# MicroPath

## Microbiology Information System

## User Guide

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# Contents


Contents . . . . . i

Chapter 1 Introduction . . . . . 1

About this manual . . . . . 1

MicroPath Window Structure . . . . . 2

MicroPath Data Flow . . . . . 4

Usability Features in MicroPath . . . . . 6

- Searching for records . . . . . 6
- The Ellipsis button (...) . . . . . 6
- Comment# fields . . . . . 6
- Required (*) fields . . . . . 6
- Save vs Save+ . . . . . 6
- External File Storage . . . . . 7
- Audit table . . . . . 8
- Context sensitive menus . . . . . 9
- Shortcuts . . . . . 9
- User defined tables and display fields . . 9

Chapter 2 Accession . . . . . 1

The Accession Window . . . . . 1

Add a new patient to the system . . . . . 2

- Discrete Name Entry . . . . . 3
- Saving the patient . . . . . 4

Look up an existing patient . . . . . 4

Add a new visit to an existing patient . . . . . 4

- Saving the visit . . . . . 6

Add a requisition or case to an existing visit . . . . . 6

- Saving the requisition . . . . . 7

Add a culture to an existing case . . . . . 8

- Adding plates to a culture . . . . . 10
- Ordering media panels . . . . . 10
- Saving the culture . . . . . 11

Flag cultures as being in the laboratory . . . . . 11

- Label printing while flagging inlab . . . . 12
- Resetting your label printer . . . . . 12

Ad hoc label printing while accessioning . . . . . 12

Ordering non-culture tests . . . . . .12
Ordering additional items on a Case . . . . . .14
Accession Menu. . . . . .15

**Chapter 3 Culture Manager . . . . . .1**

The Culture Manager Window . . . . . .1
Accessing Cultures . . . . . .2
Full Search . . . . . .3
Search list options . . . . . 3
Build Lists . . . . . .4
Entering Results on cultures with no isolates . . . . . .5
Entering results on cultures with isolates . . . . . .5
Entering media description . . . . . 5
Creating isolates . . . . . 6
Ordering Biochemicals . . . . . 7
Entering Biochemicals . . . . . 8
Ordering Antibiotics . . . . . 9
Entering Sensitivities . . . . . 10
Workup Manager . . . . . 11
Resulting Culture Tests. . . . . 15
Canceling Ordered Cultures, Specimens or Tests15
Saving as Preliminary or Final . . . . . 15
Other culture operations. . . . . .16
Canceling a culture . . . . . 16
Correcting a Final report. . . . . 16
Saving a PDF . . . . . 16
Resulting Micro Tests . . . . . .17
Saving Micro Tests as Preliminary or Final . . . . . .17
Culture Manager Menu . . . . . .18
Context Sensitive Menus . . . . . .21

**Chapter 4 Batch Result . . . . . .1**

Batch Result window. . . . . .1
Culture Selection. . . . . 1
Culture Processing . . . . . 1
Culture List Section Columns. . . . . 3
How to create a batch of cultures for processing. . . . . .3
Auto Batch Processing. . . . . .4
View Alerts Window . . . . . .6

**Chapter 5 Batch Label . . . . . .1**

Batch Label window . . . . . .1
Culture or specimen selection. . . . . 2

Culture/Specimen List . . . . . 2
Label Printing options. . . . . 2
Printing labels . . . . . .3

Chapter 6 Result Tests. . . . . .1

Result Tests window . . . . . .1

Test Selection . . . . . 1
Test Result Processing . . . . . 2
Test List Section Columns . . . . . 3
How to create a batch of tests for result entry . . . . . .3

Set Test Result Detail window. . . . . .5

Chapter 7 Batch Steps . . . . . .1

Batch Steps Window . . . . . .1

Before you can use Batch Steps . . . . . 2
Processing cultures using Batch Steps . . 2
Status Step processing buttons . . . . . 4

Chapter 8 Library . . . . . .1

Library Basics . . . . . .4

Searching the library. . . . . 4
Library Tables . . . . . .5

AlertRule. . . . . 5
AncillaryProfile (optional) . . . . . 5
AncillaryTestDefinition (optional, used with AncillaryProfile)6
AntibioticDefinition . . . . . 6
AntibioticPanel . . . . . 6
AntibioticResultDefinition . . . . . 7
AutoScheduleDefinition . . . . . 7
BioChemicalTestDefinition . . . . . 7
BioChemicalTestPanel . . . . . 7
BioChemicalTestResultDefinition . . . . . 8
CaseTypeDefinition . . . . . 8
ChargeDefinition . . . . . 8
ClinicalVialDefinition . . . . . 9
CommentDefinition . . . . . 9
CultureDefinition . . . . . 11
CultureTestDefinition. . . . . 13
e.Query Data models. . . . . 13
GramStainResultDefinition . . . . . 14
ICDDefinition. . . . . 14
InstrumentDefinition. . . . . 14
InsuranceDefinition . . . . . 14
InterfaceController . . . . . 15
Interface Map . . . . . 15
IsolateTemplateDefinition . . . . . 16
LOINC Definition. . . . . 16

MediaDefinition . . . . . 17
MediaPanelDefinition . . . . . 17
MicroTestDefinition . . . . . 17
MicroTestResultDefinition . . . . . 18
OrganismClassificationDefinition . . . . . 18
OrganismDefinition . . . . . 19
OrganismFamilyDefinition . . . . . 19
ParasiteGramDefinition . . . . . 20
ParasiteStageDefinition . . . . . 20
ProfileDefinition . . . . . 20
ReferenceLab . . . . . 21
SensitivityGroupDefinition . . . . . 21
SensitivityPattern . . . . . 22
SiteDefinition . . . . . 23
SnomedDefinition . . . . . 23
SourceDefinition . . . . . 23
Status Step Definition . . . . . 23
Storage Rack Definition . . . . . 24
User Role . . . . . 24
ZipCode . . . . . 26
Library Menu . . . . . .27
Other Menu . . . . . .28
Selection Lists . . . . . 28
Sensitivity Ranges . . . . . 29
Sensitivity Groups . . . . . 30
Pattern Map . . . . . 31
Ancillary Profiles - Result Entry Definitions . . . . . .31
Set Columns / Set Constituent Columns . 32
Set Valid Entry Definitions . . . . . 34
Set (Constituent) Ranges/Range Rules . . 35

**Chapter 9 Human Resources . . . . . .1**

Physicians . . . . . .1
Searching for Existing Physicians . . . . . 1
Physician table field descriptions . . . . . 2
Physician Locations . . . . . 3
Physician Groups . . . . . 4
Users . . . . . .4
Searching for Existing Users . . . . . 4
User table field descriptions . . . . . 5
Human Resources Menu . . . . . .7

**Chapter 10 Configuration . . . . . .1**

The Preferences Window . . . . . .1
Changing Preferences . . . . . 2
SiteWide Preferences . . . . . .3

System Menu . . . . . .7

Chapter 11 Storage Manager / Storage Find . . . . . .1

Storage Manager Window . . . . . .1

Storage Manager Actions . . . . . 2

Storage Find. . . . . .3

Chapter 12 Label Designer . . . . . .1

The Label Designer Window. . . . . .1

Label Specifications . . . . . .2

Field Specifications. . . . . .3

Label Detail Section . . . . . .4

Label Operation Buttons. . . . . .4

Creating a new label . . . . . .5

Chapter 13 ē.Query - Management Report Designer . . . . . .1

e.Query Management Report Designer Window. . . . . .1

Report parameters. . . . . .2

Section parameters . . . . . .4

Field Parameters . . . . . .5

Creating a Report with the Query Designer Window . . . . . .6

Design Query Tab. . . . . .7

Preview Query Data Tab. . . . . .12

Report Setup Tab . . . . . .13

e.Query Menus. . . . . .14

Transfer\Other Menu . . . . . .14

Commands Menu . . . . . .15

Audit Menu. . . . . .21

Operational Buttons. . . . . .21

Standard e.Query Views in MicroPath . . . . . .21

e.Query (Data Analysis) . . . . . .22

Other Menu. . . . . .22

e.Query Quick Start Guides. . . . . .24

QS - Creating a Report . . . . . .24

QS - Totals and Counts. . . . . .26

QS - Calculating Time Between Two Dates28

QS - Sorting and Grouping Data. . . . . .30

Chapter 14 Run e.Query (Run Management Reports). . . . . .1

Management Report Window . . . . . .1

How to Execute a Management Report . . . . . .2

The ‘Management Reports’ report. . . . . .2

Chapter 15 Antibiogram Reports . . . . . .1

Antibiogram Report window . . . . . .1

How to execute and print an Antibiogram report: . . . . . .1

**Chapter 16 Design Result Reports . . . . . .1**

Report Designer Window . . . . . .1

Report parameters . . . . . .2
Section parameters . . . . . .3
Field Parameters . . . . . .3

How to Create and Design a Report . . . . . .5

Operational Buttons . . . . . .5
File Menu . . . . . .5
Commands Menu . . . . . .6
Audit Menu . . . . . .7

# Chapter 1
# Introduction

The MicroPath *microbiology system* is a very flexible and powerful system where all aspects of culture processing can be done. Cultures are accessioned with the ease of barcode scanning and all levels of result entry can be pre-defined or customized as you go. User-defined labels can be printed at any time or in batch and batch culture processing can be done for select culture types.

Behind all the functions that make up MicroPath is a powerful database library that is completely user-customizable so that the system can easily meet your facility's needs. This library is described in Chapter 8.

## About this manual

This manual is divided into 15 chapters, each describing one of the operations available in MicroPath plus this introduction chapter.

- Chapter 1 – Introduction

This chapter describes the basic workflow of culture and test processing and some of the MicroPath features that are seen throughout the system.

- Chapter 2 – Accession

Chapter 2 describes how to accession cultures and specimens, including adding patients and visits into the system.

- Chapter 3 – Culture Manager

Chapter 3 describes how to process cultures and specimens in the system.

- Chapter 4 – Batch Result

Chapter 4 describes how to enter culture results in batch mode for large numbers of similar cultures.

- Chapter 5 – Batch Label

Chapter 5 gives instructions on printing a batch of labels for specimens and cultures.

- Chapter 6 – Result Tests

Chapter 6 describes how to batch enter results for specimen tests.

- Chapter 7 – Batch Steps

Chapter 7 describes how to enter and batch cultures to the next pre-defined process step.

- Chapter 8 – Library

Chapter 8 describes all the tables that make up the system library and how to configure build your library.

- Chapter 9 – Human Resources

Chapter 9 describes the physician and user tables and how to add both to your system.

- Chapter 10 – Configuration

Chapter 10 describes the system preferences available that allow the system manager to configure MicroPath to suit your laboratory.

- Chapter 11 – Storage Manager / Storage Find

Chapter 11 describes how to use Storage Manager and Storage Find, which allows you to assign the exact locations where your individual specimens are stored and locate them when needed.

- Chapter 12 – Label Designer

Chapter 12 describes how to create labels for cultures, plates, specimens, and tests.

- Chapter 13 – Run Management Reports

Chapter 13 explains how to run one of the many Management Reports that are included with MicroPath.

