test request categories to search against:
 - To select an additional category, hold down the Control key and click the additional desired category
 - To select a range of categories, click the first desired category. Hold down the Shift key and click the last desired category
- 3. Sub-category: To select one or more of the OLIS test request sub-categories to search against:
 - To select an additional sub-category, hold down the Control key and click the additional desired sub-category
 - To select a range of sub-categories, click the first desired category. Hold down the Shift key and click the last desired sub-category
- 4. Validation Status: To select one or more of the OLIS Test Request Validation Status to search against use the:
 - Binocular Icon: To start the search
 - Clear Icon: To clear the search results

"Select All" and "Deselect All" are used to select or deselect all values in the

List Box.

8.4.1 "Search Expression" Field Section

The parameters entered into the Search Expression field (Figure 8-7) searches against the following fields in OLIS Test Requests Nomenclature in the following order:

- Test Request Code
- Test Request Name
- Test Request Alternate Names 1, 2 and 3

Searching **

Figure 8-7: Search Expression Field Section

For the user's convenience, the OLIS Mapping Tool searches multiple parameters. Placing a wildcard (*) before the first and the last search parameter, regardless of the number of parameters, will return a larger set of records. Although the local name automatically is inserted between the asterisks, the user can edit this name if it is not appropriate or descriptive. The search is not case sensitive.

8.4.1.1 Search Example 1:

Parameter entered in "Searching field": "CBC" (Figure 8-8).

<u>Search Expression Field Section</u>: Since no wildcards (*) are used, the OLIS Mapping Tool searches for any values within OLIS Test Requests Nomenclature where the field value is precisely "CBC".

9 .	Hor	(° - =	•			Map L	Local T	est Request	Codes to OLI	IS Resi	ult Nomen	lature - OLIS	Nomenclatur	e Map				- = ×
Map Loo File View	Cal C TestR	Order (Request	Codes	to OLI	S Requ	Unmappe	edes			Loca Loca Loca	l Code I Name I Category	CBC256 CBC Hematology					•	
Searching Category Select All Deselect All	*CBC Allen Cher Drug Hem	gen n /Tox	Subc	ategory ect All	Amino Acid Animal Epid Animal Epid Autoantibo	ermals & Pri ermals & Pri dy	oteins R oteins Sj	Validation Status Select A	ACTIVE INACTIVE	OLIS OLIS Requ Spec Spec Comm	l Comments Code Test est Name simen Site Modi'r ments ted by	TR10477-8 Complete Blood BLD	l Count	Blood	8-31 12:01:24			
OLIS_C TR1047	Imm Cod - 7-8	Complet	Test_R te Blood	lequest_ Count	Name	v	Test_ CBC	Request_Alt	ernate_Name	e_1 -	Test_Requ Hem	Map est_Categ(+	Undo Test_Reque	Clear st_Sub_Ca →	OLIS record Validation ACTIVE	_Status		
Record: H	4 1 of	f1 →	N 18 🍋	V Filtere	d Search		•									•		
Test Resu Record: 14	ult:	 f4►	N HE A	🗸 Filtere	d Search	1								~		-		
Form View																		Filtered;

Figure 8-8: Example 1 Search List Result

8.4.1.2 Search Example 2:

Parameter entered in "Searching field": "*Count*" (Figure 8-9).

<u>Search list result</u>: Since wildcards (*) are used, the OLIS Mapping Tool will search for all records in which Test Request Names or Alternate Names contain the word "Count". The order in which the word "Count" appears in the test request name does not matter. It can appear at the beginning, in the middle or at the end of the test request name.

	🔊 - (भ - 🗐) 🖛 🛛 Map	Local Test Request Codes to OLI	S Result Nomend	lature - OLIS	Nomenclature	Мар			_ = X
()	Home								Ø _ ■ ×
Map Loo	cal Order Codes to OLIS Request Co	odes 💿	Local Code	CBC256					
File	TestRequest	▼	Local Name	CBC				₩*	
View									
	All O Mapped O Unmapped	ed	Local Category	Hematology			Là.		
			Local Comments						
		(#) 😽	OLIS Code	TR10477-8					
Searching	*count*		OLIS Test Request Name	Complete Blood	Count				
Category	Subcategory	Validation ACTIVE	Specimen	BLD	v	Blood			
	Chem Amino Acid Animal Epidermals & Pi	roteins Re	Spec Site Modi'r						
Select All	Drug/Tox Select All Animal Epidermals & Pr	roteins Sp	Comments						
Deselect All	Hem/BC Deselect All Autoantibody Challenge	Deselect All	Updated by	anil.patel		On 2011-08	3-31 12:01:24		
	Immuno Coag	<u>~</u>		Мар	Undo	Clear	OLIS record		
OLIS C	od স Test Request Name স	Test Request Alternate Name	1 🔐 Test Requ	est Categra	Test Request	t Sub Ca 🖓	Validation	Sta 🔺	
TR1000	Addis Count		Chem		Enzyme		ACTIVE		
TR1047	76-0 Cell Count		Hem				ACTIVE		
TR1047	77-8 Complete Blood Count	CBC	Hem				ACTIVE		
TR1048	32-8 Leukocyte Count		Hem				ACTIVE		
TR1049	J3-5 Eosinophil Count		Hem				ACTIVE		
TR1051	2-2 Reticulocyte Count	Retic Count	Hem				ACTIVE		
Record: N	1 of 8 P P P P Pittered Search								
L									
Test Resu	ult:					~		-	
								•	
Record: I	✓ 1 of 4 ► H H2 ¥ Filtered Search								
Form View									Filtered:

Figure 8-9: Example 2 Search List

8.4.2 List Box Section

The List Box section will allow the user to select and filter more specific information in each category and sub-category (Figure 8-10).

Searching	cbc			# 5	K
Category	Allergen	Subcategory	Amino Acid	Validation Status	ACTIVE INACTIVE
Select All	Chem Drug/Tox	Select All	Animal Epidermals & Proteins R Animal Epidermals & Proteins Sr	Select All	
Deselect All	Hem Hem/BC Immuno	Deselect All	Autoantibody Challenge Coag	Deselect All	

Figure 8-10: List Box Section

- To select individual values, click on the preferred value
- To select multiple consecutive values, select the starting value, hold down the SHIFT key and then select the last value in the row

- To select multiple non-consecutive values, click on the first value, hold down the CTRL key and select the desired values (in a consecutive or non-consecutive order)
- To include all values in the list box click the "Select All" button. To deselect all values click "Deselect All" button (Figure 8-11)

Select All
Deselect All

Figure 8-11: List Box Buttons

8.4.3 Search Icons

The "Search" (Binoculars) button is used to execute a search against the OLIS Test Requests Nomenclature after the search criteria have been entered (Figure 8-12).



Figure 8-12: Search (binoculars) Button

The "Clear Search Criteria filter" button removes any filtering criteria entered in the "Searching" field or selected in List Boxes (Figure 8-13). When the icon is clicked, the Search List section will display all records from the OLIS Test Requests Nomenclature.



Figure 8-13: Clear Search Button

8.5 Search List Screen

The Search List screen displays the returned set of query requests (Figure 8-14). By default, the screen displays all OLIS Test Requests Nomenclature records. When search parameters are defined in the "Searching" field and the "Search" icon is clicked, the Search List will display only search requests that correspond to the query parameters.

	OLIS_Code	Test_Request_Name	Test_Request_Alternate_Name_1	Test_Request_Categor	Test_Request_Sub_Categ	Validation
►	TR10012-3	Alcohol Fractionation		Chem	Drug/Tox	ACTIVE
	TR10013-1	Alcohol Screen		Chem	Drug/Tox	ACTIVE
	TR10177-4	Ethanol	Ethyl Alcohol	Chem	Drug/Tox	ACTIVE
	TR10262-4	Isopropanol	Isopropyl Alcohol	Chem	Drug/Tox	ACTIVE
	TR10296-2	Methanol	Methyl Alcohol	Chem	Drug/Tox	ACTIVE

Figure 8-14: Search List Screen: Searching *alcohol*

Columns within the Search List can be hidden, re-ordered, frozen and sorted (Figure 8-15). To view column options, right click on the desired column and select the appropriate sorting option. The sorting options will not be saved when exiting out of this screen. The user cannot modify any of the OLIS Test Requests Nomenclature record values.

OLIS_Co -	Test_Request_Name	✓ Test_Request_Altern	at	6.16	T . D .	natei 🗸	Test_Req
TR10000-8	11-Deoxycortisol			Subform	•	_	Endocrine
TR10001-6	Acetylcholinesterase	Cholinesterase True	AZ.↓	Sort A to	Z		Metabolis
TR10002-4	Acid Phosphatase	ACP	Z.	S <u>o</u> rt Z to	A		Enzyme
TR10003-2	Acid Phosphatase Prostatic	PAP	Ba	Conv		-	Enzyme
TR10004-0	Addis Count		93	Coby			Enzyme
TR10005-7	Adenosine Deaminase			Paste			Enzyme
TR10006-5	Adenosine Monophosphate Cyclic	C-amp	**	<u>C</u> olumn	Width		Endocrine
TR10007-3	17-Hydroxycorticosteroids			Hide Col	umns		Endocrine
TR10008-1	Corticotropin	ACTH		Unbida (olumna		Endocrine
TR10009-9	Alanine Aminotransaminase	ALT		Onnide	-orumns		Enzyme
TR10010-7	Albumin	Alb		Freeze C	olumns		Protein
TR10011-5	Albumin Qualitative	Alb Qual		Unfreeze	<u>A</u> ll Columns		Protein
TR10012-3	Alcohol Fractionation		NO	Add Exis	ting Fields		Drug/Tox
TR10013-1	Alcohol Screen		1921.	Conditio	nal Carmattina		Drug/Tox
TR10014-9	Aldolase		1155	Coudino	nai romatung		Enzyme
TR10015-6	Aldosterone				Chem		Endocrine
TR10016-4	Alkaline Phosphatase	ALP			Chem		Enzyme

Figure 8-15: Search List Column Options

The user can further narrow down (filter) the Search List by right clicking on the record cell that the user wants to filter against. In Figure 8-16, the "Chem" value of a record is selected. By right clicking on the cell, the user can select "Text Filter" and apply the option to "Contain" or "Does Not Contain".

Test_Request_Name	- अ Test_Request_Alternate_Name_1 →	Test	Req	<mark>uest_Cate</mark> ; ⊰ Y Test_Request_Sub_Ca∔	Validation_Sta V
Addis Count		Cher	V		ACTIVE
Cell Count		Hem	80	CUL	ACTIVE
Complete Blood Count	CBC	Hem	43	<u>C</u> opy	ACTIVE
Erythrocyte Count		Hem		Paste	ACTIVE
Leukocyte Count		Hem	AL	Sort A to Z	ACTIVE
Platelet Count		Hem	Z		ACTIVE
Eosinophil Count		Hem	A+	Soft 2 to A	ACTIVE
Reticulocyte Count	Retic Count	Hem		Clear filter from Test_Request_Category	ACTIVE
Lamellar Bodies	Lamellar Body Count	Hem		Text <u>F</u> ilters	Equals
				<u>E</u> quals "Chem" Does <u>N</u> ot Equal "Chem" Contains "Chem" <u>D</u> oes Not Contain "Chem"	Does <u>N</u> ot Equal Begins With D <u>o</u> es Not Begin With Cont <u>a</u> ins
			-		Does Not Contain
					Ends Wi <u>t</u> h

Figure 8-16: Search List Record Options

The resulting Search List will contain only those records where "HEM" is specified as the test request category (Figure 8-17). Note that the original "*Count*" search criteria was not removed. Instead, the OLIS Mapping Tool has added one search criteria "HEM" along with the existing search criteria "*Count*". The user can remove or add to the search criteria by right clicking on the same column "Test Request Category" and selecting "Remove Filter/Sort".

						Consten
	OLIS_Code	Test_Request_Name	Test_Request_Alternate_Name_1	Test_Request_Categor	Test_Request_Sub_Categ	Validatio
	TR10476-0	Cell Count		Hem		ACTIVE
۲	TR10477-8	Complete Blood Count	CBC	Hem		ACTIVE
	TR10482-8	Leukocyte Count		Hem		ACTIVE
	TR10493-5	Eosinophil Count		Hem		ACTIVE
	TR10512-2	Reticulocyte Count	Retic Count	Hem		ACTIVE
	TR11598-0	Lamellar Bodies	Lamellar Body Count	Hem		ACTIVE

Figure 8-17: Search List Filtered By "HEM" Value

Usage Tip:

When filtering the data in a Search List, the user will sometimes get a warning that the filter operation was cancelled because the filter is too long (see image below). This occurs when the <u>"Text Filter" option equals</u> "term filtered on" is used.



Solution: To narrow down the Search List, right click on a record cell to display a task menu. Use the "Text filter" options "Contain" or "Does Not Contain"

If the option "Text Filter" equals "term filtered on" is used the "Text Filter", a warning message displays. If this warning message is displayed, use the "Text Filter" option "Contain" or "Does Not Contain" rather than the "term filtered on" option.

8.6 Mapped Code Section

The Mapped Code section consists of local laboratory test request and corresponding OLIS Test Requests Nomenclature information (Figure 8-18).

Map Lo	cal Order (Codes to OLIS	Request Codes			Local Code	HG8903			
File	Request Hem La	b	×			Local Name	Hemoglobin			- L
View	• Al	O Mapped	O Unmapped			Local Category Local Comments	Hematology			1
				-		OLIS Code	TR10481-0			1
Searching	"Hemoglobin"				*	OLIS Test Request	Hemoglobin			٦í
Category	Allergen Blood Bank	Subcategory	A	Validation Status	ACTIVE INACTIVE	Specimen		×]		2
Select All	Clinical	Select Al Animal	Epidermais & Proteins Re	Select A	8	Comments				f
Deselect All	Hem/8C	Deselect All Autoan	Epidermais & Proteins Sp tibody	Deselect	Al	Updated by	anil.patel	c	2010-09-02 23:33:31	ī, — Ē
	Immuno M	Challen	ge 📉	3			Map	Undo	Clear OLIS record]]]
OLIS_C	Co 🖋	Test_Request_Na	me 🖓 Tes	t_Request	t_Alternate_N	ame_1 - Test_R	equest_Cater 7 Te	est_Request_	Sub_Ca - Validation	Sta-W
TR1138	39-4 Blood File	m Review	Morp	hology Re	wiew	Hem			ACTIVE	

Figure 8-18: Mapped Code Section

This includes:

- 1. OLIS Code: Displays the OLIS LOINC code that has been mapped to the local laboratory test displayed in the "Local Code" section. This field cannot be modified and appears empty if the user has not performed mapping before
- 2. OLIS Test Request Name: Displays the OLIS Test Request Name that has been mapped to the local laboratory test request displayed in the "Local Code" section. This field cannot be modified and appears empty if the user has not performed mapping before
- 3. Specimen: Used to specify the specimen (source) code that should be mapped together with the OLIS test request record to the local laboratory test request record. This field cannot be modified and appears empty if the user has not performed mapping before
- 4. Specimen Description: Displays the specimen description which corresponds to the selected specimen code value. This field cannot be modified and appears empty if the user has not performed mapping before
- 5. Specimen Site Modifier: Used to specify the specimen site modifier such as a procedure used to obtain a specimen (e.g., aspirate, biopsy etc). This is a free text field and is editable
- 6. Comments: Used to capture the reason for mapping. This is a free-text field and is editable.
- 7. Updated by: The name of person performing the mapping (automatically populated based on the Windows login userID of the person logged onto the computer) is captured along with the time and date the mapping was performed. If the mapping process is divided amongst multiple staff members, this feature provides a means of tracking "who mapped what and when"
- 8. Buttons
 - Map: Used to map the OLIS test request to the local laboratory test request. Mapping can be performed by double-clicking any of the fields within a record on the Search List section
 - Undo: Used to return to the value of the mapped OLIS record to the most <u>recent</u> previously mapped value
 - Clear: Used to clear all details from the Mapped Code section
 - OLIS Record: Used to display all the details of the OLIS test request record mapped or OLIS test request record selected in the Search List section (Figure 8-20)

OLIS Test Red	juests			E4
OLIS Test Request Code	TR 11389-4			₩.
Fest Request Name	Blood Film Review	Request Alternate Name 1	Morphology Review	
		Request Alternate Name 2		
		Request Alternate Name 3		
lequest Category	Hem	Reportable Indicator		×
equest Sub Category		Reportable Context]
ixternal Code		Document Text		
xternal Source		Change Note		
est Request Comments		Effective Date		
		End Date		
		Workflow Status Indicator	Retired archived	v
escription		Validation Status Indicator	ACTIVE	×
xternal Code Version		Registration Status Indicator	STANDARD	~

Figure 8-20: Details of OLIS Test Request Record Screen

8.6.1 Mapping Test Requests

To map a local laboratory test request to the OLIS Test Requests Nomenclature:

- 1. Use the "Searching" field to narrow down the number of records displayed in the Search List (Figure 8-21)
- 2. Select the OLIS test request by clicking it once
- 3. Click on the "Map" button

<u>Note</u>: Double clicking the record in the Search List will automatically map the record and is equivalent to combining steps 2 and 3 above.

Usage Tip:

Duplicate entries in the local test mnemonic are not recognized. Only the first entry will be mapped.

Solution: Be certain to remove or rename duplicate local test mnemonic entries before starting the mapping task.

P	OLIS	Nor	nencla	ature M	lap - [M	ap Local	Test	Reque	st Code	s to OL	IS Res	ult Nome	nclature]]	
÷Ξ	<u>F</u> ile	<u>E</u> dit	<u>I</u> nsert	<u>R</u> ecords	<u>W</u> indow	<u>H</u> elp							Т	Type a questi	on for help
Μ	lap Lo	cal (Order (Codes to	OLIS R	equest Co	des			Local Code		ERC			
Fil	e	resul	t bld				\mathbf{v}			Local Name	•	ERYTHROCYTE			
Vi	ew	() ali	Ома	pped		±			Local Categ Local Comn	jory nents				
										OLIS Code					
Se	arching	*ERY	THROCYTE	*					×	OLIS Test R	equest				
Ca	itegory			Subcategor	у			Validation	ACTIVE	Name					
	alaat All	Cher	n 🔳	Colort All	Amino Aci Animal Epi	1 dermals & Protein	s Re	Status	INACTIVE	Specimen Si	ite Modifier				
	Select All	Drug	/Tox	Select All	Animal Epi	dermals & Protein odv	s Sp	Select All	J	Comments					
De	eselect All	Hem	/вс	Deselect Al	Challenge	,		Deselect All	J	Updated by				On	
		Imm	uno 🔛		Coag							Мар	Undo	Clear	OLIS recor
	OLIS_C	Code		Test_Re	equest_Nan	ne	Te	st_Request	Alternate	Name_1	Test_Re	quest_Catego	r Test_Reque	st_Sub_Cate	g Validatior
►	TR1019	95-6	Free Ery	throcyte Pr	otoporphyr	n	FEP				Chem		Hematin		ACTIVE
	TR1049	94-3	Erythrocy	/te Sedime	entation Rat	e	ESR				Hem				ACTIVE

Figure 8-21: Mapping Local Order Codes to OLIS Test Request Record Screen

The mapped OLIS Test Request from the Search List section will appear in the "OLIS Code" field. Click the "Undo Mapping" button to undo the mapping action and the previous value (if available) will appear in the "OLIS Code" field.

After mapping the OLIS code to the local laboratory test code, use the "Specimen" field drop down list to specify the type of specimen that should be used together with the OLIS code to ensure an unambiguous laboratory test request (Figure 8-22). Specifying the specimen type is optional.

OLIS Code		TR10481-	0								
OLIS Test Ro Name	equest	Hemoglob	Hemoglobin								
Specimen		3BL			Blood bag						
Specimen Sit Comments Updated by	e Modifier	BBL BC BDY BIFL	Blood bag Buffy Coat Whole body Bile fluid		On 2010-09-0	02 23:33:31					
		BLD BLDA	BLD Whole blood BLDA Blood arterial		Clear	OLIS record					
ame_1 🛪	Test_Re	BLDC	Blood capillary		t_Sub_Ca ⊰ γ	Validation_St					
	Chem	BLDCOA	Cord blood arteria			ACTIVE					
	Chem	BLDCOV	Cord blood venous	;		ACTIVE					
	Chem	BLDMV	Blood mixed venou	u		ACTIVE					
	Chem	BLIST	Blood venous Blister			ACTIVE					
	Hem	BON	Bone			ACTIVE					
ar Hemoglo	Hem	BPH	Basophiles	-	Ĵ	ACTIVE					
	Hem	BPU	Blood product unit	~		ACTIVE					
	Hem		>			ACTIVE					

Figure 8-22: Specimen Field Drop Down List

Usage Tip:

If a local test request code requires mapping to the same OLIS test request code but with more than one specimen source code, only the latter mapping will be retained.

Solution: Create a new local source code.

The specimen description field is automatically populated based on the selected Specimen code (Figure 8-23). The "Specimen Site Modifier" field is an editable free-text field used to specify the specimen site modifier such as a procedure used to obtain a specimen (e.g., aspirate, biopsy etc).

OLIS Code	TR10481-0						
OLIS Test Request Name	Hemoglobin						
Specimen	BLD	1	Whole blood				
Specimen Site Modifier	Surgery						
Comments	Investigate if	this is correct test					
Updated by	anil.patel		On 2010-0	9-03 00:46:59			
	Мар	Undo	Clear	OLIS record			

Figure 8-23: Specimen Description and Modifier

8.7 Record Navigation Section

The Record Navigation section contains two rows (Figure 8-24). The first row is used to navigate between the OLIS test request records within the Search List. It is not necessary to use the first row since the same goal can be achieved by using the vertical scroll bar.

The second row is used to navigate between the imported dataset records. Use this section to navigate between the imported dataset.

ecord: H	4 5 of 14	F H 	V Filtered	Search
ecord: 14	4 3 of 6	P H H	V Filtered	Search

Figure 8-24: Record Navigation Screen

The details outlined below pertain to the second Navigation row:

- The field within the Record Navigation section displays the user's current record location within the imported dataset
- The Record Navigation section also displays the total number of records within a dataset as "[current record position] of [total number of records]"

- The "|<" and "|>" buttons allow the user to navigate to the first and the last record (respectively) in the dataset
- The "<" and ">" buttons allow the user to navigate to the previous and the next record (respectively) in the dataset

8.8 Exit Section

The Exit section located at the top right portion of the Mapping screen contains the Exit button (Figure 8-25). This button is used to exit the Mapping screen and return to the Main Menu screen.



8.9 View Details

This button is located at the top right portion of the mapping screen under the Exit button (Figure 8-26) shows the linked local Result code to Request. This shows the View details button. Clicking on the button shows the Test result Code linked To window



Figure 8-26: View Details

The Linked Local Result Code to Request Codes shows the code linked to the Test request Code (e.g. CBC226) in the example (Figure 8-27), the figure shows the Eosinophils, but the navigation bar can be used to view the other Test result records for the Local Test Request.

If the Test result record linked to the Test request is Incorrect, the delete record button can be used to remove the link.

-8	Test Result Codes	i Linked To	x
	Linked Loca	Result Codes to Request Codes: CBC256	
▶	Local Code	EOS2	
	Local Name	Eosinophils	
	Local Units	x10e3/mm3	
	Local Method	Man La	
	Local Comments		
	LOINC_Code	7120	
	OLIS LOINC Fully Specified Name	Eosinophils:NCnc:Pt:Bld:Qn:Manual count	
Re	cord: H 🖂 1 of 2	> H 2 Filtered Search	

Figure 8-27: Test result Code linked To

1. Delete Record Link

2. Navigation bar

8.10 Linking the Test Result Code to the Test Request code

To link the test result code to the Test Request code, the Test result must be first be mapped and in the mapped status. Test result codes that are imported and not mapped will not be available for linkage to the Test Request and not seen in the Test Result selection list (Figure 8.28). The Test Request and Test result link can be done on either the Map Local Order Codes to OLIS request Code Window or Map Local Test Result Codes to OLIS Test Result Code.

Map Local Test Request Codes to OTS Result Nomenstature											~	
		st Request Codes to OLIS	Result Nomencial	ure.				[
мар сос	aru	raer Codes to OLIS	Request Co	aes			Local Code	CBC256				I.
File	abcRe	equest5		~	l	W	Local Name	CBC				
View	0	All O Mapped	🔘 Unmappe	d			Local Category	Hematology				
							Local Comments					
							OLIS Code	TR10477-8				
Coardbing	Sepe	8			<i>6</i> 4	X	OUE Test	Complete Bleed	Count			
Searching	СВС						Request Name	Complete blood	Count			
Category	Allerg	en A Subcategory	nino Acid	^	Validation	ACTIVE	Specimen	24H	~	Urine 24 Hou	r	
	Chen		nimal Epidermals & Pro	oteins Re		INACIAL	Spec Site Modi'r					
Select All	Clinic	al Select All Ar	nimal Epidermals & Pro	oteins Sp	Select All		Comments					
Deselect All	Immu	Deselect All	itoantibody hallenge		Deselect All		Updated by	tammy.chan		On 2011-09	9-14 09:49:50	
	Micro		pag	~				Мар	Undo	Clear	OLIS record	
OLIS_C	od 🚽	Test_Request_N	ame 👻	Test_Re	quest_Altern	ate_Name	1 - Test_Requ	iest_Categ(+	Test_Request	Sub_Ca -	Validation 🔺	-
TR10000	0-8	11-Deoxycortisol					Chem		Endocrine		ACTIVE 🔤	
TR10001	1-6	Acetylcholinesterase		Cholines	terase True		Chem		Metabolism		ACTIVE	
TR10002	2-4	Acid Phosphatase		ACP			Chem		Enzyme		ACTIVE	
TR10003	3-2	Acid Phosphatase Prostat	ic	PAP			Chem		Enzyme		ACTIVE	
TR10004	4-0	Addis Count					Chem		Enzyme		ACTIVE	
TR10008	5-7	Adenosine Deaminase					Chem		Enzyme		ACTIVE	
TR10006	6-5	Adenosine Monophosphate	e Cyclic	C-amp			Chem		Endocrine		ACTIVE	
TR10007	7-3	17-Hydroxycorticosteroids					Chem		Endocrine		ACTIVE	
TR10008	8-1	Corticotropin		ACTH			Chem		Endocrine		ACTIVE	
TR10009	9-9	Alanine Aminotransaminas	e	ALT			Chem		Enzyme		ACTIVE	
TR10010	0-7	Albumin		Alb			Chem		Protein		ACTIVE	
TR10011	1-5	Albumin Qualitative		Alb Qual			Chem		Protein		ACTIVE	
TR10012	2-3	Al Local_Code_Mnemonic	Local_Name		OLIS_Code		OLIS_LOINC_F	ully_Specified_N	Result_Id		ACTIVE	
TR10013	3-1	AI EOS2	Eosinophils		712-0		EOSINOPHILS:	NCNC:PT:BLD:Q	33		ACTIVE	
TR10014	4-9	AI EBY1	Erythrocytes		790-6		EDSINOPHILS	S:NCNC:PT:BLD1Q	31		ACTIVE	
TR10015	5-6	Al ERY1	Erythrocytes		790-6		ERYTRHOCYTE	S:NCNC:PT:BLD	19		ACTIVE -	
Record: I4	< 1 of	18 PLT2	Thrombocytes		778-1		ERYTRHOCYTE	S:NCNC:PT:BLD	32		•	
Test Resul	lt:		Inrombocytes		//8-1		ERTIRHOCYTE	SINCINC:PT:BLD	20		<i>S</i> 7]

Figure 8.28 Test Result Codes selection List for Test Request

Select the OLIS code or OLIS Fully Specified to link to the Test request in the Map Local Order Codes screen and click the "link button"

8.11 View List of Local Test Result Codes

Select the List of Local Test Request button is to view the Mapped Local Test Request Codes

-8	List of Local Test R	equest Codes (T	ro sort, highlight colu	mn and right click)		x
	Local_Code 🚽	Local_Name 🗸	Local_Category -	Local_Comments -	OLIS_Code 🗸	OLIS_Test_Request_Name -
	CBC256	CBC	Hematology		TR10477-8	Complete Blood Count
	HCT829	Hematocrit	Hematology		TR10480-2	Hematocrit
	HGB903	Hemoglobin	Hematology		TR10481-0	Hemoglobin
	MCH902	MCH	Hematology			
						N
Re	cord: 🛯 🔸 1 of 4	► H H≊ 🕅 No	Filter Search			

9.0 Mapping Laboratory Test Result Codes

9.1 Background

Once the local laboratory test results dataset has been imported in the OLIS Mapping Tool, mapping of local test result codes can take place with the OLIS Test Results Nomenclature. This section will provide detailed information on how to map local test result codes using the OLIS Mapping Tool.