- Chapter 14 – Antibiogram Reports

Chapter 14 describes how to generate an Antibiogram report of organism antibiotic susceptibilities.

- Chapter 15 – Design Result Reports

Chapter 15 shows you the Result Report Designer where you can design the report that can be used to send to clients.

## MicroPath Window Structure

The main windows in MicroPath basically consist of two types, although every window varies with buttons and fields appropriate to the operation being performed in that window.

The *simple list type* windows, which are used to display the library tables and other data, have a list on the left and a detail grid on the right that shows all the information pertaining to the selected item in the list on the left. Figure 1-1 is an example of a simple list type window, the *Physician* window.

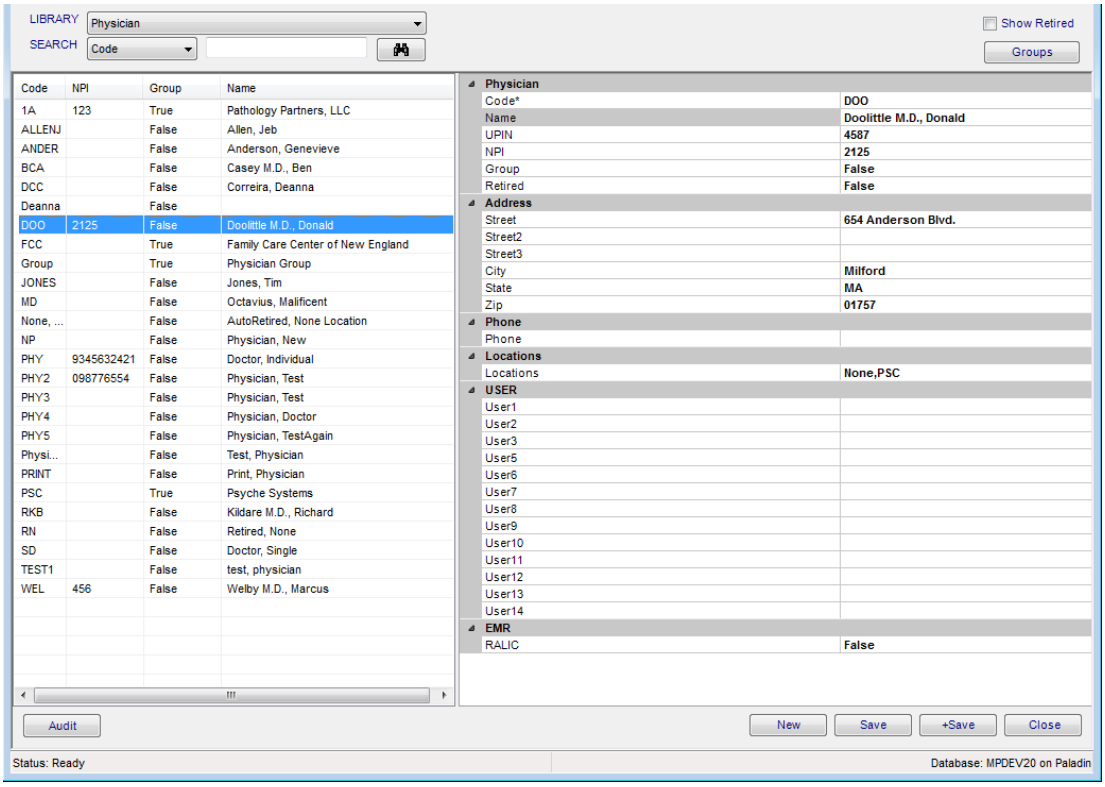



Figure 1-1 - Example of a Simple List Type Window

Another type of window in MicroPath is more complex. This *complex multi-grid type* of window displays a great deal of information in one place and is used in the *Culture Manager* and *Accession* operations. Figure 1-2 shows an example of the C*ulture Manager* window, a very complex multi-grid type window.

Complex multi-grid type windows contain a **main data grid**, which consists of the left **directory tree** structure and the right **details grid.** Depending on what is selected in the directory tree, the entries on the right change to reflect the appropriate selection.

As data grows in the directory tree, you will see a small square with a plus sign **(+)** in front of a record indicating that there are other records under that one. Click **(+)** to open and display the *child* records. Click minus sign **(-)** to collapse the tree from that point.

**NOTE:** *Other types of windows are found throughout MicroPath that do not follow either of these types. They are laid out in a specific way appropriate for the purpose of the window.*

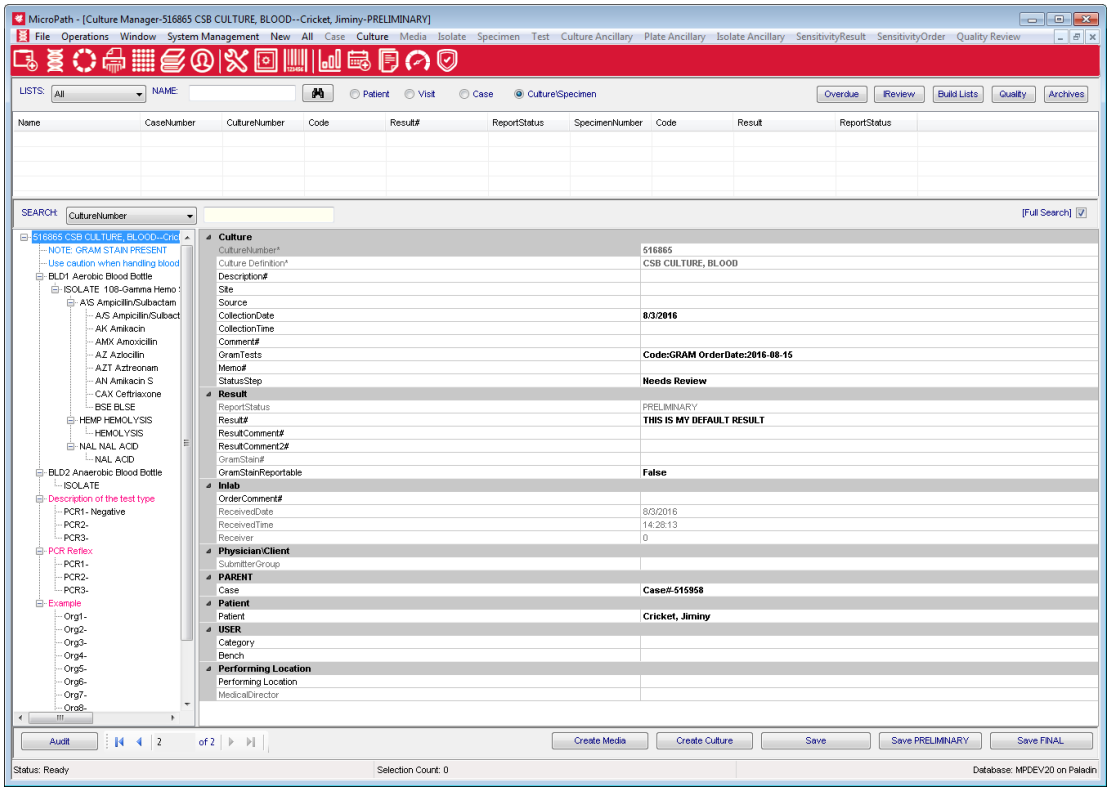



Figure 1-2 - Example of a Complex Multi-grid Type Window

# MicroPath Data Flow

There is a definite relationship and dependency between types of records in MicroPath. For example, before a visit can be added, a patient record must first be created for that patient. Similarly before a culture can be added, a *requisition* or *order* (also known as *Case*) must be added to the patient's visit.

The chart in Figure 1-3 shows the relationship of the types of patient through culture and specimen records that must be present.

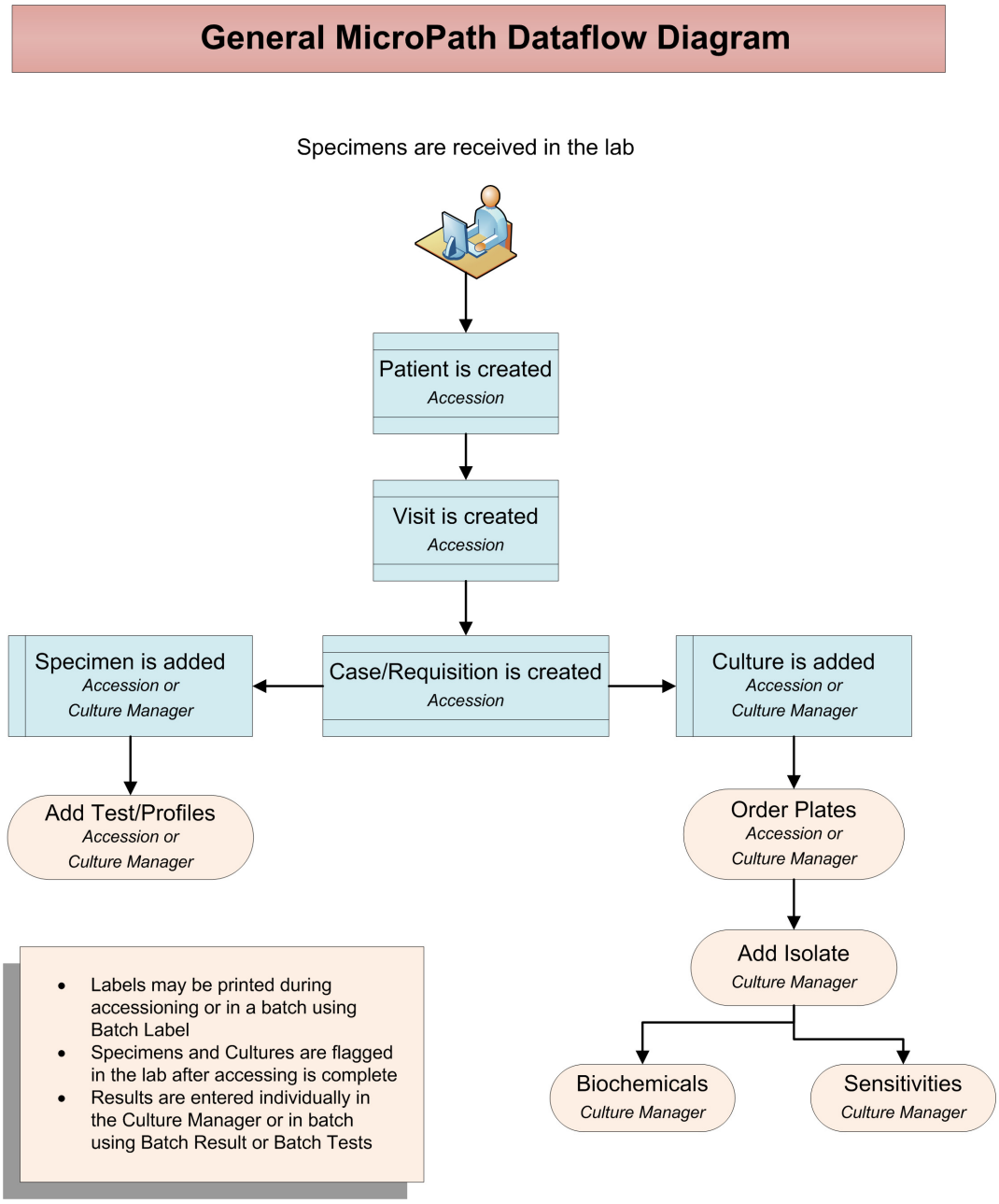



Figure 1-3 - General MicroPath Data Flow Diagram

# Usability Features in MicroPath

A number of features that help with the usability of MicroPath are found throughout the system. These standard conventions are described in this section.