9.2 Map Local Result Codes to OLIS Result Codes Screen

To start mapping the local laboratory test results dataset to the OLIS Test Results Nomenclature select "Map Result Codes" from the Main Menu. The following screen will appear (Figure 9-1):

		💽 🕫	Map Local Test Resul	t Codes to C	ILIS Re	sult Nomeno	lature - OLIS N	lomenclature Map			
View Views	Paste Clip	Cut 2 Copy Format Painter board 5 Font		(第一) 日本ショー) ICh Text	Refresh All *	New Save Collecte Record	Σ Totals Spelling More -	2↓ X↓ Filter Sort & Filter	Size to Sw Fit Form Wind Window	Find the select + Find the se	
» Mi Fie	ap Local	I Result Codes to OLIS Result C	odes	Local Cate Local Code	gory e	Hem ERY1 Erythrocytes	LocalL	DINC Code		7	
1 1	w []	All O Mapped O Unmap	sped	Local Units	a nments	x10e3/mm3	Local M	ethod Man	2		
Sea Cat	elect All	Erythrocytes" P.NE/DUS A Subcategory ATTAGRED/MEDS ELLMARK Select All CALCULUS ANALTSIS Select All CALCULUS ANALTSIS CALCULUS ANALTSIS CA	Validation Status Select All Description	OLIS LOIN OLIS LOIN Specified N Comments Updated b	C Code C Fully lame Y	26453-1 Erythrocytes Check if this anil.patel	NCnc:Pt:Bld:Qn automated or mani	ia) On [2010-09-03 00:59:05	5		
on Pane	LOINC C-N 14713-2	MOLPATH.MUT MSS N CONC Component Name 4 Erythrocytes	Result Alternate Nam - 47 Erythrocytes, Pericardia	LOINC P 4	Ur - 10^6/	LOINC '-Y Pt	LOINC S Pericard fld	ystem - Y LOINC Sc - Qn	X LOINC Me - Manual cc		
Navigat	16828-6 17848-3 17849-1	Erythrocytes Reticulocytes/1000 erythrocytes Reticulocytes/100 erythrocytes	Erythrocytes; Semen Reticulocytes/1000 Eryt Reticulocytes/100 Eryth	NCnc NFr NFr	% %	Pt Pt Pt	Semin plas RBC RBC	Qn Qn Qn	Manual co Manual Automate		
	18289-9 18290-7 18309-5	Erythrocytes Erythrocytes Erythrocytes nucleated/100 leukocytes	Erythrocytes, CSF Erythrocytes, Synovial F Erythrocytes Nucleated/	Morph Morph Ratio		Pt Pt Pt	CSF Synv fld Bld	Nom Nom Qn	Microscop Microscop Manual cc	4	
	19048-8 19098-3 23859-2	Erythrocytes.nucleated/100 leukocytes Erythrocytes Erythrocytes	Erythrocytes Nucleated/ Erythrocytes; Amniotic I Erythrocytes	Ratio ACnc NCnc	#/100	Pt Pt Pt	Bld Amnio fld XXX	Qn Ord Qn	Microscor		
	23860-0 26453-1 26454-9	Erythrocytes Erythrocytes Erythrocytes	Erythrocytes; Fluid Erythrocytes; Blood Erythrocytes; CSF	NCnc NCnc NCnc	X 10*	Pt Pt Pt	Body fid Bid CSF	Qn Qn Qn	Automate		
	26455-6 26456-4 26457-2	Erythrocytes Erythrocytes Erythrocytes	Erythrocytes; Fluid Erythrocytes; Pleural Flu Erythrocytes; Peritoneal	NCnc NCnc NCnc	X 10*	Pt Pt Pt	Body fid Pir fid Periton fid	Qn Qn Qn			

Figure 9-1: Map Local Result Codes to OLIS Result Codes Screen

This screen consists of 7 sections:

- 1: Data File
- 3: Search Criteria
- 5: Mapped Code Display
- 7: Exit

- 2: Local Code Display
- 4: Search List
- 6: Navigation

Usage Tip:

The "Comments" associated with the OLIS LOINC code in the "Map Local Result Codes to OLIS Result Codes" screen are not comments from the OLIS Test Results Nomenclature table.

Usage Tip:

Upon accessing the mapped test result codes, the OLIS test result codes are sorted by the LOINC code.

Option: To display the OLIS test result codes alphabetically based upon the LOINC Component name, select Records then Apply Filter/Sort.

9.3 Data File Section

The Data "File" section displays the name of the dataset file currently selected (Figure 9-2). Only the test results dataset files are displayed. To select a different test results dataset file, click on the drop down list:

Map L	ocal Result	Codes to OLIS	6 Result Codes
File	Test result Hen	n	~
View	III 💿	O Mapped	O Unmapped

Figure 9-2: Data Field Section

The buttons in the "View" section will filter the data contained in the dataset (Figure 9-3):

- All: Enables the selection of all records within the dataset
- Mapped: Enables selection of records that have already been mapped to the OLIS Nomenclature
- Unmapped: Enables selection of records that have not yet been mapped to the OLIS Nomenclature



Figure 9-3: List of Imported Laboratory Test Results Datasets

9.4 Local Code Section

The Local Code section displays the details of the local laboratory test result codes from the imported local laboratory test dataset (Figure 9-4).

Local Category	Hem	Local LOINC Code
Local Code	ERY1	
Local Name	Erythrocytes	
Local Units	x10e3/mm3	Local Method Man
Local_Comments		

Figure 9-4: Local Code Display Section

This section contains the following fields:

- 1. Local Category: A local mnemonic
- 2. Local LOINC Code: If the local test result code was previously mapped, this field will be populated. Confirm the previously mapped LOINC code matches the currently selected OLIS nomenclature code
- 3. Local Code: A local mnemonic
- 4. Local Name: The test that is locally described
- 5. Local Units: The local unit of measure associated with this result
- 6. Local Method: Notes on the local method associated with this result
- 7. Local Comments: Notes for future discussion
- 8. Trash: Deletes the currently displayed local test results dataset (Figure 9-5). Clicking this button will not delete the entire dataset. It will delete only the displayed record. When the "Trash" button is clicked, the user is prompted to confirm the deletion. Select the "Yes" button to confirm the deletion or the "No" button to cancel the deletion



Figure 9-5: Confirm Record Deletion

9.5 Search Criteria Section

The information displayed in the search section is used to define the search criteria needed to find the corresponding test result in the OLIS Test Results Nomenclature (Figure 9-6). This section is analogous to the Search Criteria

section found on the Test Request Mapping section, except that the data values within the List Boxes are those from OLIS Test Results Nomenclature. As a default setting, all categories and sub-categories are selected as well as an Active validation status.

Validation AGTIVE Status INACTIVE
Select All
Deselect All

Figure 9-6: Search Criteria Section

Usage Tip:

When mapping local test request or test result codes to the OLIS Nomenclature, the Search function treats a blank category or sub-category as a valid entry.

Solution: When searching, either select all categories or include blank entries.

The Search Criteria section consists of:

- 1. Searching: The local laboratory test name automatically populates this field and has a proceeding and trailing asterisk
- 2. Category: To select one or more OLIS test result categories to search against
 - To select an additional category, hold down the Control key and click the additional desired category
 - To select a range of categories, click the first desired category. Hold down the Shift key and click the last desired category
- 3. Sub-category: To select one or more of the OLIS test result sub-categories to search against
 - To select an additional sub-category, hold down the Control key and click the additional desired sub-category
 - To select a range of sub-categories, click the first desired category. Hold down the Shift key and click the last desired sub-category
- 4. Validation Status: To select the OLIS Test Result Validation Status to search against

- 5. Binocular Icon: To start the search; and
- 6. Clear Icon: To clear the search results.

"Select All" and "Deselect All" are used to select or deselect all values in the List Box.

9.5.1 "Search Expression" Field Section

The parameters entered into the Search Expression field searches against the fields listed below in OLIS Test Results Nomenclature (Figure 9-7).

Search	**						

Figure 9-7: Search Expression Field Section

This search takes place in the following order:

- LOINC Code
- Result Alternate Names (1,2,3)
- LOINC Short Name
- LOINC Component
- LOINC Property
- LOINC Time
- LOINC System
- LOINC Scale
- LOINC Method

The OLIS Mapping Tool searches multiple parameters by placing a wildcard (*) before the first and the after the last search parameter. By placing asterisks between parameters (terms) regardless of the number of parameters, the search will return a large set of records. The search is not case sensitive. Please make sure that the search criteria are specified in above order. It is not necessary to specify the search criteria for all fields. However, those that are specified must be listed in the order mentioned above (see examples below).

<u>Note:</u> Although the local laboratory test name is automatically inserted between the asterisks, the user can edit this name if the name is not appropriate or descriptive. When a user enters multiple search criteria, always precede the first search parameter with a wild card.

9.5.1.1 Search Example 1

Entered parameter: "*Lymphocytes* *BLD* *QN*" (Figure 9-8).

<u>Search List Result</u>: The Search List will return a set of records where Lymphocytes are specified (most likely) as Alternate Names (1, 2 and 3) or Component Name, BLD (a value found in LOINC_SYSTEM column) and QN (a value found in LOINC_SCALE column).

P	OLIS N	lomenc	lature	Map -	[Map L	ocal	Test R	esult	t Co	des to O	LIS	Result N	Nome	nclatur	re]	
	<u>F</u> ile	<u>E</u> dit <u>V</u> iew	Insert	F <u>o</u> rmat	<u>R</u> ecords	<u>T</u> ools	<u>W</u> indow	/ <u>H</u> elp)						Туре	a question for he
M	ap Loc	al Re <mark>s</mark> ul	t Codes	to OLI	S Resul	t Cod	es			Local Cate	gory	bldbk		Local LOIN	C Code	
File		Rec Bldbok							W	Local Code		lymphcnt				
Vie		Res blubrik	~		~					Local Name	э	Lymphocyte	s			
			O M	lapped	O Ur	nmapped										
										Local Units				Local Method		
										Local_Com	ments					
										OLIS LOIN	Code					
Sea	rch	Lymphocytes	*BLD*QN*							OLIS LOIN	C Fully					
Cat	eaory		Subcated				lidation	ACTIVE		Specified N	ame					
Cut	cyory	ABXBACT	Jubency	ATTAC	HED.MEDS	St	atus	HCT11C		Comments						
Se	elect All	ALLERGY	Select A	CALCU	JLUS ANALYS		elect All			Updated by	,				On	
		BDYHGT.AT	Decelert	MOLPA	ATH	6										
De		BDYSURF.	Deselect	MOLPA	ATH.MUT		select All					Мар		Undo	Clear	OLIS record
		BDYTMP.AT	<u> </u>	MSS												
_		od	LOINC Co	omponent	Name	Re	sult Alter	nate Na	ame 1	LOINC Prop	Units	LOINC Tim		LOINC Sy	rstem	LOINC Scale
▶	11275-5	Lympho	ocytes.larg	e granular	r/100 leuko	cyte LY	MPHOCY	TES.L	ARG	NFr		Pt	Bld			Qn
	13046-8	Lympho	ocytes.atyp	pical/100 I	eukocytes	LY	MPHOCI	TES.A		NFr		Pt	Bld			Qn
	26474-7	Lympho	ocytes			LY	MPHOCY	TESE		NCnc		Pt	Bld			Qn
	26477-0	Lympho	pcytes.atyp	pical		LY	MPHOCI	TES.A	IYPI	NCnc		Pt	Bld			Qn
	26478-8	Lympho	ocytes/100	leukocyte	es	LY	MPHOCY	TES/1	00 LE	NFr		Pt	Bld			Qn
	29261-5	Lympho	ocytes.abn	ormal/100	leukocyte	s LY	MPHOCI	TES.A	BNO	NFr		Pt	Bld			Qn
	29262-3	Lympho	ocytes.abn	ormal		LY	MPHOCI	TES.A	BNO	NCnc		Pt	Bld			Qn
	30412-1	Lympho	ocytes.abn	ormal		LY	MPHOCY	TES.A	BNO	NCnc		Pt	Bld			Qn
_	30418-8	Lympho	ocytes.fiss	ured		LY	MPHOCI	TES.F	ISSU	NCnc		Pt	Bld			Qn
	30419-6	Lympho	ocytes.fiss	ured/100 I	eukocytes	LY	MPHOCY	TES.F	ISSU	NFr		Pt	Bld			Qn
	33832-7	Lympho	ocytes.imm	nunoblasti	с	LY	MPHOCY	TES.II	NMU	NCnc		Pt	Bld			Qn
	33833-5	Lympho	ocytes.imm	nunoblasti	c/100 leuk	ocyt LY	MPHOCY	ries.II	IUMN	N⊢r		Pt	Bld			Qn
	33834-3	Lympho	ocytes.plas	smacytoid		LY	MPHOCY	ries.P	LASI	NCnc		Pt	Bld			Qn
	33835-0	Lympho	ocytes.plas	smacytoid	/100 leuko	cyte LY	MPHOCY	TES.P	LASI	NFr		Pt	Bld			Qn
	4662-3	Lympho	ocytes+Mo	nocytes/1	100 leukocy	/tes LY	MPHOCY	TES+I	NON	NFr		Pt	Bld			Qn
	731.0	Uymphr	neutoe			ΠV	MDHOCY			MCnc		D+	RIA			On

Figure 9-8: Example 1 Search List Results

9.5.1.2 Search Example 2:

Entered parameter: "*Lymphocytes* *QN* *BLD*" (Figure 9-9).