## Searching for records

In most windows you need to search for some piece of information. In these windows there are some search criteria fields specific to the current window and a button that shows a picture of a pair of binoculars.

Clicking the binocular button performs a search based on the entries in the search criteria fields. When the search criteria fields are blank, the binoculars display all records.

Starting a search also has a shortcut keystroke of **Ctrl+R**.

## The Ellipsis button (...)

Often during data entry throughout MicroPath, you may see a button at the end of the current field that displays three periods, also called an **ellipsis (...)**. This tells you that if you click on it a window will open that gives you choices that are specific for that field. These choices are usually defined in one of the tables in the Library.

## Comment# fields

One of the many tables in the Library is the *Comment Definition* table. In this table all system comments are defined. Whenever you see a field label followed by the pound sign **(#)**, entering a # in that field opens a list of available comments for that field. Depending on the definitions in the *Link Comments* window, the options in the list may be the complete Comment Definition table or a subset.

How to link comments to a specific field is described in the Library chapter.

## Required (*) fields

Fields that have as asterisk **(*)** following the label are required fields. These fields may be auto-generated when the record is saved depending on your system configuration.

## Save vs Save+

In most windows there is a **Save** button, which as you would expect saves the current record with whatever changes have just been made. In some windows there is also a **Save+** button. This button usually saves the record and opens a new blank window for a new record, such as in the Library windows.

The **Save+** button may also open the next logical window in a normal workflow. For example, clicking **Save+** after adding a new patient to the system opens the Visit window so that a visit can be created on that patient.

- **Ctrl+S** is the keyboard shortcut for **Save**.
- **Ctrl+Shift+A** is the keyboard shortcut for **Save+**.

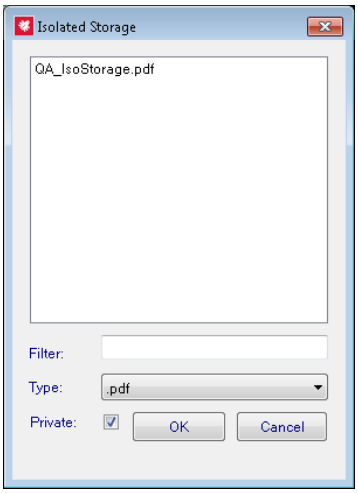
## External File Storage

Most data in MicroPath is stored in multiple tables in the MicroPath database, but external data, such as images you might add to a case or reports that you save for a special purpose, are retrieved from or stored outside the database.

If there is no defined isolated area for this storage, the location MicroPath will use is the user's workstation and opened to whatever folders they normally have access to. This may or may not be preferable and in some laboratories, prohibited. For hosted clients, Psyche sets the path for you and is typically a sub folder of where your MicroPath program resides.

In MicroPath v3.1.11, you may also set user-specific, or *private*, folders to be used when opening or saving files. When the private folders preference is set to true, the Open and Save dialog boxes appear different to the user, as shown below.

## Opening files dialog box



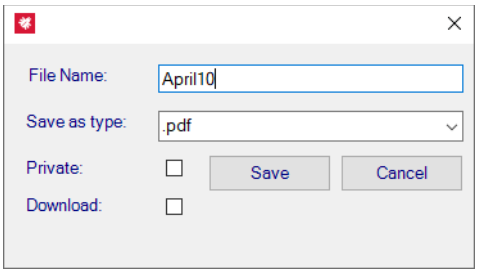

- List of available files in either IsolatedStorageArea or Private folder are displayed in main box.
- **Filter:** Enter partial file name to filter for matching files.
- **Type:** Drop-down list to filter by file type, such as PDF or JPG.
- **Private checkbox:** Check to view files in Private folder. Uncheck to view files in main IsolatedStorageArea folder.

Click **OK** to continue or **Cancel** to exit.

### Open dialog box that uses the IsolatedStorageArea folder are in the following MicroPath fields and menu options:

- **Accession:** Case - Documents field
- **Culture Manager:** Case - Documents field
- **Library:** Transfer - Import Library Item

## Saving files dialog box




- **Filename:** Enter partial file name to filter for matching files.
- **Save as type:** Drop-down list to select file type, such as PDF or XML.
- **Private checkbox:** Check to save file in Private folder, named for the user. Uncheck to save file in main IsolatedStorageArea folder. e.g. *IsolatedStorage\username*.
- **Download checkbox:** Check to save file in Download subfolder of the defined Isolated Storage folder. If Private is also checked, the file is stored in a subfolder of "Download" named for the user. e.g. *IsolatedStorage\Download\username*.

Click **OK** to continue or **Cancel** to exit.

### Save dialog box that uses the IsolatedStorageArea folder are in the following MicroPath options:

- **Run Management Reports:** Save option
- **Result Report:** Save option
- **Library:** Transfer - Export Library Item

There are three preferences related to the Isolated Storage Folder, set by Psyche:

- **IsolatedStorageArea:** Sets a directory path to restrict file system interactions to a single directory. If no path is defined, the user accesses their own workstation file structure.
- **IsolatedStorageDownload:** Enables reading and writing to a "Download" sub directory of IsolatedStorage. Set True/False.
- **IsolatedStoragePrivate:** Enables reading and writing to a user specific sub directory of IsolatedStorage. Set True/False.

## Audit table

Many of the windows have an Audit button. Clicking these buttons opens a window that displays a detailed audit trail of anything that has happened to the *current* record.

**Ctrl+T** is the keyboard shortcut for the *Audit window*.

## Context sensitive menus

*Context sensitive menus* are menus that are specific to the current record. When a record is selected in the Directory Tree, and you right-click with the mouse, a menu will pop up giving you options that are appropriate for the record you have selected.

These menu options are also available in the windows menu or often an action button at the bottom of the window, but some users find the context sensitive menus easier to use.

## Shortcuts

Many of the operation performed in MicroPath have a keyboard shortcut to accompany the menu selection or button that performs that action. Some of these shortcuts are listed in this section, but they are also listed along with the command in the appropriate menus. Whether you use the shortcut or select from a menu is up to the user.

## User defined tables and display fields

MicroPath is a very flexible system that allows you to customize it to best suit your facility. Field labels can be changed to a label that is more familiar to you, most tables have optional user fields that you can use to specify additional data to be stored on the record, and many default entries can be pre-defined.

All of these parameters are defined through the *Configuration* window.

## Notes

# Chapter 2
# Accession

The *Accession window* is where you add new patients, visits, and cultures to MicroPath. You access the Accession window either through the Accession button shown on the left or from the Operations Menu.

Before any culture can be processed, they must be created (or logged in) in the Accession window. Depending on the configuration of your system and what kind of interfaces are running, you may or may not need to add a patient to the system or create a visit.

**NOTE:** *If you have an orders interface, you may not need to add cultures, specimens, or tests.*

This chapter will show you how to use the Accession window to do the following:

- Add a new patient to the system
- Look up a patient that is already in the system
- Add a new visit to an existing patient
- Create an order or requisition on an existing visit
- Add a culture to an existing order
- Add a specimen to an existing order
- Add tests to a specimen
- Flag cultures and specimens as being in the laboratory

## The Accession Window

When you open the Accession window by clicking the Accession button or selecting Accession from the Operations menu, a blank Accession window is displayed similar to the one shown in Figure 2-1. There are 5 sections that make up the Accession window.

- The **search fields** where criteria may be entered to search for patients and cultures
- The **list grid** where any found records from a search are listed
- The **main data grid**, which consists of the left **data tree** structure and the right **data details grid.** Depending on what is selected in the data tree, the entries on the right change to reflect the appropriate selection.
- **Action buttons and check boxes** on the bottom, which change depending on the current process

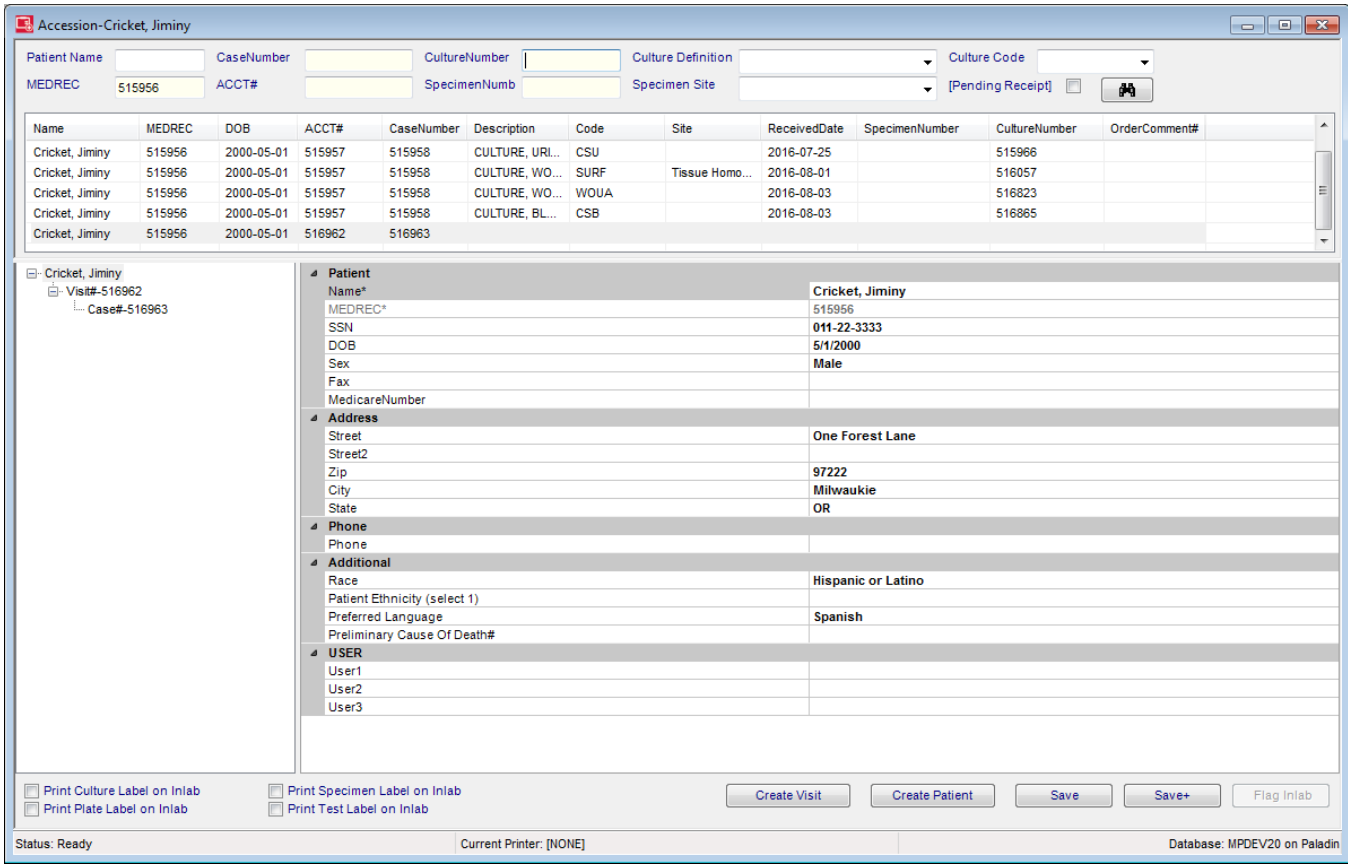



Figure 2-1 - Accession Window

# Add a new patient to the system

In the Accession window, select **New > Patient** from the Windows menu or press **<CTRL+N>**. The Patient demographic list is displayed in the data details grid, which typically includes the following:

## Name

- Name* - patient name
- MedRec* - patient medical record number
- SSN - patient social security number
- DOB - patient date of birth
- Sex - patient sex
- Fax - patient fax
- MedicareNumber - patient medicare number

## Address

- Street - patient street address
- Street2 - second patient street address
- Zip - patient zip code; accesses the Zip Code table and fills in the city and state if any
- City - patient city
- State - patient state

## Phone

- Phone - patient phone number

## Additional (valid entries defined in SiteWidePreferences for Meaningful Use)

- Race - patient race
- Patient Ethnicity (select 1) - patient ethnicity
- Preferred Language - patient's preferred language
- Primary Cause of Death# - primary cause of death

## User

- User1 - optional user-defined field for patients
- User2 - optional user-defined field for patients
- User3 - optional user-defined field for patients

**NOTE:** *The demographics available on your system may be configured differently. Remember - All required demographics have an asterisk (*) following the item.*

Enter the appropriate information for each demographic, pressing return after each entry to go to the next.

Patient names should be entered as **`last name, first name`**.

Demographics that are set to be calculated will be dithered and the entry will be assigned when the patient is saved.

Some demographics may have a drop down box for ease of selection, such as dates will open a selection calendar, or a list of standard entries stored in the library may be available. These demographics will be flagged with an ellipsis (...), the 3 periods, at the end of the field when the cursor is at that field.

## Discrete Name Entry

If your system is configured for discrete names, you may specify entry of names that have one or more first or middle names and/or suffix. This functionality is most useful when interfaces have specific requirements. To specify a patient's discrete name, click the name field, then the ellipsis in that field. The following window opens, where parts of the name may be entered. Click OK to store the discrete name.

The default storage of names whether manually entered or through an ADT interface are such that anything before the comma is considered the last name. Following the comma, if there's more than one name/word, the last is considered the middle name and the rest is considered the first.

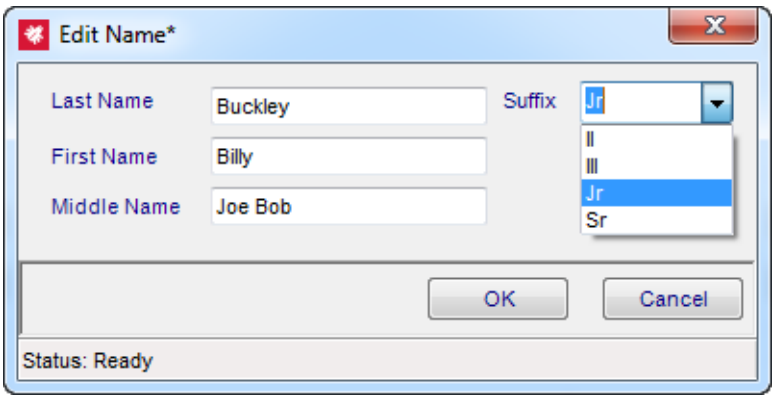



Figure 2-2 - Edit Name Window

## Saving the patient

Click **Save** to save the patient record and leave the screen as is to add another patient or click **Save+** to save the patient and display the Visit demographics for the next step in the process. See *Add a new visit to an existing patient* below.

## Look up an existing patient

To look up a patient, enter any information in the top search fields and click the Search icon. If there's a match, a list of patient is displayed in the grid list below the search fields. Double-clicking any of the listed patients and visits displays all related information in the bottom data tree and grid.

**NOTE:** *If a patient has been entered into the system, but has no culture work yet or cultures have been received and are completed, you must un-check the* ***Pending Receipt*** *check box in order to have them displayed.*

Once a patient has been accessed, you may create a visit on them. See *Add a new visit to an existing patient* below.

## Add a new visit to an existing patient

Once a patient has been accessed, either by search or by having just been added, a visit can then be created for the patient. A patient must have a visit in order to have a requisition and subsequent culture created on them.

In the data tree of the Accession window, highlight the patient name, which is followed by an identification number (usually MedRec), and select **New > Visit** from the Windows menu, press **<CTRL+N>**, or click the Create Visit button at the bottom of the window.

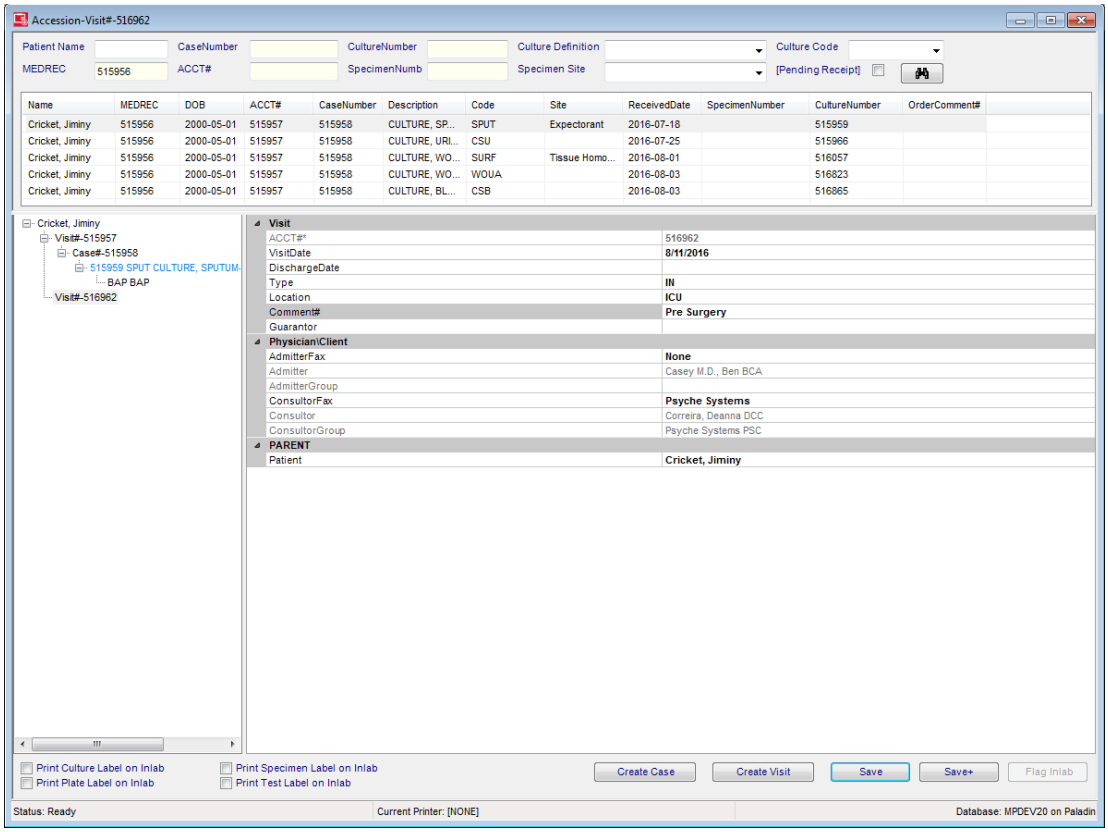



Figure 2-3 - Visit Window

The Visit demographic list is displayed in the data details grid, shown in Figure 2-3, which typically includes the following in 3 sections:

## Visit

- Visit/Acct#* - identification # for the visit; may be auto-generated
- VisitDate - date the visit was added to the system; defaults to current date
- DischargeDate - date the patient was discharged
- Type - patient type (e.g. IN, OP)
- Location - current patient location
- Comment# - enter the pound sign (#) to open the comment selection box allowing you to pick a defined comment from the library (CommentDefinition), or enter free text. A subset of comments in the table may be linked to this particular field.
- Guarantor - displays the last name of the person responsible for the bill; the visit must be saved first before a guarantor can be added; click ...and a new window opens where you can enter information on the Guarantor, Employer, and or Insurance.

## Physician/Client

- AdmitterFax - clicking ... opens AdmitterFax search window to select Admitting physician
- Admitter - filled in from selected AdmitterFax
- AdmitterGroup - filled in from selected AdmitterFax
- ConsultorFax - clicking ... opens ConsultorFax search window to select consultor
- Consultor - filled in from selected ConsultorFax
- ConsultorGroup - filled in from selected ConsultorFax

## Parent

- Patient - displays the patient name

**NOTE:** *The visit demographics available on your system may be configured differently.*

Enter the appropriate information for each visit demographic, pressing enter after each entry to go to the next. Demographics that are set to be calculated will be dithered and the entry will be assigned when the patient is saved. (e.g. Visit/Acct#)

### Saving the visit

Click **Save** to save the visit record and leave the screen as is to add another visit on the patient or click **Save+** to save the visit and display the Requisition fields for the next step in the process. See *Add a new requisition or case to an existing visit* below.

## Add a requisition or case to an existing visit

Once a visit has been accessed, either by search or by having just been added, a requisition (or case) can then be created. A visit must have a requisition order to have a culture created on them.

In the data tree of the Accession window, highlight the patient visit, which is followed by an identification number (usually account), and select **New>Case** from the Windows menu or press **<CTRL+N>**. The Requisition/Case fields is displayed in the data details grid, which typically includes the following in 3 sections:

### Case

- CaseNumber# - auto-generated case/requisition number
- CaseType - select from drop-down list, if there are any defined in the CaseTypeDefinition table.
- ReqNumber - optional free text requisition number for internal use

### Physician\Client

- Submitter - filled in from selected SubmitterLocation
- SubmitterGroup - filled in from selected SubmitterLocation
- SubmitterLocation - clicking ... opens SubmitterLocation search window to select submitter

### Clinical Information

- ClinicalInformation - optional user-defined clinical related information

### Parent

- Visit - displays the visit/account number

### User

- User1 - optional user-defined for case

### Documents

- Documents# -Attach pertinent documents to the case. These documents can be configured to append to the case report. Case must be saved before documents can be added to it. Sample document window is shown in Figure 2-4.