<u>Search List Result</u>: Since the last two parameters have been reversed, and this goes against the search parameter definition rules, the Search List will return no records.

OLIS I	Nomenc	lature	Map -	[Map L	ocal ⁻	Test Re	esult (Cod	es to OLIS	Result Nor	nenclature	.]		
Eile	<u>E</u> dit <u>V</u> iew	Insert	F <u>o</u> rmat	<u>R</u> ecords	<u>T</u> ools	<u>W</u> indow	<u>H</u> elp					Туре	a question for he	elţ
Map Loo	cal Resul	t Codes	to OL	IS Resu	lt Cod	e s	6	9	Local Category	bldbk	Local LOINC	Code		
File	Res Bldbnk						Ľ	M.	Local Code	lymphcnt				
View	💿 All	0	1apped	Ou	Inmapped				Local Name	Lymphocytes				
									Local Units		Local Method			
									Local_Comments					
									OLIS LOINC Code					
Search	Lymphocytes	*QN*BLD*							OLIS LOINC Fully					
Category		Subcateg	lory		Va	idation	ACTIVE		Specified Name					
	ABXBACT			CHED.MEDS	Sta	atus			Comments					
Select All	ATTACH.M	Select /	Суто			elect All			Updated by		0	n		
Deselect All	BDYHGT.A BDYSURF.A BDYTMP.A	Deselect	All MOLP MOLP MSS	ATH ATH.MUT		eselect All				Map	Undo	Clear	OLIS record	
LOINC (Cod	LOINC C	omponent	t Name	Re	sult Altern	ate Nam	e 1 L	OINC Prop Units	LOINC Tim	LOINC Syst	em	LOINC Scale	e l

Figure 9-9: Example 2 Search List (No records returned)

9.5.2 List Box Section

The List Box section will allow the user to select and filter more specific information in each category and sub-category (Figure 9-10).

				ÅÅ	w l
Search	*HEMOGLOBIN*	*			
Category	H&P.HX	Subcategory	CALCULUS ANALYSIS	Validation Status	ACTIVE
Select All	HEME HEMODYN.	Select All	MOLPATH MOLPATH.MUT	Select All	
Deselect All	HLA MICRO MISC	Deselect All	MSS PATH.PROTOCOLS SERO	Deselect All	

Figure 9-10: List Box Section

- To select individual values, click on the preferred value (Figure 9-10)
- To select multiple consecutive values, select the starting value, hold down the SHIFT key and then select the last value in the row
- To select multiple non-consecutive values, click on the first value, hold down the CTRL key and select the desired values (in a consecutive or non-consecutive order)
- To include all values in the List Box, click the "Select All" button. To deselect all values click "Deselect All" button (Figure 9-11)



Figure 9-11: List Box Button
9.5.3 Search Icons

The "Search" (Binoculars) button is used to execute a search against OLIS Test Results Nomenclature after the search criteria have been entered into "Searching" field (Figure 9-12).



Figure 9-12: Search (Binocular) Button

The "Clear Search Criteria filter" button removes any filtering criteria entered in the "Searching" field or selected in list boxes (Figure 9-13). When the icon is clicked, the Search List section will display all records from the OLIS Test Results Nomenclature.



Figure 9-13: Remove Filter Button

9.6 Search List Section

The Search List section displays the returned set of query results (Figure 9-14). By default, this section displays all OLIS Test Results Nomenclature records. When search parameters are defined in the "Search" field and the "Search" button is clicked, the Search List will display only search results that correspond to the query parameters. To sort, the default setting is on the LOINC Code field.



Figure 9-14: Search List Section (correct record returned)

Columns within the Search List can be hidden, reordered, frozen and sorted upon. To view column options, right click on the desired column and select the appropriate option (Figure 9-15). The order of sorted results will not be retained once the screen is closed.

			OLIS LOINC Co	ie 11130-2					
Search [®] L Category A Select All A Deselect All B	withocytes* BXBACT Burgen LLERGY Select All CALCULUS ANALYSIS CALCULUS ANALYSIS CYTO Deselect All MOLPATH.MUT MOL	Validation Status Select All Deselect All	OLIS LOINC Ful Specified Name Comments Updated by	y Lymphocy anil.patel	rtes B:N %	Cut Copy Paste Sort A to Z Sort Z to A			
LOINC C-	LOINC Component Name	Result Alternate Nam 🖓	LOINC P 🔐 Ur	+ LOINC 1	×7	Clear filter from LOINC S	System	Sc →Y	
10328-3	Lymphocytes/100 leukocytes	Lymphocytes/100 Leuko	NFr %	Pt	CSI	Text Ditters			Manual co
11031-2	Lymphocytes/100 leukocytes	Lymphocytes/100 Leuko	NFr	Pt	Boo	Equals "Bld"			-
11107-0	Lymphocytes.atypical/100 cells	Lymphocytes Atypical/1	NFr	Pt	Bor	Does Not Equal "Bld"			Microscor
11108-8	Lymphocytes/100 cells	Lymphocytes/100 Cells;	NFr	Pt	Bor	Contains "Pld"			Microscor
11121-1	Prolymphocytes/100 cells	Prolymphocytes/100 Ce	NFr	Pt	Bor	Congains bid			Microscor
11130-2	Lymphocytes B	B Lymphocytes: Blood	NCnc	Pt	Bld	Does Not Contain "Bld"			
11275-5	Lymphocytes large granular/100 leukocyte	Lymphocytes Large Gra	NFr	Pt	Bld		Qn		Manual cc
13046-8	Lymphocytes.atypical/100 leukocytes	Lymphocytes Atypical/1	NFr	Pt	Bld		Qn		
13517-8	Lymphocytes.atypical/100 leukocytes	Lymphocytes Atypical/1	NFr %	Pt	CSF		Qn		Manual cc
13518-6	Lymphocytes.atypical/100 leukocytes	Lymphocytes Atypical/1	NFr %	Pt	Body fl	d	Qn		Manual cc
13941-0	Lymphocytes/100 leukocytes	Lymphocytes/100 Leuko	NFr %	Pt	Body fl	d	Qn		Manual cc

Figure 9-15: Search List Column Options

9.7 Mapped Code Section

The Mapped Code section includes the local laboratory test results and corresponding OLIS Tests Results Nomenclature information (Figure 9-16).

OLIS LOINC Code	11130-2	
OLIS LOINC Fully Specified Name	Lymphocytes B:NCnc:Pt:Bld:Qn	
Comments	[
Updated by	anil.patel	On 2010-09-10 00:36:20
	Map Undo	Clear OLIS record

Figure 9-16: Mapped Code Section

The Mapped Code section consists of the following:

- 1. OLIS LOINC Code: Displays the OLIS LOINC Code that has been mapped to the local laboratory test result displayed in Local Code field. This field cannot be edited. The field appears empty if the user has not performed mapping before
- 2. OLIS LOINC Fully Specified Name: Displays the OLIS LOINC Fully Specified Name. This field cannot be edited. The field appears empty if the user has not performed mapping before

- 3. Comments: Used to capture the reasoning for the mapping. This is a freetext field and is editable
- 4. Updated by: The name of person performing the mapping (automatically populated based on the Windows login userID of the person logged onto the computer) is captured along with the time and date the mapping was performed. If the mapping process is divided amongst multiple staff members, this feature provides a means of assessing "who mapped what and when"
- 5. Buttons:
 - Map: Used to map the OLIS test result to the local laboratory test result. Mapping can also be performed by double-clicking any of the fields within a record on the Search List section
 - Undo: Used to return to the value of the mapped OLIS record to the last previously mapped value
 - Clear: Used to clear all details from the Mapped Code section
 - OLIS Record: Used to display all the details of the OLIS test result record mapped or OLIS test result record selected in the Search List screen (Figure 9-17)

OLIS Test Res	sults		
OLIS Test Res	ults		<u></u> []+
LOINC Code	20619-3		•
LOINC Component Name	lymphocytes/100 leukocytes	Units Result Alternate Name 1	Lymphocytes XXX Auto
LOINC Property	NFr	Result Alternate Name 2	
LOINC Time	Pt	Result Alternate Name 3	
LOINC System	XXX	External Code	
LOINC Scale	Qn	External Source	
LOINC Method	Automated count	LILI Code	
LOINC Short Name	Lymphocytes fr XXX Auto	Reportable	
LOINC Fully Specified Name	Lymphocytes/100 leukocytes:NFr:Pt:XXX:Qn:Automated count	Reportable Context	
		OLIS Code Version	
		External Code Version	
LOTING Answer List		Change Note	
LOTING ANSWER LIST		Effective Begin Date	
		Effective End Date	
		Workflow Status Indicator	RELEASED
LOINC Status		Validation Status Indicator	ACTIVE
Result Category	CELLMARK	Registration Status Indicator	STANDARD
Result Sub-Cat		Description	

Figure 9-17: Details of the OLIS Test Result Record Screen

9.7.1 Mapping Test Results

To map a local laboratory test result to OLIS Test Results Nomenclature record:

- 4. Use the "Searching" field to narrow down the number of records displayed in the Search List (Figure 9-18)
- 5. Select the OLIS result record by clicking it once
- 6. Click the "Map" button

Note: Double clicking the record in the Search List will automatically map the OLIS Nomenclature record to the local laboratory test result record

Usage Tip:

Duplicate entries in the local test mnemonic are not recognized. Only the first entry will be mapped.

Solution: Be certain to remove or rename duplicate local test mnemonic entries before starting the mapping task.

Þ	OLIS Nomenclature Map - [Map Local Test Result Codes to OLIS Result Nomenclature]								
÷Ξ	<u> </u>	<mark>lit <u>V</u>iew Insert F<u>o</u>rmat <u>R</u>ecords <u>T</u>o</mark>	ols <u>W</u> indow <u>H</u> elp					Туре	a question for
Μ	ap Loca	Result Codes to OLIS Result C	odes 🝙	Local Category		L	Local LOIN	Code	
Fil	e R	es Bldbok		Local Code	hcT				
Vi	ew	All O Mapped O Unmap	ped	Local Name	HEMATOCRIT				
				Local Units		L	Local Metho	bd	
				Local_Comments					
				OLIS LOINC Code	31100-1				
Se	arch 🏻	IEMATOCRIT*		OLIS LOINC Fully Specified Name	Hematocrit:VF	r:Pt:Bld:Qr	n:Impedan	ce	
Ca	tegory	EXBACT Subcategory	Validation ACTIVE Status	Comments					
3	elect All	LLERGY CALCULUS ANALYSIS	Select All	Updated by	paul.ramses			On 2007-0	3-27 10:12:23
De	eselect All B	DYHGT.AT DYSURF.A DYTMP.AT	Deselect All		Map	Unc	do 🗌	Clear	OLIS record
	LOINC Co	LOINC Component Name	Result Alternate N	lame 1	LOINC Prop	Units LC	DINC Tim	L	OINC System
	11151-8	Hematocrit	HEMATOCRIT BLDCO^FET	TUS PT QN	VFr	Pt		BldCo	
	11271-4	Hematocrit	HEMATOCRIT BLDCO^FET	TUS PT QN AUT	VFr	Pt		BldCo	
	16931-8	Hematocrit/Hemoglobin	HEMATOCRIT/HEMOGLOB	BIN BLD PT QN	Ratio	Pt		Bld	
►	31100-1	Hematocrit	HEMATOCRIT BLD PT QN	IMPEDANCE	VFr	Pt		Bld	
	32354-3	Hematocrit	HEMATOCRIT BLDA PT Q	N	VFr	Pt	1	BldA	
	41654-5	Hematocrit	Hct fr BldV		VFr	% Pt		BldV	
	41655-2	Hematocrit	Hct fr BIdMV		VFr	% Pt		BIdMV	
	42908-4	Hematocrit	Hct fr BIdC		VFr	% Pt		BIdC	
	43416-7	Hematocrit	Hct fr		VFr	Pt		^Stem ce	Il product
	4544-3	Hematocrit	HEMATOCRIT BLD PT QN	AUTOMATED (VFr	Pt		Bld	
	4545-0	Hematocrit	HEMATOCRIT BLD PT QN	SPUN	VFr	Pt		Bld	

Figure 9-18: Map Local Result Codes to OLIS Result Codes Screen

The mapped LOINC code value from the Search List section appears in the "OLIS Code" field. Click the "Undo Mapping" button to undo the mapping action and the

previous value (if available) will appear in the "OLIS LOINC Code" and "OLIS Fully Specified Name" fields. Clicking the "Clear" button will clear values from both the "OLIS Code" and the "OLIS Fully Specified Name".

9.8 Navigation Section

The Record Navigation section contains two rows (Figure 9-19). The first row is used to navigate between the OLIS test result records within the Search List. It is not necessary to use the first row since the same goal can be achieved by using the vertical scroll bar.

The second row is used to navigate between imported dataset records.

Record: I	4 • • • • of 11 (Filtered)
Record: I	7 • • • • • • • • • • • • • • • • • • •

Figure 9-19: Record Navigation Section

The details outlined below pertain to the second Navigation row:

- The field within the Record Navigation section displays the user's current record location within the imported dataset
- The Record Navigation section also displays the total number of records within a dataset as "[current record position] of [total number of records]"
- The "|<" and "|>" buttons allow the user to navigate to the first and the last record (respectively) in the dataset
- The "<" and ">" buttons allow the user to navigate to the previous and the next record (respectively) in the dataset

9.9 Linking Test Result to Test Request

Background

After completing the Test request and Test result Mapping. You may link the Test request code to the Test Result code. All LIS and HIS systems have the relationship between the Test order and the results. The OLIS mapping tool provides a button to that can link the Test Result to the Test Request

The Linked Local Request Code to Result Codes shows the code linked to the Test request Code (e.g. CBC256) in the example (Figure 9-20), the figure shows the Eosinophils (EOS2), but the navigation bar can be used to view the other Test Request records for the Local Test Result, EOS2 .

If the Test request record linked to the Test result is Incorrect, the delete record button can be used to remove the link.

-8	Test Result Codes	Linked To X	
	Linked Local	Request Codes to Result Codes: EOS2	
▶	Local Code	C8C256	
	Local Name	CBC 1/2 ++	
	OLIS Code	1810477-E	
	OLIS Test Request Name		
Re	cord: H 4 1 of 2	Filtered Search	

Figure 9-20: Test Request Code linked to Result Code

1. Delete Record Link

2. Navigation bar

9.10 Linking the Test Request Code to the Test Result code

To link the test result code to the Test Result code, the Test request must be first be mapped and in the mapped status. Test request codes that are imported and not mapped will not be available for linkage to the Test Result and not seen in the Test Request selection list (Figure 9.21). The Test Result and Test request link can be done on either the Map Local Result Codes to OLIS Result Code Window or Map Local Test Result Codes to OLIS Test Result Code.

-8	Map Local 1	Test Result	Codes to OLIS R	esult Nomenclature						x
	Map Loc	al Resu	t Codes to (OLIS Result Codes		Local Category	Hem	Local LOINC Code		
	File	Test result a		~		Local Code	EOS2			
	View	⊙ All	O Mapped	O Unmapped		Local Name	Eosinophils			
						Local Units	x10e3/mm3	Local Method	Man	
						Local_Comments	s			ī l
•	Search	*Eosinophils*			M X	OLIS LOINC Code OLIS LOINC Fully Specified Name	e 48710-8 y Eosinophils:AC	nc:Pt:XXX:Ord:Microscopy.l	ight	-
	Category	ABXBACT	Sub	ocategory	Validation ACTIVE	Units				-
		ALLERGY		ATTACHED.MEDS	Status INACTIVE	LOINC Answer L	List]
	Select All	ATTACH.CL	S	elect All CYTO	Select All	Comments				
	Deselect All	ATTACH.ME	De De	select All	Deselect All	Updated by	anil.patel	On 201	1-09-27 22:14:28]
		BDYHGT.ATC BDYSURF.AT	om 🔽	MOLPATH MOLPATH.MUT	✓	Мар	Undo	Clear OLIS record		
ľ	LOINC C	od 🗸		LOINC Component N	Vame	শ	Res	ult Alternate Name 1	↓ LOII	
	15236-3	(Aca	us siro+Lepidog	lyphus destructor+Gasterop	hilus intestinalis+Sitophilu	s granarius Oc	ccupational Alle	ergen Mix 2 IgE	ACr	ic 🔲
	48265-3	(Aca	us siro+Lepidog	lyphus destructor+Tyrophag	us putrescentiae+Glycoph	agus dome Ste	orage Mite Mix	Leukotriene Release; L	eucocytes MCr	10
	15270-2	(Ace	negundo+Betula	a verrucosa+Corylus avellan	a+Quercus alba+Platanus	acerifolia) / Tre	ee Allergen Mix	8 IgE	ACn	IC
	50653-5	(Ace	negundo+Betula	a verrucosa+Corylus avellan	a+Quercus alba+Platanus	acerifolia), Tre	ee Allergen Mix	: 8 lgE	ACn	IC
	15267-8	(Ace	negundo+Betula	a verrucosa+Fagus grandifol	ia+Quercus alba+Juglans	californica) Tre	ee Allergen Mix	6 IgE	ACn	IC
	15262-9	(Ace	negundo+Betula	a verrucosa+Quercus alba+l	Jlmus americana+Juglans	californica) Tre	ee Allergen Mix	: 1 lgE	ACr	IC
	30184-6	(Ace	negundo+Betula	a verrucosa+Quercus alba+l	JImus americana+Juglans	californica) Tre	ee Allergen Mix	1 IgE	ACn	C
	24479-8	(Ace	negundo+Betula	a verrucosa+Quercus alba+l	Ulmus americana+Juglans	californica) Tre	ee Allergen Mix	1 IgE RAST	ACn	IC
	23797-4	(Ace	negundo+Quero	cus alba+Ulmus americana+	Populus deltoides+Carya	pecan) Ab. Tre	ee Allergen Mix	2 IgE	ACn	IC
	24489-7	(Ace	negundo+Quero	cus alba+Ulmus americana+	Populus deltoides+Carya	pecan) Ab. Tre	ee Allergen Mix	2 IgE RAST	ACn	C
	15251-2	(Acti	nidia chinensis+/	Ananas comosus+Cucumis	melo+Musa spp+Prunus p	ersica) Ab. Fo	ood Allergen Mi	x 21 lgE	ACn	IC
	34393-9	(Acti	nidia chinensis+B	Beef+Pandalus borealis+Se	samum indicum) Ab.lgE	Fo	ood Allergen Mi	x 28 lgE	ACn	IC
	50652-7	(Acti	nidia chinensis+8	Beef+Pandalus borealis+Se:	samum indicum) Ab.lgE	Fo	ood Allergen Mi	x 28 lgE	ACr	C
	31008-6	(Acti	nidia chinensis+(Corylus avellana+Musa spp+	+Pandalus borealis) Ab.lgE	Fo Fo	ood Allergen Mi	x 24 IgE	ACn	IC
	50655-0	(Acti	nidia chinensis+0	Corylus avellana+Musa spp+	+Pandalus borealis) Ab.lgE	Fo	ood Allergen Mi	x 24 IgE	ACn	IC
	15255-3	(Acti	nidia chinensis+(Cucumis melo+Musa spp+P	Prunus dulcis+Vitis vinifera	Ab.IgE Fo	ood Allergen Mi	x 9 lgE	ACn	ic _
	Test Reque	est: Local C	ode Mnemonic	Local Name	OLIS Code	OLIS Test Reg	guest Name R	equest Id	S E	
		CBC 256	-	CBC	TR 10477-8	Complete Blood	Count 5	1		·
Re	ord: I4 🖂 1	of 3 HCT829		Hematocrit	TR 10480-2	Hematocrit	5	2		
		MCH90		MCH	IK 10481-0	nemoglopin	5	ia 14		

Figure 9.21 Test Request Codes selection List for Test Result

Select the OLIS code or OLIS Fully Specified to link to the Test request in the Map Local Order Codes screen and click the "link button"

After the link has been established the link completed icon will appear

OLIS	
(į)	Link completed
	ок

9.11 View List of Local Test Result Codes

Select the List of Local Test Requestd button 🔤 to view the Mapped Local Test Request Codes

-8	🗄 List of Local Test Request Codes (To sort, highlight column and right click) 🗴 🗙									
	Local_Code 🚽	Local_Name 🗸	Local_Category 🗸	Local_Comments -	OLIS_Code +	OLIS_Test_Request_Name +				
	CBC256	CBC	Hematology		TR10477-8	Complete Blood Count				
	HCT829	Hematocrit	Hematology		TR10480-2	Hematocrit				
	HGB903	Hemoglobin	Hematology		TR10481-0	Hemoglobin				
	MCH902	MCH	Hematology							
Re	tecord: M < 1 of 4 > N > B V No Filter Search									

Figure 9-22 List of Local Test Request Codes

9.12 Exit Section

The Exit section is located at the top right portion of the Mapping screen and contains the Exit button used to exit the Mapping screen and return to the Main Menu screen (Figure 9-23).



Figure 9-23: Exit Button

10.0 Mapping Laboratory Microorganism Codes

10.1 Background

Once the Microorganisms dataset has been imported in the OLIS Mapping Tool, mapping of local Microorganism codes can take place with the OLIS Microorganism Nomenclature. This section will provide detailed information on how to map local Microorganism codes using the OLIS Mapping Tool.

10.2 Map Microorganism Codes to OLIS Microorganism Codes Screen

To start mapping the local laboratory Microorganism dataset to the OLIS Microorganism Nomenclature select "Map Microorganism Codes" from the Main Menu. The following screen will appear (Figure 10-1):

	u) ~ (°i ~ <mark>≣≣</mark>) ∓	Мар	Local Test Result Codes to OL	S Result Nomenc	lature - OL	IS Nomenclatu	re Map			_ = ×
	Home									🕑 🗕 🗖 🗙
Paste Clipbo	ard	• • (≣ ≡ ≫ • (⊞ •) ⊞ • Font	■ 詳述す。 日日の Refresh All*	New 🍄 S Save 💮 M X Delete ~ Records	pelling fore * A	Selection Advanced Toggle Filt Sort & Filter	Size to Fit Form	Switch Windows +	A Contraction Con	ace 0 * tt *
Map Loo	al Microorganism Cod	les to OLIS Micro	organism Codes 🛛 🔊	1						
Ele	Territor of gambin cot			Local Code	ABIO_DEFEC	STIVA			↓ ₽ •	7
rie w	i estmicroorganism	0	×	Local Name	Abiotrophia	defectiva				
1	All O Mapper	d O Unmapped	1						2	
				OLIS Code	M01554]	
Search	"Abiotrophia defectiva"			Microorganism	Abiotrophia	defectiva				
Type	Bacteria	Validation	ACTIVE	Name	De sta da				5	
	Ectoparasite	Status		Microorganism Type	Bacteria					
3 ect All	Fungus	Select All		Taxonomi Llevel	Species					
Deselect All	Parasite Decesite (Slap	Deselect All		Updated by	tammy.chan		On 2011-	08-17 16:38:18]	
	Plant V				Мар	Undo	Clear	OLIS record		
OLIS N	lic - Microorganism Type -	Taxonomic level -	Microorganism Name	Alternative N -	Alterna -	Short N - R	eportable 👻	Reportable C .	Effec 🔺	
M0000	1 Virus	Species	78V-3531virus							
M0155	4 Bacteria	Species	Abiotrophia defectiva							
M0022	4 Bacteria	Genus	Abiotrophia sp.							
P00898	Bacteria	Phenotype	Abiotrophia/Granulicatella spe	c						
M0101	6 Fungus	Species	Absidia corymbifera							
M0101	7 Fungus	Genus	Absidia sp.						1	
M0127	5 Parasite	Genus	Acanthamoeba sp.							4
M0022	5 Bacteria	Genus	Acetobacter sp.						·	
M0155	b Bacteria	Species	Acholeplasma laidlawii	-						
M0155	b Bacteria	Species	Acholepiasma oculi							
M0155	Pacteria Restoria	Species	Achomohostor denitriferene							
M0033	o Dacteria 6 Bacteria	Species	Achromobacter denitrificans							
M0155	9 Bacteria	Genue	Achromobacter piechaudii							
M0155	0 Bacteria	Species	Achromobacter vulgeovidage							
M0022	7 Bacteria	Subspecies	Achromobacter xylosoxidans	si						
000000	Pastoria	Dhanatuna	Appromobilities in description		-				-	
6 cord: 14	<1 of 3782 > N H 🖄 🔆 N	lo Filter Search	•						•	
cord: H	🔸 1 of 5 💿 🕨 🖂 😽 Fil	tered Search								
Form View										Filtered

Figure 10-1: Map Local Microorganism Codes to OLIS Microorganism Codes Screen

This screen consists of 7 sections:

- 1: Data File
- 3: Search Criteria
- 5: Mapped Code Display
- 7: Exit

- 2: Local Code Display
- 4: Search List
- 6: Navigation

10.3 Map Microorganism Codes to OLIS Microorganism Codes Screen

The Data "File" section displays the name of the dataset file currently selected (Figure 10-2). Only the test results dataset files are displayed. To select a different test results dataset file, click on the drop down list:

Map Local Microorganism Codes to OLIS Microorganism Codes								
File	TestMicroorga	nism	~]				
View	💿 All	O Mapped	O Unmapped					

Figure 10-2: Data Field Section

The buttons in the "View" section will filter the data contained in the dataset (Figure 10-3):

- All: Enables the selection of all records within the dataset
- Mapped: Enables selection of records that have already been mapped to the OLIS Nomenclature
- Unmapped: Enables selection of records that have not yet been mapped to the OLIS Nomenclature

File	Anil Micro	M
View	Anil Micro	8/29/2011 2:06:49 PM
	TestMicroorganism	8/17/2011 4:38:10 PM

Figure 10-3: List of Imported Laboratory Microorganism Datasets

10.4 Local Code Section

The Local Code section displays the details of the local laboratory Microorganism codes from the imported local laboratory Microorganism dataset (Figure 10-4).