**NOTE:** *The requisition fields available on your system may be configured differently.*

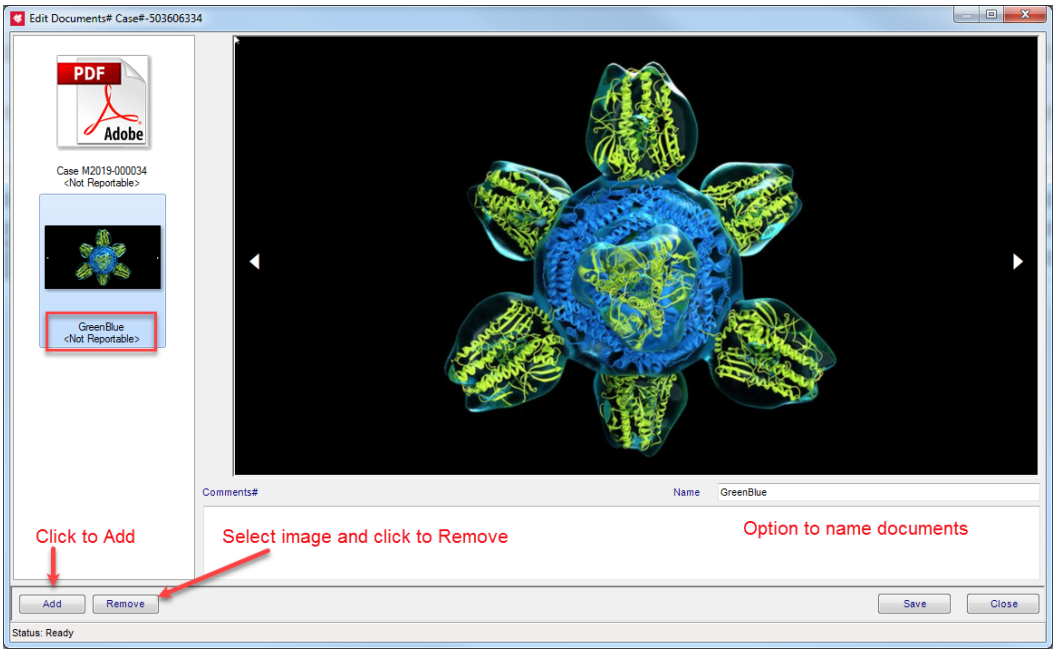



Figure 2-4 - Edit Documents Window

## Saving the requisition

Click **Save** to save the requisition and leave the screen as is to add another requisition on the visit or click **Save+** to save the requisition and display the Culture fields for the next step in the process. See *Add a culture to an existing case* below.

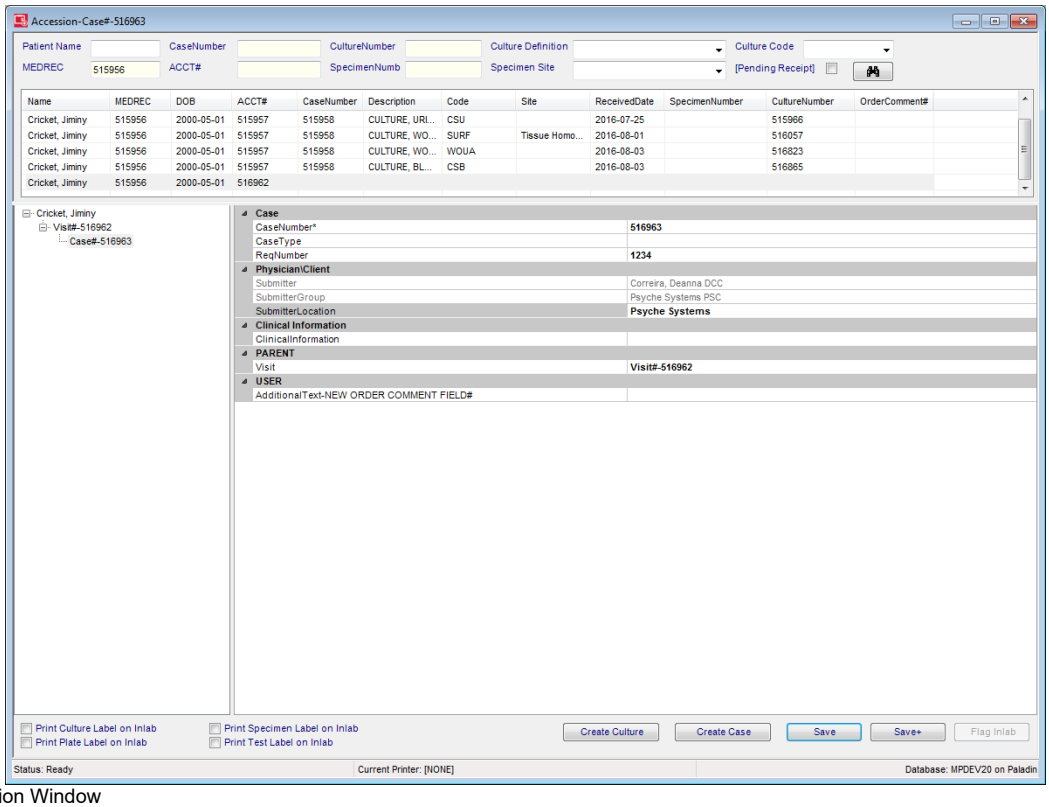



Figure 2-5 - Case/Requisition Window

# Add a culture to an existing case

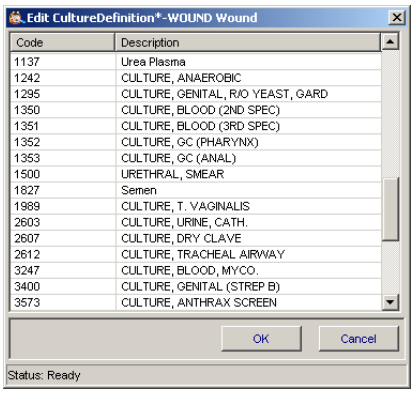
Once a requisition/case has been accessed, either by search or by having just been added, a culture can then be created.

In the data tree of the Accession window, highlight the Order/Req#, which is followed by an identification number, and select **New>Culture** from the Windows menu or press **<CTRL+C>**.

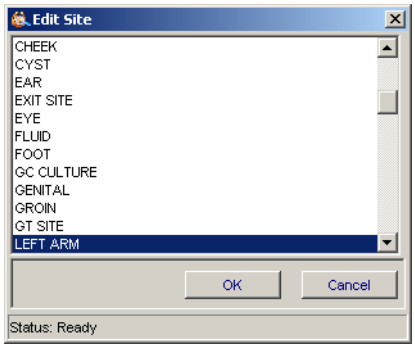
The Culture fields are displayed in the data details grid, which typically includes the following 8 sections:

## Culture

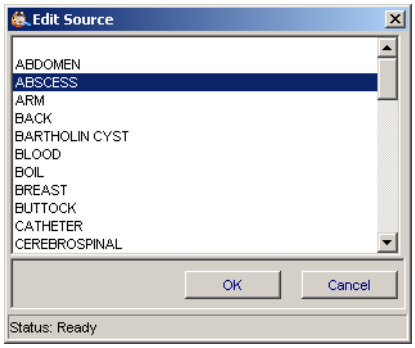
- CultureNumber* - culture number; may be auto-generated
- CultureDefinition* - clicking ... opens a window to select the culture type (CultureDefinition) from the library (e.g. 0082-WOUND)




- Description# - optional additional culture information; enter the pound sign (#) to open the comment selection box allowing you to pick a defined comment from the library (CommentDefinition), or enter free text. A subset of comments in the table may be linked to this particular field.
- ViabilityComment - If preference is configured, specimen viability for cultures and specimens may be calculated based on collection date/time to received date/time, using user-defined time limits. A predefined comment is entered in this field to describe the viability status.
- Site - clicking ... opens a window to select the culture site (SiteDefinition) from the library (e.g. LEFT ARM)




- Source - clicking ... opens a window to select the culture source (SourceDefinition) from the library (e.g. SWAB)




- CollectionDate - date the culture was collected in mm/dd/yyyy format or pick from the calendar popup. Collection date must be prior to received date in order to process cultures.
- CollectionTime - time the culture was collected in hh:mm format
- Comment# - will be part of the culture result; enter the pound sign (#) to open the comment selection box allowing you to pick a defined comment from the library (CommentDefinition), or enter free text. A subset of comments in the table may be linked to this particular field.
- GramTests - For culture display; if DisplayAlertRules preference is true and a gram test has been ordered on the case specimen, this field may show the gram order and order date, with an ellipsis that displays specimen information and a link to view the report, if one exists.
- Memo# - optional user-defined additional note

## Result

- ReportStatus - the current status of the report: PENDING PRELIMINARY, FINAL, CORRECTED
- Result# - used for results on cultures that have no isolates (e.g.No Growth). Enter the pound sign (#) to open the comment selection box allowing you to pick a defined comment from the library (CommentDefinition), or enter free text. A subset of comments in the table may be linked to this particular field.
- ResultComment# - if defined, optional user-defined additional information on the result
- ResultComment2# - if defined, optional user-defined additional information on the result
- GramStain# - gram stain result on the culture
- GramStainClientOrdered - (optional) whether a gram stain was ordered as part of the culture or as an add-on by the provider. (True/False); default is specified in the Library (Culture Definition).
- GramStainClientOrdered - whether a gram stain is ordered as part of the culture (True/False); default is specified in the library (CultureDefinition)
- GramStainReportable - whether the gram stain will be part of the culture report (True/False); default is specified in the library (CultureDefinition)

## Inlab

- Order/Comment# - internal comment; enter the pound sign (#) to open the comment selection box allowing you to pick a defined comment from the library (CommentDefinition), or enter free text. A subset of comments in the table may be linked to this particular field.
- ReceivedDate - date the culture was flagged inlab in mm/dd/yyyy format
- ReceivedTime - time the culture was flagged inlab in hh:mm:ss format
- Receiver - user name of the person who flagged the culture inlab

## Physician\Client

- SubmitterGroup - displays the submitter group

## Parent

- Case - displays the Order/Req#

## Patient

- Patient - displays the patient name

## User

- User1 - User12 - optional user-defined fields for the culture

### Performing Location

- PerformingLocation - facility where test was performed
- MedicalDirector - Medical Director of performing facility

**NOTE:** *The requisition fields available on your system may be configured differently. The default entry field when accessing cultures is also configurable.*

## Adding plates to a culture

Most cultures will be defined to have a set number of media assigned to be automatically added when the culture is created. If an additional media needs to be added at accessioning, click the **Create Media** button, press **<CTRL+P>**, or select **Media** from the New menu with the culture selected. The Media window opens with the following fields:

### Media

- MediaDefinition - definition of the media type as defined in the library (MediDefinition)
- Description - user-defined description for media
- Reportable - whether or not the media results should be reportable (True/False)

### Parent

- Culture - displays the culture number, culture definition, status, patient name and DOB, and culture received date

Enter or select the appropriate information and click Save.

## Ordering media panels

You may also order a panel of media by right-clicking on the culture to access the context sensitive menu and select **Order Media**. This opens the Order MediaPanelDefinition window where all defined media panels in the library are displayed. Selecting a panel orders all the defined media that are in that panel.