Local Code	ABIO_DEFECTIVA, Abiotrophia
Local Name	defectiva,M01554,,,,,

Figure 10-4: Local Microorganism Code Display Section

This section contains the following fields:

1. Local Code: A local mnemonic

- 2. Local Name: The Microorganism that is locally described
- 3. Trash: Deletes the currently displayed local Microorganism dataset (Figure 10-5). Clicking this button will not delete the entire dataset. It will delete only the displayed record. When the "Trash" button is clicked, the user is prompted to confirm the deletion. Select the "Yes" button to confirm the deletion or the "No" button to cancel the deletion



Figure 10-5: Confirm Record Deletion

10.5 Search Criteria Section

The information displayed in the search section is used to define the search criteria needed to find the corresponding test result in the OLIS Microorganism Nomenclature (Figure 10-6). This section is analogous to the Search Criteria section found on the Microorganism Mapping section, except that the data values within the List Boxes are those from OLIS Microorganism Nomenclature. As a default setting, all Types selected as well as an Active validation status.





Usage Tip:

When mapping local test request or test result codes or Microorganism to the OLIS Nomenclature, the Search function treats a blank category as a valid entry.

Solution: When searching, either select all categories or include blank entries.

The Search Criteria section consists of:

1. Searching: The local laboratory test name automatically populates this field and has a proceeding and trailing asterisk

- 2. Category: To select one or more OLIS Microorganism type to search against
 - To select an additional category, hold down the Control key and click the additional desired Types
 - To select a range of categories, click the first desired category. Hold down the Shift key and click the last desired category
- 3. Validation Status: To select the OLIS Microorganism Validation Status to search against
- 4. Binocular Icon: To start the search; and
- 5. Clear Icon: To clear the search results.

"Select All" and "Deselect All" are used to select or deselect all values in the List Box.

10.5.1 "Search Expression" Field Section

The parameters entered into the Search Expression field searches against the fields listed below in OLIS Test Results Nomenclature (Figure 10-7).

Search	**	

Figure 10-7: Search Expression Field Section

This search takes place in the following order:

- OLIS Microorganism Code
- Microorganism Type
- Microorganism Name
- Result Alternate Names (1,2)
- Short Name

The OLIS Mapping Tool searches multiple parameters by placing a wildcard (*) before the first and the after the last search parameter. By placing asterisks between parameters (terms) regardless of the number of parameters, the search will return a large set of records. The search is not case sensitive. Please make sure that the search criteria are specified in above order. It is not necessary to specify the search criteria for all fields. However, those that are specified must be listed in the order mentioned above (see examples below). **Note:** Although the local laboratory test name is automatically inserted between the asterisks, the user can edit this name if the name is not appropriate or descriptive. When a user enters multiple search criteria, always precede the first search parameter with a wild card.

10.5.1.1 Search Example 1

Entered parameter: "*Abiotrophia* (Figure 10-8).

<u>Search List Result:</u> The Search List will return a set of records where Abiotrophia are specified (most likely) as Alternate Names (1 and 2) or Microorganism name Name.

		Last				_	-						
м	ар Loc	al Microorgar	iism Code	es to OLIS Microorg	anism Codes		Local Code	ABIO_DEFI	ECTIVA				P
Fik	e	TestMicroorganism		*			J Local Name	Abiotrophi	a defectiva				
Vie	ew	⊙ All	O Mapped	O Unmapped			Lucarivanie	Abiotrophia					
_						w	OLIS Code						
Se	arch	*Abiotrophia*				<u>^</u>	Microorganism	78V-3531v	/irus				
Tvn	e	Bacteria		Validation ACT	VE		Name			Τ			
. 16	~	Ectoparasite		Status			Microorganism	Bacteria		T			
G	elect All	Ectoparasite-Tick		Select All			Taxonomi Llevel	Species					
		Fungus Parasite					Updated by	tammy cha		On 201	1-08-17 16:3	9+19	
De	select All	Parasite/Flea		Deselect All			opuated by	caminy.cria			1-08-17 10:3	0:10	
		Plant	~					Мар	Undo	Clear		record	
	OLIS	S Microorganism	code 🗸	Microorganism Type 👻	Taxonomic level 👻	1	Aicroorganism Na	ime 🚽	Alternative N 🗸	Alterna 🗸	Short N -	Repo	ortable
	M01554			Bacteria	Species	Abio	trophia defectiva						
	M00224			Bacteria	Genus	Abio	trophia sp.						
	P00898			Bacteria	Phenotype	Abio	trophia/Granulica	tella speci					

Figure 10-8: Example 1 Search List (3 records returned)

10.5.1.2 Search Example 2

Entered parameter: "*Abiotrophia**Virus* (Figure 10-9).

<u>Search List Results</u>: The search List will return a set of records where nothing is found

Map Loc	al Microorganism (Codes to OLIS Microorganis	sm Codes	Local Code	ABIO_DEFECTIVA		
File	TestMicroorganism	*		Local Name	Abiotrophia defectiva		
View	O All ○ May	pped O Unmapped					
Search	*Abiotrophia* *Virus*		M ×	OLIS Code Microorganism	78V-3531virus]
Type Select All	Bacteria Ectoparasite Ectoparasite-Tick Fungus	Validation ACTIVE Status Select All		Microorganism Type Taxonomi Llevel	Bacteria Species	I	
Deselect All	Parasite Parasite/Flea Plant	Deselect All		Updated by	tammy.chan Map Undo	On 2011-08-17 16:38:18 Clear OLIS record]
OLI	S Microorganism code	 Microorganism Type Tax 	konomic level 👻 🐧	Aicroorganism Na	Alternative N -	Alterna - Short N - Re	portable

Figure 10-9: Example 1 Search List (No records returned)

10.5.2 List Box Section

The List Box section will allow the user to select and filter more specific information in each Microorganism Type Figure 10-10).

Search	*Abiotrophia*		
Гуре	Bacteria Ectoparasite Ectoparasite-Tick	^	Validation ACTIVE Status
Select All	Fungus		Select All
Deselect All	Parasite Parasite/Flea		Deselect All
	Plant	~	

Figure 10-10: List Box Section

- To select individual values, click on the preferred value (Figure 10-10)
- To select multiple consecutive values, select the starting value, hold down the SHIFT key and then select the last value in the row
- To select multiple non-consecutive values, click on the first value, hold down the CTRL key and select the desired values (in a consecutive or non-consecutive order)
- To include all values in the List Box, click the "Select All" button. To deselect all values click "Deselect All" button (Figure 10-11)



Figure 10-11: List Box Button

10.5.3 Search Icons

The "Search" (Binoculars) button is used to execute a search against OLIS Test Results Nomenclature after the search criteria have been entered into "Searching" field (Figure 10-12).



Figure 10-12: Search (Binocular) Button

10.5.4 Remove Filter Icon

The "Clear Search Criteria filter" button removes any filtering criteria entered in the "Searching" field or selected in list boxes (Figure 10-13). When the icon is clicked, the Search List section will display all records from the OLIS Test Results Nomenclature.

|--|

Figure 10-1: Remove Filter Button

10.6 Search List Section

The Search List section displays the returned set of query results (Figure 10-14). By default, this section displays all OLIS Test Results Nomenclature records. When search parameters are defined in the "Search" field and the "Search" button is clicked, the Search List will display only search results that correspond to the query parameters. To sort, the default setting is on the LOINC Code field.

Map Loc	al Microorgani	ism Code	es to OLIS Microorg	anism Codes		Local Code	ABIO_DEF	CTIVA				
File	TestMicroorganism	_	×			Local Name	Abiotrophia	a defectiva				
VIEW	● All	Mapped	O Unmapped									
					%	OLIS Code	M00224					
Search	*Abiotrophia*					Microorganism	Abiotrophia	a sp.		T		
Гуре	Bacteria Ectoparacite	^	Validation ACTI Status	/E		Microorganism	Bacteria					
Select All	Ectoparasite-Tick		Select All			Type Taxonomi Llevel	Genus					
Decelect All	Parasite		Deselect All			Updated by	anil.patel		On 201	1-08-29 21:12	:45	
Deselect All	Parasite/Flea Plant	~					Мар	Undo	Clear	OLIS re	ecord	
	S Microorganism c	ode 🖓	Microorganism Type 🖓	Taxonomic level 👻	M	icroorganism Na	ame 🖓	Alternative N 🖓	Alterna 🖓	Short N-7	Repo	rtable
M01554			Bacteria	Species	Abiotr	ophia defectiva						
M00224			Bacteria	Genus	Abiotr	ophia sp.						
P00898			Bacteria	Phenotype	Abiotr	ophia/Granulica	tella spec					

Figure 10-2: Search List Section (correct record returned)

Columns within the Search List can be hidden, reordered, frozen and sorted upon. To view column options, right click on the desired column and select the appropriate option (Figure 10-15). The order of sorted results will not be retained once the screen is closed.

Map Loca	al Microorganism Coo	des to OLIS Microorg	anism Codes		ocal Code	ABIO_DE	FEC	TIVA		P •	
View	All Mappe	d O Unmapped		Li	ocal Name	Abiotroph	nia c	lefectiva		_	
Search Type Select All Deselect All	*Abiotrophia* Bacteria Ectoparasite Ectoparasite-Tick Fungus Parasite/Flea Plant	Validation Status Select All Deselect All		0 M N M Ty Ta	LIS Code icroorganism ame icroorganism ype axonomi Llevel pdated by	78V-3531 Bacteria Species tammy.ch Map	1 viri	us On 2011-08-17 16:38: Undo Clear OLIS rec	18 :ord		
OLIS M01554 M00224 P00898	S Microorganism code	Y Microorganism Type ギ Bacteria Bacteria Bacteria	Taxonomic level Species Genus Phenotype	Mic Mic Abiotro Abiotro Abiotro	roorganism Na phia defectiva phia sp. phia/Granulicat	tella sp	r A ≵↓ X↓ X↓	Alternative N अ Alterna अ Short N अ Sort A to Z Sort Z to A Clear filter from Microorganism Name	Repo	ortable	
								Text Eijters		<u>E</u> quals Does <u>N</u> ot B Begins Wit D <u>o</u> es Not B Cont <u>a</u> ins <u>D</u> oes Not B Ends Wi <u>t</u> h Does Not B	Equal th Segin With Contain End Wit <u>h</u>

Figure 10-3: Search List Column Options

10.7 Mapped Code Section

The Mapped Code section includes the local laboratory Microorganism Name and corresponding OLIS Microorganism Nomenclature information (Figure 10-16).

OLIS Code	M00224	
Microorganism Name	Abiotrophia sp.	
Microorganism	Bacteria	I
Taxonomi Llevel	Genus	
Updated by	anil.patel On 2	011-08-29 21:12:45
	Map Undo Cle	ar OLIS record

Figure 10-4: Mapped Code Section

The Mapped Code section consists of the following:

- 5. OLIS Code: Displays the OLIS Code that has been mapped to the local laboratory Microorganism Name displayed in Local Code field. This field cannot be edited. The field appears empty if the user has not performed mapping before
- 6. Comments: Used to capture the reasoning for the mapping. This is a freetext field and is editable
- 7. Updated by: The name of person performing the mapping (automatically populated based on the Windows login userID of the person logged onto the computer) is captured along with the time and date the mapping was

performed. If the mapping process is divided amongst multiple staff members, this feature provides a means of assessing "who mapped what and when"

- 8. Buttons:
 - Map: Used to map the OLIS test result to the local laboratory test result. Mapping can also be performed by double-clicking any of the fields within a record on the Search List section
 - Undo: Used to return to the value of the mapped OLIS record to the last previously mapped value
 - Clear: Used to clear all details from the Mapped Code section
 - OLIS Record: Used to display all the details of the OLIS test result record mapped or OLIS test result record selected in the Search List screen (Figure 10-17)

OLIS Microorganism		
OLIS Microorga	nism	Į.
OLIS Microorganism code	M00001	
Microorganism Type	Virus	
Taxonomic level	Species	
Microorganism Name	78V-3531virus	
Alternative Name 1		
Alternative Name 2		
Short Name		
Source	ICTVdb	
External Link	http://www.ncbi.nlm.nih.gov/ICTVdb/index.htm	
Reportable		
Reportable Context		
Effective Start Date		
Effective End Date		
Change Note		
Comments		
Validation Status Indicator	ACTIVE	

Figure 10-5: Details of the OLIS Microorganism Record Screen

10.7.1 Mapping Microorganism

To map a local laboratory Microorganism to OLIS Microorganism Nomenclature record:

- 2. Use the "Searching" field to narrow down the number of records displayed in the Search List (Figure 10-18)
- 3. Select the OLIS result record by clicking it once
- 4. Click the "Map" button

Note: Double clicking the record in the Search List will automatically map the OLIS Nomenclature record to the local laboratory test result record

Usage Tip:

Duplicate entries in the local test mnemonic are not recognized. Only the first entry will be mapped.

Solution: Be certain to remove or rename duplicate local test mnemonic entries before starting the mapping task.

	₽) - (2 - 🗐) -	Map Local Tes	t Result Codes to OLIS I	Result N	omenclature - O	LIS Nomeno	lature Map	1		_ = X
•	Home								(0 _ = ×
Map Loo	cal Microorganism (Codes to OLIS Micro	organism Codes		Local Code	ABIO_DEFEC	TIVA			1
File	Anil Micro		~		Local Name	Abiotrophia c	lefectiva			
View	💿 All 🛛 🔿 Ma	apped O Unmappe	d							
				×	OLIS Code	M01554]
Search	*Abiotrophia*				Microorganism Name	Abiotrophia c	lefectiva]
Туре	Bacteria Ctoparasite	Validation Status	ACTIVE		Microorganism	Bacteria]
Select All	Ectoparasite-Tick Fungus	Select All			Taxonomi Llevel	Species]
Deselect All	Parasite Parasite /Elea	Deselect All			Updated by	Anil.Patel		On 201	1-09-01 12:27:53]
	Plant					Мар	Undo	Clear	OLIS record	J
	lic∢r Microorganism Typ	e 🛛 Taxonomic level 🗸	Microorganism Na	ime fi	Alternative N 🕯	Alterna 🖓	Short N-7	Reportable	 Reportable C 	- Effective
M0022	4 Bacteria	Genus	Abiotrophia derectiva							
P00898	Bacteria	Phenotype	Abiotrophia/Granulicat	tella spe	ci					
Record: 14	4 1 of 3 🕨 🕨 🖂	Filtered Search	•							•
Record: 14	4 1 of 5 🕨 🕨 🖂	Filtered Search								
Form View										Filtered .:

Figure 10-6: Map Local Microorganism Codes to OLIS Microorganism Codes Screen

The mapped LOINC code value from the Search List section appears in the "OLIS Code" field. Click the "Undo Mapping" button to undo the mapping action and the previous value (if available) will appear in the "OLIS Code" and "Microorganism name" field. Clicking the "Clear" button will clear values from both the "OLIS Code" and the "Microorganism name".

10.8 Navigation Section

The Record Navigation section contains two rows (Figure 10-19). The first row is used to navigate between the OLIS test result records within the Search List. It is not necessary to use the first row since the same goal can be achieved by using the vertical scroll bar.

The second row is used to navigate between imported dataset records.

Record: I	4	► ► ► ► of 11 (Filtered)
Record: I	7	▶ ▶ ▶ ▶ ★ of 8

Figure 10-7: Record Navigation Section

The details outlined below pertain to the second Navigation row:

- The field within the Record Navigation section displays the user's current record location within the imported dataset
- The Record Navigation section also displays the total number of records within a dataset as "[current record position] of [total number of records]"
- The "|<" and "|>" buttons allow the user to navigate to the first and the last record (respectively) in the dataset
- The "<" and ">" buttons allow the user to navigate to the previous and the next record (respectively) in the dataset

10.9 Exit Section

The Exit section is located at the top right portion of the Mapping screen and contains the Exit button used to exit the Mapping screen and return to the Main Menu screen (Figure 10-20).



Figure 10-20: Exit Button

11.0 Show Mapped Nomenclature Codes

11.1 Background

At ant stage of the mapping exercise, it is important to export and save mapped laboratory test datasets. This section will provide instructions on how progress of the mapped code can be viewed.

File_Name	Local_Code_Mnemonic	Local_Name	Local_Category	OUS_Code	
FestRequet 2	CBC256	CBC	Hematology	TR10477-8	Co
TestRequet	HCT829	Hematocrit	Hematology	TR10480-2	He
TestRequet	HGB903	Hemoglobin	Hematology	TR10481-0	He
TestRequet	MCH902	MCH	Hematology	TR10483-6	M
test	CBC256	CBC	Hematology		
(est	HCT829	Hematocrit	Hematology		Τ
lest	H51-503	Hemoglobin	Hematology		
est	MCH302	MCH	Hematology		
es 2	CBC256	CBC	Hematology		
es 2	HCT829	Hematocrit	Hematology		Τ
es 2	HGB903	Hemoglobin	Hematology		T
es 2	MCH902	MCH	Hematology		
est 2003	CBC256	CBC	Hematology		Τ
est 2003	HCT829	Hematocrit	Hematology		
est 2003	HGB903	Hemoglobin	Hematology		
est 2003	MCH902	MCH	Hematology		
Excel Import 3	APCO2	pCO2	H2GAS		
Excel Import 3	ACO2J	pCO2	J2GAS		
Excel Import 3	INR	INR	COAIH		
Excel Import 3	APTT	PTT	COAIH		
Excel Import 3	PROTM	PT	COAIH		
Excel Import 3	COAGT	MEDICATION ?:	COAIH		
Excel Import 3	CA	CALCIUM	MAIN		
Excel Import 3	IONCA	CALCIUM (IONIZED)	MISC		
Excel Import 3	RUCA	Random Urine Calcium	MAIN		
ord: II I D	1 🕨 🕷 of 40		···		
Client (File Name):	OR 3	Filter 4 Refres	h 5	6] [

Figure 11-1: Show Mapped Nomenclature Code Screen

This screen consists of 6 sections:

- 1: Dataset selection tab
- 3: Search Criteria
- 5: Refresh

- 2: Code Display
- 4: Filter
- 6: Exit.

11.2 Local Codes Screen

- Dataset Selection Tab: Specify whether the test results, test requests. Microorganism dataset is selected.
- Code Display: Specify the records that are in the dataset fro the mapping tool
- The Search Criteria section consists of:

1. Searching by Client file Name: This is filename assigned during the import step

2. Search by Local Code: This allows filtering the imported test file for all the entries associated with the code or imputed term.

- Filter: Shows all records that match the search criteria.
- Refresh: Clears the filter and returns the complete record set
- Exit: Closes the form and returns to the main menu

11.2.1 Search Example 1:

Parameter entered in "Searching field": "*test*" (Figure 11-2).

<u>Search list result:</u> Since wildcards (*) are used, the OLIS Mapping Tool will search for all records in which contain the word "Test".

File_Name	Local_Code_Mnemonic	Local_Name	Local_Category	OLIS_Code	OLI
TestRequet	CBC256	CBC	Hematology	TR10477-8	Comp
TestRequet	HCT829	Hematocrit	Hematology	TR10480-2	Hema
TestRequet	HGB903	Hemoglobin	Hematology	TR10481-0	Hemo
TestRequet	MCH902	MCH	Hematology	TR10483-6	MCH
test	CBC256	CBC	Hematology		
test	HCT829	Hematocrit	Hematology		
test	HGB903	Hemoglobin	Hematology		
test	MCH902	MCH	Hematology		
test 2003	CBC256	CBC	Hematology		
test 2003	HCT829	Hematocrit	Hematology		
test 2003	HGB903	Hemoglobin	Hematology		
test 2003	MCH902	МСН	Hematology		
*					
			-7		
Record: 14 1)	▶]▶¥) of 12 (Filtered)				•1

Figure 11-2: Show *test* filenames

11.2.2 Search Example

Parameter entered in "Searching field": "CBC256" (Figure 11-3).

<u>Search list result:</u> Since wildcards (*) are used, the OLIS Mapping Tool will search for all Local Codes in which contain the text "CBC256".

	File Name	Local Code Mnemonic	Local Name	Local Category	OLIS Code	0115
Þ	TestRequet	CBC256	CBC	Hematology	TR10477-8	Compl
<u> </u>	test	CBC256	CBC	Hematology	1112011710	compi
_	tes 2	CBC256	CBC	Hematology		
	test 2003	CBC256	CBC	Hematology		
*						
	K					
Re	scord: 📢 🌒 🚺 🕨]))¥) of 4 (Filtered)				2

Figure 11-3: Show all codes with *CBC256* in Local Code Field

12.0 Exporting and Saving Mapped Laboratory Test Data

12.1 Background

At the completion of the mapping exercise, it is important to export and save mapped laboratory test datasets. This section will provide instructions on how to export and save mapped datasets.

12.2 Export Local Codes Screen

To export a mapped dataset select "Export Local Codes" from the Main Menu screen and the "Export Local Codes" screen will appear (Figure 12-1):

🗉 OLIS Main Switchboard		x
OLIS Nomenclatu	re Mapper V	ersion 1.2
	Import	Local Codes
	Map Test	Request Codes
	Map Tes	Export Local Codes 🗶
	Map Micro	Export Local Codes
	Map Sp	⊙ Test Request ○ Test Result ○ Microorganism ○ Specimen
	Show Test Re	
	Show Mapped	All O Mapped O Unmapped
	Export	O Excel 💿 Text File
	Manag	⊙ Tab O Semicolon O Comma O Space O Vertical Bar
	Exit th	First Row Contains Column Headers TextQualifier [None]
	Con	Try 2
	· · · · · · · · · · · · · · · · · · ·	Export Close

Figure 12-1: Export Local Codes Screen

Complete the following information:

- Nomenclature Dataset Type: Specify whether the test results or test requests dataset is exported
- File Format: Specify whether the exported file format is MS Excel or ASCII text file
- File Name: Select the file name for the dataset used during mapping
- All, Mapped or Unmapped: Specify whether All, Mapped or only Unmapped records should be included in the exported dataset
- Data Separators: If the selected file format is a "Text File" then a separator needs to be specified: Tab, Semicolon (:), Comma (,), Space or Vertical bar, pipe (|)
- Column Headers: Specify whether the first row in the exported dataset should contain data element headers (=column headers)
- Text Qualifier: Specify which Text Qualifier the dataset will contain (none, single or double quote)

12.3 Exporting Mapped Laboratory Test Data

Click the "Export" button and specify the file name and the location on the local PC where the file is saved (Figure 12-2).

	Save As	? 🗙
I	Save in:	🔁 InputFiles 🔽 🕜 🎓 🖽 -
	MuBacard	Anil microsconism data Anil New Specimen data Anil Test Request data Anil Test Request data
I	Documents	Ani Test Request data unitse Ani Test Request data contain the exported mappings
	Desktop	New microorganism data New Specimen data Test Request data
	My Documents	Test Result data Provide a description name for the mapped file
I	3	
I	My Computer	File name: Save
	My Network	Save as type: All Files (".") Cancel

Figure 12-2: Specify Export File Name and Location

12.4 Saving Mapped Data

Click the "Save" button and the file will be exported. If the file is in MS Excel, it will be automatically saved in an Excel (97-2003) file format. The mapped files are now stored on the local computer, in the specified folder.

13.0 Exiting the OLIS Mapping Tool

After the user has completed using the OLIS Mapping Tool, the "Exit this Database" option from the Main Menu will allow the user to exit the OLIS Mapping Tool application (Figure 12-1).



Figure 13-1: Main Menu – Exit this database

When the "Exit this database" option is selected, an empty MS Access screen is displayed (Figure 12-2).



Figure 13-2: MS Access Screen – No databases Loaded

Click on the close ("X") icon at the top right corner to close the MS Access applications.

14.0 Glossary

Terms, Acronyms and Abbreviations	Definition
Adopter	A user of the Ontario Laboratories Information System.
American Standard Code for Information Interchange (ASCII)	A coding system for representing English characters as numbers, with each letter assigned a number from 0 to 127. For example, the ASCII code for uppercase M is ASCII 77. Most computers use ASCII codes to represent text, which makes it possible to transfer data from one computer to another.
Battery	A group of laboratory tests which are performed on the same specimen and one order is placed for the entire group of tests. A Battery is typically performed in a specific clinical specialty and using a common laboratory instrument (e.g., CBC).
Binary large object (BLOB)	In computer programming, the verb glob or globbing is used to refer to an instance of pattern matching behavior. ³ The noun "glob" is used to refer to a particular pattern (e.g., "use the glob *.log to match all those log files").
Business Service Desk (BSD)	A team within the OLIS Program that is the first line of contact for Adopters on issues relevant to operation and usage of OLIS. Email: <u>OLIS.BusinessSupport@ehealthontario.on.ca</u>
Canada Health Infoway (CHI)	Infoway is an independent not-for-profit corporation created by Canada's First Ministers in 2001 to foster and accelerate the development and adoption of electronic health record (EHR) systems with compatible standards and communications technologies. CHI works with the country's ten provinces and three territories to implement private, secure EHR systems, enabling best practices and successful projects in one region to be shared or replicated in other regions.
Change Request Form	An electronic form which is completed by an OLIS Adopter to request a new OLIS Nomenclature code (test request, test result, specimen (source) or microorganism code).
Client Self Test (CST) Environment	A computer server running the most current version of the OLIS software that can be used to develop and test LIS to OLIS interfaces or CMS to OLIS interfaces. The environment simulates the OLIS Production environment but only contains fictitious patient and practitioner data to safeguard patient confidentiality.
Clinical Management System (CMS)	A computer system used by practitioners to manage data related to their patients. This term has the same meaning as Electronic Medical Record (EMR).
Common Name	A name in general use within a laboratory community and is often contrasted with a scientific name. A common name is not necessarily a commonly used name, nor is it necessarily considered less correct than a scientific name.