## Saving the culture

Click **Save** to save the culture and leave the screen as is to add another culture on the requisition or click **Save+** to save the culture and flag it inlab. The culture status becomes PENDING and the culture can now be called up in the Culture Manager.

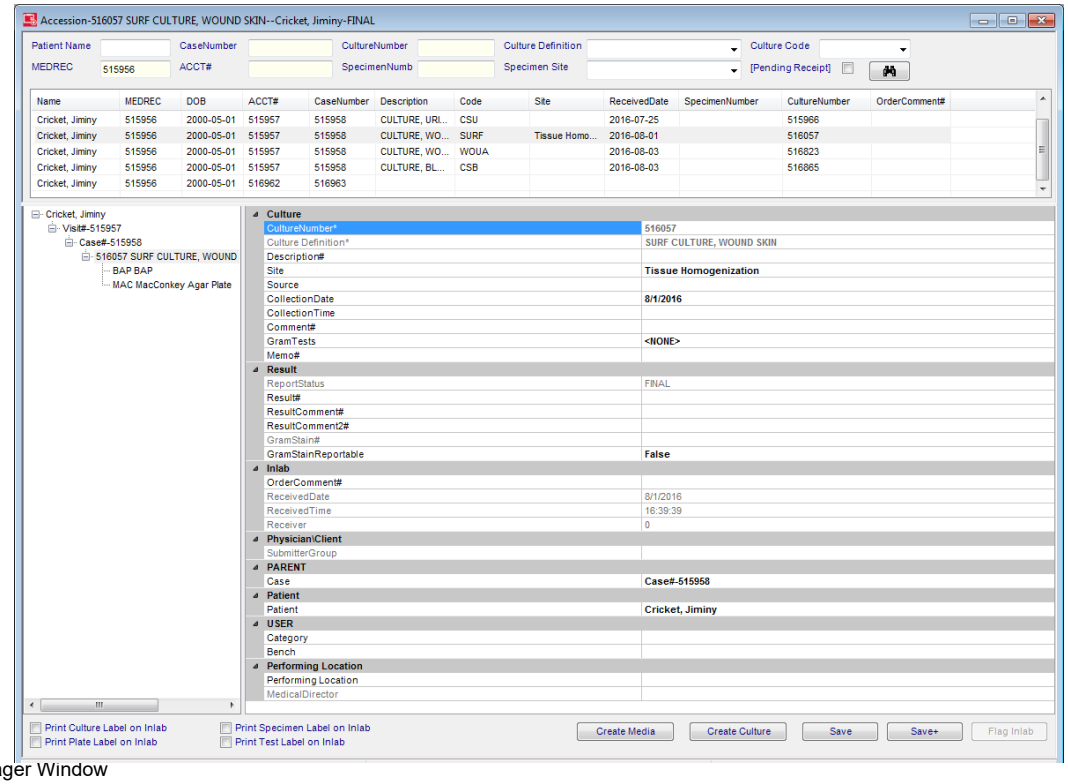


Figure 2-6 - Culture Manager Window

**NOTE:** *Depending on the interfaces you have in place at your facility, patients, visits and even cultures may already have been created. In this case, you can simply enter the culture number in the search field and access the culture to add specimens and flag as arriving in the lab.*

## Flag cultures as being in the laboratory

To flag individual cultures as being in the lab, you highlight the culture in the Accession window and do one of the following:

- Click the Flag Inlab button.
- Right-click the culture and select Flag Inlab from the context sensitive menu.
- Press **<CTRL+F>**.

The Inlab related information described above is entered and the labels print to the current printer.

- The default source and site will be added. A gram stain will be ordered if defined as such.
- The cursor positions to the Entry Default field configured in your system.

## Label printing while flagging inlab

Labels can be printed when a culture or non-culture specimen is flagged inlab. You have the option of printing a labels for any of the following combinations.

- Check the *Print Culture Label on Inlab* check box to print culture labels when the specimen in flagged inlab.
- Check the *Print Plate Label on Inlab* check box to print plate labels when the specimen is flagged inlab.
- Check the *Print Specimen Label on Inlab* check box to print non-culture specimen labels when the specimen is flagged inlab.
- Check the *Print Test Label on Inlab* check box to print non-culture tests labels when the non-culture specimen is flagged inlab.

**NOTE:** *Batch Label Printing is also available and is described in Chapter 5.*

## Resetting your label printer

Your current default printer is always displayed at the bottom of the Accession window. To change the default printer to a different printer, select **Printer>Reset Current Printer** from the window menu. This removes the default printer so that the next time you flag a culture inlab, you are prompted for a new default printer, if one of the Print Label on Inlab check boxes described above have been selected or labels are manually requested.

# Ad hoc label printing while accessioning

You may also print either culture or plate labels at any time during or after accessioning.

- With the culture selected, right-click to access the context sensitive menu and select **Print Label** or press **<CTRL+H>** to print a label for the culture.
- With the culture selected, right-click to access the context sensitive menu and select **Print Media Labels** or press **<CTRL+Shift+H>** to print a labels for each of the ordered media.

The Windows printer selection window opens for you to select the label

# Ordering non-culture tests

Sometimes specimens arrive in the Microbiology department that require testing that is not a culture, but they are performed in the Micro lab. In order to be able to enter results for these tests, a specimen needs to be added to the Requisition/Case and then the tests can be ordered on that specimen.

### To order non-culture tests on a requisition:

1. **With a requisition/case selected, select New > Specimen from the window menu. A window very similar to the Culture window is displayed, except it will display Specimen and Specimen Number.**
2. **Enter the appropriate information in the fields.**
3. **Click Save+, which displays specimen related information in the detail grid.**

4 **In the TestDefinition field, click ... to select the Test to order defined in the library (TestDefinition).**

5 **Add a description or comment if necessary.**

6 **Flag the specimen Inlab**

If multiple tests are requested, repeat from Step 1.

An example of the non-culture test grid display is shown in Figure 2-7.

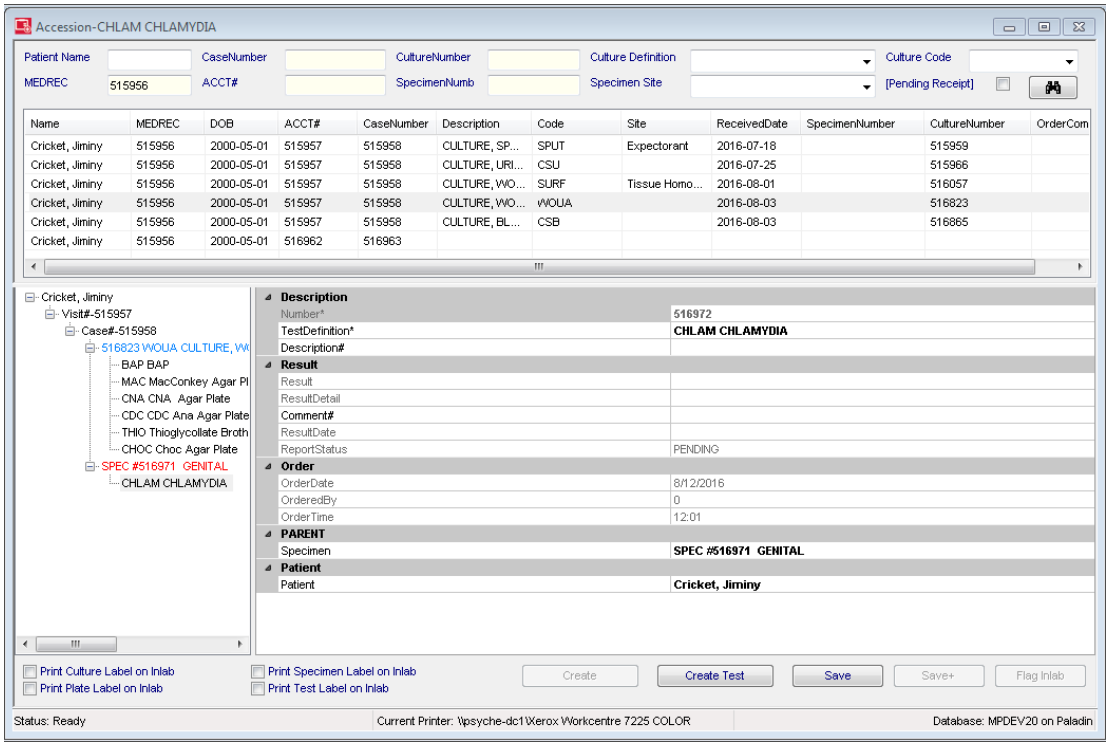



Figure 2-7 - Non-culture Test Grid Display

## Ordering additional items on a Case

If you need to order additional Cultures, Micro Tests, or Profiles on a case, you can add them using the *Order Items* option from the Case menu. Profiles are defined in the library manager (profile definition library) and may contain cultures, micro tests or both.

### To order an item on a requisition:

1. **With the requisition\case selected, open the Case menu and click the Order Items option. The Order Entry window, shown in Figure 2-8, opens initially displaying all defined cultures.**
2. **To add on a culture, double-click the culture you wish to order or enter the Culture code in the Orderable Code field.**
3. **To add on a Micro Test, select MicroTestDefinition from the drop down order list, then double-click the Micro Test you wish to order or enter the Micro Test code in the Orderable Code field.**
4. **To add on a Profile, select ProfileDefinition from the drop down order list, then double-click the Profile you wish to order or enter the Profile code in the Orderable Code field.**
5. **Cultures are added to the requisition\case. A specimen record is created for Micro Tests and profiles and will be shown on the bottom right. You may select an already existing specimen record or create a New one.**

   [Alternately, a profile can be ordered from the specimen menu items. Then, tests are added to the selected specimen.]

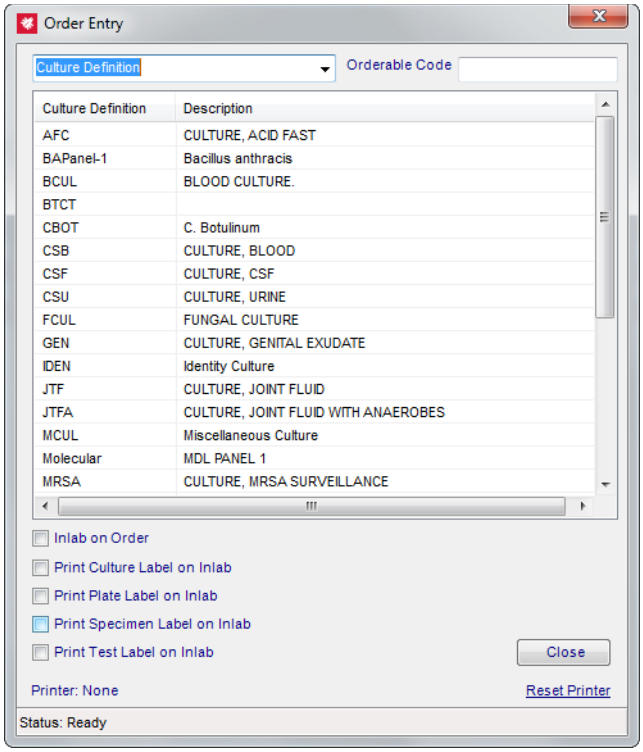



Figure 2-8 - Order Entry Window

The bottom of the Order Entry window has check boxes so you can inlab or print labels as items are ordered.