³ Wikipedia (http://en.wikipedia.org/wiki/Blob_(computing))

Terms, Acronyms and	Definition
Abbreviations	
Component Name	The name of the analyte being measured.
Descriptive Name	A textual description which clearly describes a laboratory test.
Clinical Discipline (Modality)	A sub-specialty within the laboratory that is dedicated to performing
	groups of tests based on the area of science (discipline).
Duplicate codes	Two or more LIS codes that refer to the same test request or test
	result.
Effective Date	The first date the record is "active" within the OLIS Nomenclature.
Element	An atomic unit of data that has precise meaning or precise semantics.
End Date	The last date the record is "active" within the OLIS Nomenclature.
Extract	The publication of the local laboratory test request and local
	laboratory test result codes from the local LIS.
HL7 Message	A hierarchical structure associated with a trigger event. The HL7
	standard defines trigger event as "an event in the real world of health
	care (that) creates the need for data to flow among systems".
Health Level Seven Standard	A standard for the electronic data exchange of health care
(HL7)	information. HL7 endeavours to standardize the format and protocol
	of the exchange of certain key sets of data among health care
	computer application systems, such as patient
	administration/registration, discharge, and requisitions for laboratory
	testing, results and clinical observations.
Hospital Information System	A comprehensive, integrated information system designed to manage
(HIS)	the administrative, financial and clinical aspects of a nospital.
Inactive Fag	A data element in the OLIS Nomenclature file which indicates
	whether the code is active (available for use) or mactive (no longer
Laboratory Information	A class of software which handles receiving processing and storing
System (LIS)	information generated by laboratory testing processes. These systems
System (LIS)	often must interface with instruments and other information systems
	such as hospital information systems (HIS)
Laboratory Information	Codes used in a laboratory information system to define test request.
System (LIS) codes	specimen (source), test result and microorganism codes
Laboratory Service Provider	Is a facility that performs laboratory testing on specimens derived
	from humans for the purpose of providing information for the
	diagnosis, prevention, or the treatment of or impairment of disease, or
	for the assessment of health.
Laboratory Test	A laboratory test is a common term for laboratory test requests and
-	laboratory test results. A laboratory test is a <u>scientific</u> analysis
	performed on a wide variety of specimens such as <u>blood</u> , urine, stool,
	body fluid, tissue, or from sources derived from a patient during their
	care or treatment (e.g., swabs, iv solutions, medication, aspirate or
	biopsies).
	Laboratory tests are used to determine <u>physiological</u> and <u>biochemical</u>
	states, such as <u>disease</u> , <u>mineral</u> content, drug effectiveness, and organ
	function. They are also used for diagnosis, monitoring, therapeutic
	drug monitoring, or genetic assessment of a patient.
Local Test Request Code	A test request code that resides in the Laboratory Information system
	(LIS), Ulinical Management System (UMS) or Hospital Information
Level West D. H.C. I	System (fils).
Local Test Result Code	A test result code that resides in the Laboratory Information system

Terms, Acronyms and	Definition
Abbreviations	
	(LIS), Clinical Management System (CMS) or Hospital Information System (HIS).
Logic Observation Identifier	A set of standard codes and universal nomenclature for identifying
Names and Codes (LOINC®)	and encoding laboratory terms and clinical observations.
Nomenclature Standard	
	The LOINC Nomenclature Standard has over 50,000 codes which
	provides a structured means of identifying and naming laboratory and
	medical tests or procedures.
Line Constant	<u>http://www.regenstrief.org/medinformatics/loinc/</u>
Live System	repository from a LIS to OLIS, or from a CMS to OLIS.
Local Laboratory Test	A collection of information about test requests that a laboratory can
Requests Dataset	perform. This list is also referred to in some laboratory information
	systems as a dictionary or data dictionary or data dictionary (since it
	defines the test requests that can be requested).
Local Laboratory Test Results	A collection of information about test results that a laboratory can
Dataset	report. This list is also referred to in some laboratory information
	systems as a dictionary or data dictionary (since it defines the test
Monning	results that can be requested).
Mapping	arganization's local test code and description to an
Motadata	Defined as data about data. Metadata is a concept that applies mainly
Metauata	to electronically archived or presented data and is used to describe the
	a) definition b) structure and c) administration of data files with all
	contents in context to ease the use of the captured and archived data
	for further use. For example, a web page may include metadata
	specifying what language it is written in, what tools were used to
	create it, where to go for more on the subject and so on. Attributes are
	the assigned qualities for specific elements of the data.
Mnemonic	Is a <u>mind memory</u> and/or <u>learning</u> aid. Commonly, mnemonics are
	verbal—such as a very short poem or a special word used to help a
	person remember something—but may be visual, kinesthetic or
	auditory. Mnemonics rely on associations between easy-to-remember
	constructs which can be related back to the data that is to be
	remembered.
Observation	The result of something seen or noted.
Untario Laboratories	An integrated, province-wide, information and order fulfillment
mormation System (OLIS)	information between authorized practitioners, specimen collection
	centres and laboratories
OLIS Collaboration Portal	An area of the eHealth Ontario portal that provides information and
	tools to registered OLIS users.
OLIS List of Microorganisms	Describes names and unique identifier codes for medically significant
	bacteria, fungi, and viruses. It is used to code a specific microorganism
	as the value or result of the culture when a code from the OLIS
	Results Nomenclature such as "microorganism or agent identified" is
	used.
OLIS Nomenclature	A naming schema which provides an unambiguous and consistent
	system of names, unique codes and related information which a
	laboratory information system, hospital information system or clinical

Terms, Acronyms and	Definition
Abbreviations	
	management system uses to exchange data with OLIS. The OLIS
	Nomenclature includes the OLIS Test Requests and Test Results
	Nomenclature.
OLIS Nomenclature	Subject matter experts within the OLIS Program who are responsible
Maintenance Working Group	for maintenance of the OLIS Nomenclature.
OLIS Program	A division within eHealth Ontario responsible for the delivery of
	OLIS.
OLIS Program Coordinator	An individual from the OLIS Program responsible for liaising and
	supporting OLIS Adopters during the development and
	implementation of their LIS to OLIS interface.
OLIS Interface Specification	A technical document outlining the requirements that must be
	followed when developing an interface between a laboratory
	information system, hospital information system or clinical
	management system and the OLIS. The current OLIS Interface
	Specification is Version 1.07 (September 2010).
OLIS Test Requests	A naming schema used within OLIS to uniquely identify and describe
Nomenclature	test requests.
OLIS Test Results	A naming schema used within OLIS to uniquely identify and describe
Nomenclature	test results and observations.
OLIS Web Viewer	Software that has been developed for eHealth Ontario to allow queries
	to be submitted to the OLIS repository and to display laboratory test
	results returned by those queries.
Order (Orderable)	A collective term used to refer to one or more test requests.
Pan-Canadian Nomenclature	A naming schema proposed by CHI for identifying and reporting
Standard	laboratory test request and test results. This naming schema is based
	on the HL7 version 3.0 Standard and the LOINC Nomenclature
	Standard and takes into consideration Ontario and British Columbia's
	reporting requirements for laboratory test data.
Panel	A common group of test requests and test results that facilitate
	ordering and reporting.
Practitioner	OLIS recognizes four types of practitioners (physicians, dentists,
	nurse practitioners and midwives) that are authorized to order
	medical laboratory tests.
Production System	The final version of a particular product in which the release is
_	considered to be very stable and relatively bug-free with a quality
	suitable for wide distribution and use by end users. It is sometimes
	referred to as the LIVE system.
Production Environment	A suite of computer servers running OLIS software which receive,
	store and respond to queries. This environment contains copies of
	patient test requests and test results including confidential personal
	health information and practitioner information.
Profile	A group of laboratory tests which are performed on two or more
	specimens and can belong to a specific clinical specialty or different
	clinical specialties.
Record	A row in database table.
Regenstrief Institute Inc.	Provides a Windows-based mapping utility called the Regenstrief
	LOINC Mapping Assistant (RELMA)® to facilitate searches through
	the LOINC Nomenclature Standard and to assist mapping of local
	codes to LOINC codes.
Retired codes	An OLIS test request or test result code that is no longer available to

Terms, Acronyms and	Definition
Abbreviations	
	submit new laboratory test request or result codes to OLIS.
Schedule of Benefits	A listing of the physician services that are covered by the Ontario
	Health Insurance Plan. For laboratories there is a separate schedule
	which lists the insured laboratory procedures.
Specialty (Sub-type)	A branch of medical laboratory science.
Specimen (Source)	Allows for test requests to be differentiated by the specimen that was
	used for the analysis (e.g., blood, urine, cerebrospinal fluid).
Specimen (Source) Dataset	The publication of local specimen (source) codes from the local LIS.
Extract	
Specimen (Source) File	A specimen list from HL7 version 2.5 Table 0070.
Specimen (source) dataset	The publication of local specimen (source) codes from the local LIS.
extract	
Test	A medical procedure or analysis performed to detect, diagnose, or
	evaluate disease, disease processes and susceptibility.
Test Request	A request for a laboratory test or medical procedure that is generated
	by a licences health care provider.
Test Result	The results of a laboratory test or medical procedure that is generated
	in response to a test request.
Testing System	A computer environment which contains either the current version or
	an unreleased version of LIS software and fictitious patient
	information. This system is used for development and training
	purposes.
XCA Code	A prefix for Canadian specific codes in OLIS Results Nomenclature.
XON Code	A prefix for Ontario specific codes in OLIS Results Nomenclature.

15.0 Troubleshooting

15.1 Background

This section provides troubleshooting tips for when errors arise during the use of the OLIS Mapping Tool. If the user continues to have issues with the application, contact your OLIS Program Coordinator for assistance.

15.2 Solutions to Application Issues

- 1. To prevent problems from arising during the use of the OLIS Mapping Tool, use the "Compact and Repair" and "Compact on Close" function (Refer to *Section 3.4*) in situations when errors result from an open database, form or object. The user can manually run the Compact and Repair command when a database is open or closed.
 - Click the Microsoft Office Button (B), point to "Manage". Click "Compact and Repair Database" under "Manage this database".
- 2. In situations where the cause of an error is unknown and there was no error before, create a new and blank database. Import the objects from the old database into the new one.
- 3. Errors can arise due to system upgrades and changes in permission. If this is suspected:

a) Check to ensure all system requirements are met and no changes have taken place. If all system requirements are met, back up and archive any existing files for the OLIS_MAP folder

b) Test MS Access to check if a database file can be opened or created. If this task can be completed, follow these steps:

- Run a virus check
- Back up and archive the OLIS_MAP folder
- Delete the OLIS_MAP folder from the C: drive
- Reboot the computer (this can reset temporary settings for services and applications that may have been incorrectly set)
- Install the most recent OLIS Mapping Tool from the OLIS Collaboration Portal
- If the problem persists, call the OLIS Coordinator

15.3 Usage Tips

Usage Tip:

The size of the Access files are not an indication of the number of entries that are within a file. As these files are used, they become larger in size due to unformatted space in their data structure. A newly created database can easily amount to being over 1 megabyte in size without data. For this reason, it is recommend that these files are regularly "Compacted and Repaired" to improve performance. To automatically compact and repair a database, complete the following tasks:

- 1. Click on the "Microsoft Office Button", and click "Access Options"
- 2. In the "Access Options" dialog box, click on "Current Database"
- 3. Under "Application Options", select the "Compact on Close" check box

Usage Tip:

If the lower portion of the Mapping screen is not immediately displayed.

> Solution: Turn off the Ribbon. This can be done by right clicking on the

Microsoft Office Button⁽¹⁾, and then clicking "Minimize the ribbon".

Usage Tip:

The spelling of the Metadata descriptors (row column headings) is not important, for txt or CSV files but the relative order of their association is important. For Excel files the format must be Excel 97-2003 (Excel 2007 file format is not compatible).

Usage Tip:

If the Navigation Pane is accidentally opened (as shown on the left side in Figure 5-

3), minimize the window by clicking the Shutter bar Open/Close Button . The upper portion of the screen displays the MS Access ribbon. To minimize this ribbon,

right click the Microsoft Office Button ^(B). The lower portion of the Main Menu screen will be fully displayed.

Usage Tip:

When the file name for the local test request codes is typed incorrectly, an error window will appear, alerting the user that 2 parameters are required.

t Office Access	×
parameters, Expecte	ed 2.
ОК	
	t Office Access parameters, Expecte

Solution: Use the column header (Refer to section 4 of this guide - Extraction of Local Laboratory Test Datasets).

Usage Tip:

When importing data from an Excel spreadsheet file, if the column headers for the Excel file are not specified exactly, "#name?" will appear.

Local Code Mnemonic	Local Name	Local Category	OLIS Code	OLIS Request	Specimen Value	Specimen Description	Specimen Site Modifier	Comments	Local Comments	Mapping Date	Mapping User
2520	TOBRAMYCIN PEAK	Chemistry	TR10681-5	Tryptase	SER	Serum	#Name?	com1	user com1	2010-09- 09	shar
2512	GENTAMICIN PEAK	Chemistry	TR10207-9	Gentamicin Peak	SER	Serum	#Name?	com2	user com2	2010-09- 09	shar
2521	AMIKACIN PEAK	Chemistry	TR10025-5	Amikacin Peak	SER	Serum	#Name?	com3	user com3	2010-09- 09	shar
180	RH GENOTYPE+A	immunchematol ogy	TR11565-9	RH Genotype	SER	Whole blood	#Name?	com4	user com4	2010-09- 09	shar
348	CHOLINESTER ASE-RBC	Chemistry	TR10123-8	Cholinesterase	SER	Erythrocyt es	#Name?	com5	user com5	2010-09- 09	shar
241	ALANINE	Chemistry	TR10009-9	Alanine Aminotransami	SER	Serum	#Name?	com6	user com6	2010-09- 09	shar
244		Chemistry	TR10010-7	Albumin	SER	Serum	#Name?	com7	user com7	2010-09- 09	shar

> **Solution:** Type in correct column headers.

Usage Tip:

When mapping local test request or test result codes to the OLIS Nomenclature, the Search function treats a blank category or sub-category as a valid entry.

> **Solution:** When searching, either select all categories or include blank entries.

Usage Tip:

When filtering the data in a Search List after a preliminary the user will sometimes get a warning that the filter operation was cancelled because the filter would be too long (see image below). This occurs when the "Text Filter" option equals "term filtered on" is used.



Solution: To narrow down the Search List, right click on a record cell to display a task menu. Use the "Text filter" options "Contain" or "Does Not Contain"

If the option "Text Filter" equals "term filtered on" is used the "Text Filter", a warning message displays. If this warning message is displayed, use the "Text Filter" option "Contain" or "Does Not Contain" rather than the "term filtered on" option.

Usage Tip:

Duplicate entries in the local test mnemonic are not recognized. Only the first entry will be mapped.

Solution: Be certain to remove or rename duplicate local test mnemonic entries before starting the mapping task.

Usage Tip:

If a local test request code requires mapping to the same OLIS test request code but with more than one specimen source code, only the latter mapping will be retained.
➢ Solution: Create a new local source code.

Usage Tip:

The "Comments" associated with the OLIS LOINC code in the "Map Local Result Codes to OLIS Result Codes" screen are not comments from the OLIS Test Results Nomenclature table.

Usage Tip:

Upon accessing the mapped test result codes, the OLIS test result codes are sorted by the LOINC code.

Option: To display the OLIS test result codes alphabetically based upon the LOINC Component name, select Records then Apply Filter/Sort.

Usage Tip:

When mapping local test request or test result codes to the OLIS Nomenclature, the Search function treats a blank category or sub-category as a valid entry.

> **Solution:** When searching, either select all categories or include blank entries.