# Accession Menu

| Menu | Options |
|---|---|
| File | **Show User** - shows current user<br>**Version** - displays current MicroPath version, with install date<br>**Exit** - exits MicroPath |
| Operations | **Accession** – opens the Accession window<br>**Culture Manager** – opens the Culture Manager window<br>**Batch Result** – opens the Batch Result window<br>**Batch Label** – opens the Batch Label window<br>**Result Tests** – opens the Result Tests window<br>**Batch Steps** – opens the Batch Steps window<br><br>**Library** – opens the Library window<br>**Human Resources** – opens the Human Resources window<br><br>**Configuration** – opens the Configuration window<br>**Storage Manager** – opens the Storage Manager window<br>**Storage Find** – allows you to find the location of a specimen<br>**Label Designer** – opens the Label Designer window<br><br>**Run Management Reports** – opens the Management Reports window to select and run reports<br>**Antibiogram Report** – opens the Antibiogram Report window<br><br>**Design Result Reports** – opens the Report Designer window<br>**e.Dashboard** – if purchased, opens the e.Dashboard window – see separate documentation<br>**e.Monitor** – if purchased, opens the e.Monitor window – see separate documentation |
| Window | Shows currently opened windows to select |
| System Management (Admin Users) | **Deactivation** - executes the deactivation process<br>**Purge Orders** - executes the order purge process, if activated by the SiteWideReserved preference. |
| Printer | Reset the Current Printer for labels and reports |
| New | **Patient (Ctrl+N)** - opens the patient window to add a new patient<br>**Visit (Ctrl+V)** - opens the visit window to add a new visit<br>**Case (Ctrl+E)** - opens the case window to add a new case<br>**Culture (Ctrl+C)** - opens the culture window to add a new culture<br>**Media (Ctrl+P)** - opens the media window to add new media<br>**Specimen** - opens the specimen window to add a new specimen<br>**Test** - opens the micro test window to add a new test |
| Search | **Run (Ctrl+R)** - searches using current criteria<br>**Clear Criteria** - clears current criteria for new search |

| Menu | Options |
|---|---|
| Entry | **New Entry (Ctrl+W)** - opens the patient window to add a new patient<br>**Next Entry (Ctrl+Q)** - depending on which window you have accessed, opens the next entry window. e.g. when on a patient, opens the visit window to add a new visit |
| Scan | If installed, opens the *e.Docs* module to scan documents to the case. |
| Quick Case | Optional feature that allows the creation of cases with automatically created patients and visits; useful for cases where the patient and/or visit data is not unique. Default values for the case, patient and visit may be predefined in the SiteWideReserved preference by Psyche. |
| All | **New (Ctrl+N)** - new record for current table<br>**Save (Ctrl+S)** - save current record<br>**Save+ (Ctrl+Shift+A)** - save current record and open new window<br>**Audit (Ctrl+T)** - shows audit table of current record<br>**Delete (Ctrl+Shift+D)** - deletes current accessed item |
| Case (available when case selected) | **Order Item** - opens the Order Entry window to add additional cultures, micro tests or profiles<br>**Document Link (Ctrl+D)** - accesses the document images location, which must be previously defined in preferences. If not, error is displayed<br>**Print Label (Ctrl+H)** - prints label(s) for the current case |
| Culture (available when culture selected) | **Flag Inlab (Ctrl+F)** - flags the culture as in the lab<br>**Cancel** - cancels the current culture; prompts for verification and reason; date/time, reason and user are stored with culture<br><br>**Order Media** - opens the media window to add media<br>**Order Culture Ancillary** - if ancillary tests are used, opens ancillary profile window to add ancillary profiles<br>**Print Label (Ctrl+H)** - prints label(s) for the current culture<br>**Print Media Labels (Ctrl+Shift+H)** - prints media label(s) for the current culture<br><br>**Document Link (Ctrl+D)** - accesses the document images location, which must be previously defined in preferences. If not, error is displayed |
| Culture Ancillary | Cancels the selected culture ancillary |
| Media (available when media selected) | **Print Label (Ctrl+H)** - prints labels for the current media |

| Menu | Options |
| --- | --- |
| Specimen (available when specimen selected) | **Flag Inlab/Un-Inlab (Ctrl+F)** - depending upon current status<br>**Cancel** - cancels the current specimen; prompts for verification and reason; date/time, reason and user are stored with specimen<br>**Order Profile** - opens the Order Profile Definition window to order additional profiles<br>**Print Label (Ctrl+H)** - prints label(s) for the current specimen<br>**Print Test Labels (Ctrl+Shift+H)** - prints label(s) for the current test(s) |
| Test (available when test selected) | **Cancel** - cancels the current test; prompts for verification and reason; date/time, reason and user are stored with test<br>**Print Label (Ctrl+H)** - prints labels for the current test |

# Chapter 3
# Culture Manager

The *Culture Manager* is where all non-batch culture and non-culture test processing is performed. You access the Culture Manager either through the Culture Manager button on the left or from the Operations Menu.

Before any culture can be processed and receive results, they must be created (or logged in) in the Accession window and flagged inlab. Depending on the configuration of your system and what kind of interfaces are running, you may or may not need to add a patient to the system or create a visit.

## The Culture Manager Window

When you first run the MicroPath module, the window that automatically opens is the Culture Manager since this is where much of the routine day-to-day data entry is performed. The Culture Manager is where all non-batch results are entered.

Although you can add patients, visits, requisitions and cultures in the Culture Manager window, usually these are created in the Accession window and flagged *inlab* there.

**Cultures must be flagged inlab in order to be called up in the Culture Manager.**

**NOTE:** *To see which cultures are pending receipt, use the Accession window, make sure the Pending Receipt check box is checked and click the Search (binocular) button.*

Until you call up a culture in the Culture Manager, the window is basically blank. Once a culture has been accessed, all information that has been entered on that culture will be available in the Culture Manager.

The multi-grid type Culture Manager window is made up of three areas:

- The **culture search fields** at the top are used to search for the individual culture, followed by a list of matching cultures based on search criteria.
- The **main data grid**, which consists of the left **directory tree** structure and the right **details grid.** Depending on what is selected in the directory tree, the entries on the right change to reflect the appropriate selection.
- Multiple **operation buttons** at the bottom that change to reflect what operations are available depending on what is selected in the directory tree. For example you can only create a plate when either the culture or another plate is selected.

Figure 3-1 shows a culture in the Culture Manager as you would typically first see it. The culture information is entered and the it has been flagged inlab. No results have been entered yet.

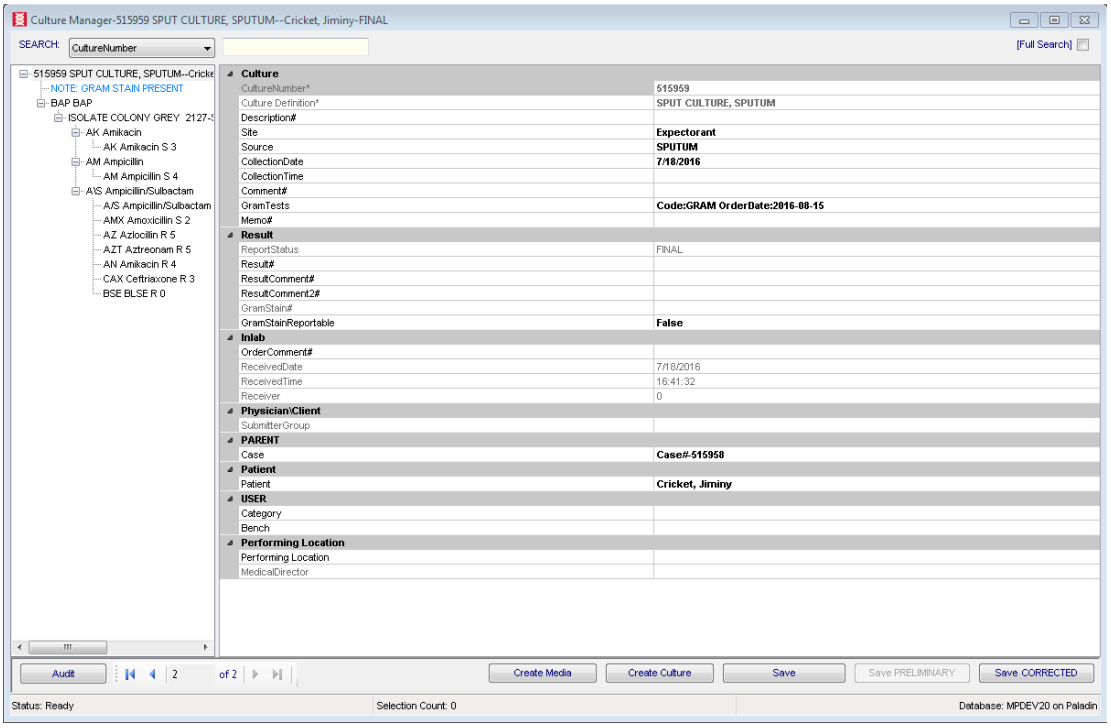



Figure 3-1 - Culture Manager with new culture

# Accessing Cultures

You can access cultures in the Culture Manager window by any of five different parameters. Select the search parameter in the **Search** drop-down box and enter or scan the barcode for the respective number in the shaded field.

The search parameter choices include the following: (a default search parameter can be modified)

- Culture Number - used for recalling Cultures
- Case # (Requisition)
- ACC# (Visit Code)
- MEDREC (Patient Code)
- Specimen Number - used for recalling non-culture specimens

When a number that relates to a culture that is flagged inlab is entered, then the culture and all related records are displayed in the Culture Manager window. These include default media records and possible gram stains.

## Full Search

Clicking the Full Search checkbox enables an expanded range of culture and test search options. Searches can be performed using patient name, overdue status, instrument review status, quality control, archived records or a custom defined list. Upon execution of one of the search options, the grid will display all qualifying records. Double-click a row in the grid to display all related records in the Culture Manager window.

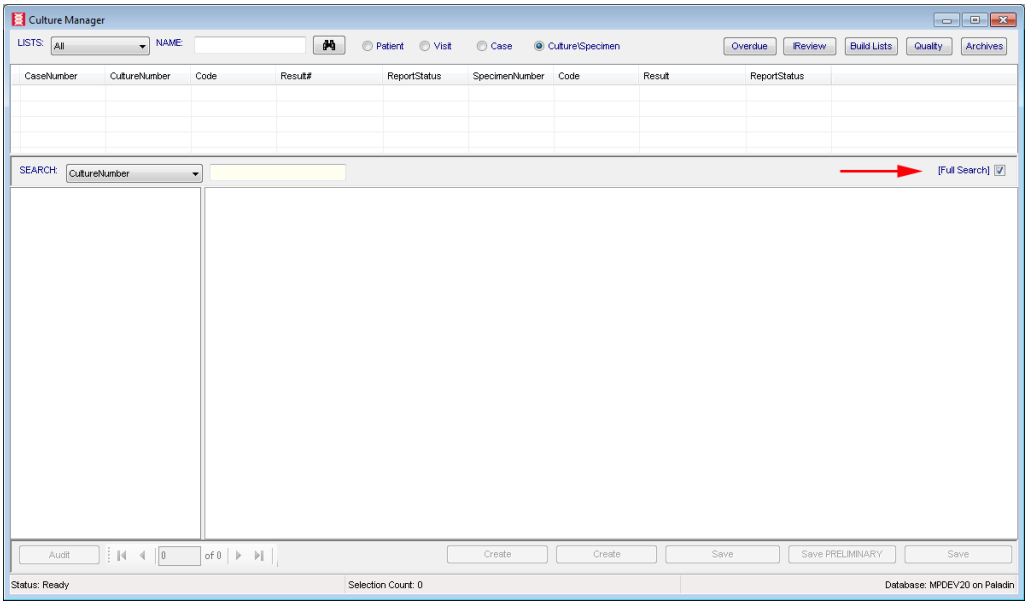



Figure 3-2 - Full Search

- In the text box labeled NAME, enter the name or partial name in which to search
- To query all tests and cultures deemed overdue, click the Overdue button
- To query all results returned from an instrument that have not yet been finalized, click the IReview button.
- Click the Build Lists button to display a window that enables building user defined custom queries.
- To query all cultures flagged for quality control review, click the Quality button.
- To query archived cultures and tests (completed and deactivated records), click the Archives button.

## Search list options

Once a search list has been generated by any method, the list may be printed and/or the column widths saved by right clicking and selecting either Print or Save.

- Selecting **Print** opens a dialog box to select the output printer. *(Build List specialized management report format needs to be defined in system.)*
- Selecting **Save** saves the grid column widths for that workstation. *(Admin only)*

**NOTE:** *The Build Lists that are available to the user may be limited by the User Role assigned to that user, if the role has Build Lists limits defined.*

# Build Lists

Admin users can build predefined queries for common requests using the Advanced Search Build List window below.

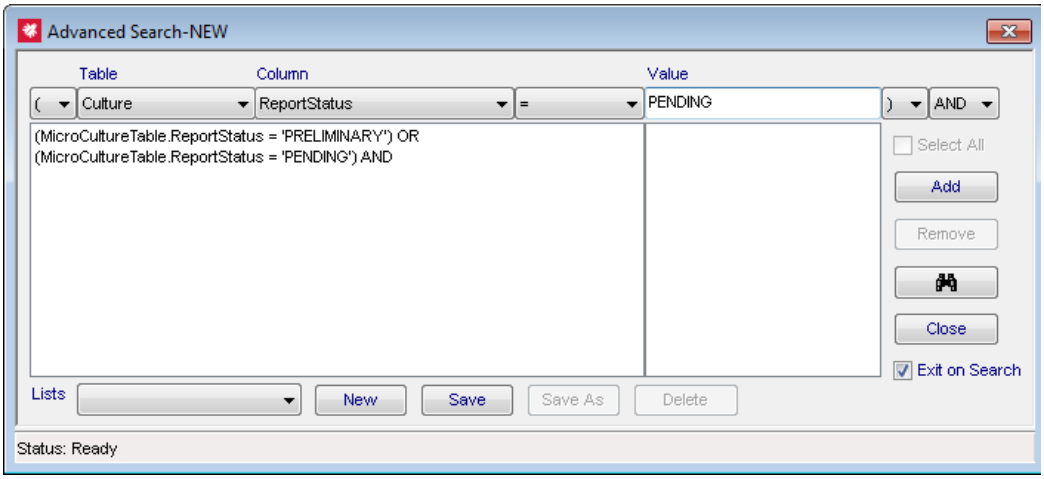



Figure 3-3 - Advanced Search Build List window

- Table - options include querying any of the following tables: patient, visit, case, culture, specimen, test
- Columns - options include any columns from the selected table

**1 Standard operators**

- equal (=)
- greater than (>)
- greater than or equal to (>=)
- less than (<)
- less than or equal to (<=)
- not equal (<>)

**2 Additional operators**

- IN - build a comma separated list
- NOT IN- excludes match records
- LIKE - match on similar values
- Brackets (,) and AND\OR operator options provide additional logical capabilities

Click the Add button to add criteria to your list. Clicking remove will remove the selected item.

Click the Binoculars to execute your query.

Click the Save button to name and save your query.

**NOTE:** *When entering Values, the Value picklist contains the option "BLANK" so you can search for fields that have no entry. This feature works with date and time fields.*

**NOTE:** *When editing existing Build Lists, the Delete button remains unavailable if that Build List has been associated with a User Role, until it has been removed from that role.*

## Entering Results on cultures with no isolates

Entering results on cultures that have no growth may be done in the Batch Result window, but they may also be resulted in the Culture Manager, especially if mixed with other growing cultures and processed together.

**While reading cultures, follow these steps to enter results on negative cultures.**

1. **Access the culture by one of the search parameters described in Accessing Cultures.**
2. **Make sure the culture is selected in the directory tree.**
3. **Enter a culture description in the Description# field, if applicable.**
4. **If media descriptions are needed, they can be entered all at once in the Media Description window by selecting the Media Description option from the Culture menu or by pressing Ctrl+L.**

   *(The media description window is described in the next section.)*
5. **Enter the result in the Result# field. Entering # in this field will bring up a list of results that may be configured to this field. e.g. NO GROWTH IN 24 HOURS.**
6. **Enter gram stain results in the GramStain# field, if appropriate. Entering # in this field will bring up a list of results that may be configured to this field.**
7. **Click Save Preliminary or Save Final to save the results and flag the culture as preliminary or final. A preview of the results that will be reported is displayed and the report status is changed appropriately.**

## Entering results on cultures with isolates

Typically cultures are define to have a set of media types assigned as the default, so when the culture is created, records for each of the media types is automatically created. If additional media is needed, they can be added during culture processing.

The steps involved with typical culture processing are similar to the following:

- Entering Media description (optional), usually a description of growth
- Creating isolates
- Add plates or sub-media and print labels (optional)
- Ordering and entering Biochemicals
- Ordering and entering Sensitivities
- Saving as Preliminary or Final

### Entering media description

Plate descriptions can be entered in two ways.

- Select the media in the directory tree and in the detail grid, enter the *Description* for that media using the # character to list all available descriptions, or free-text. Whether to report the description is selected in the *Reportable* field (True/False).
- Enter all media descriptions for the selected culture in one window.

### To enter plate descriptions for all media at once:

1. **Access the culture by one of the search parameters described in Accessing Cultures.**
2. **Make sure the culture is selected in the directory tree.**
3. **Select *Culture Menu>Media Description* or press Ctrl+L. The window in Figure 3-4 opens.**
4. **Enter a description for each media using the # character, or free text.**
5. **Check the *Reportable* check box for each description you want to report.**
6. **Click Save to save the descriptions and keep the window open.**

   **Click Close to close the window without saving the descriptions.**

   **Click Save Close to save the descriptions and close the window.**

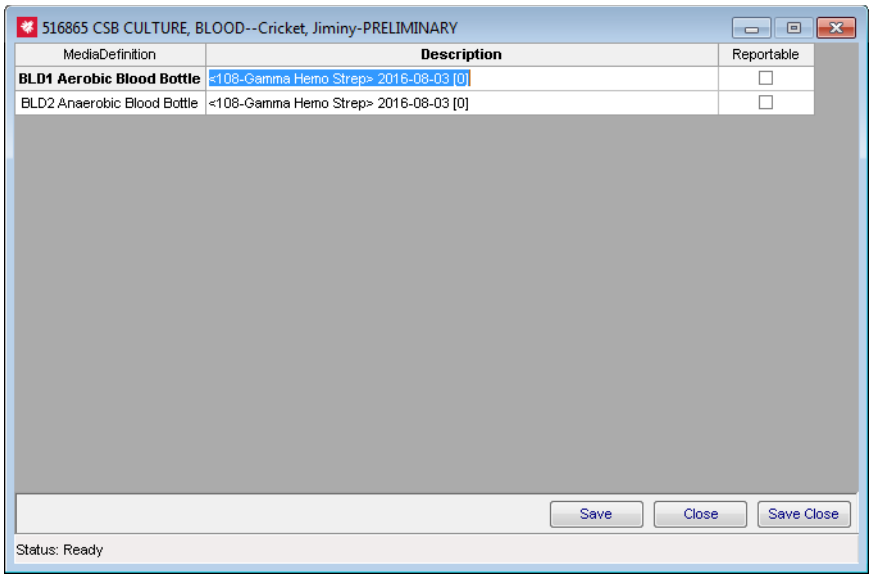



Figure 3-4 - Media Description Window

## Creating isolates

In order for organism results to be entered, isolates must be created on at least one of the media.

### To create an isolate on a culture:

1. **Access the culture by one of the search parameters described in Accessing Cultures.**
2. **Select the media in the directory tree for which you want to create an isolate.**
3. **Isolates may be created in two ways; Using the context-sensitive menu, right click the media and select either:**
   - New Isolate [Full] (Ctrl+I)
   - New Isolate [Quick]: This creates a new isolate with the fields as listed in the table below. Enter information as described.
   - New Isolate [Template]: Note: The selected plate must be define with one or more isolate template.
   - New Isolate [Template-Quick] When selected the same process occurs as selected Isolate Template, however the workup manager is not loaded.

The Full Isolate and Isolate Template options display the “Workup Manager” upon selection. In this window, all information on the isolate is entered. If Isolate Template is selected, the attributes of the isolate template (including antibiotic and biochemical orders) are applied to the isolate.

### Creating the Isolate Template Definition

Isolate Templates are created in the IsolateTemplateDefinition Library. In order to use the Isolate Template, the MediaDefinition must have the IsolateTemplate defined in the designated field.

### Quick isolate fields

| Field | Description |
|---|---|
| Label | Usually a number |
| Description# | Isolate description |
| Organism Modifier# | May be included with Organism identification; selected from Comment Definitions or free-text and describes the quantity of the isolate (e.g. MODERATE, <10,000 colonies) |
| Organism Definition | Organism name from list of available organisms for that culture type. You **cannot** free-text in this field. |
| Comment# | Isolate comment that may be free text or selected from the Comment Definition list; whether to report it is specified in Report Comment |
| Reportable | Whether to report any information the isolate (True/False) |
| Report Comment | Whether to report the isolate Comment (True/False) |
| Gram Stain | Result for gram stain, if ordered |
| **Parent** | |
| Media | The media where the isolate was found |
| **Performing Location** | |
| PerformingLocation | Location where the culture workup was done |

## Ordering Biochemicals

### To order biochemicals on an isolate, follow these steps:

1. **Access the culture by one of the search parameters described in Accessing Cultures.**
2. **Select the isolate in the directory tree for which you want to order biochemicals.**
3. **Using the context-sensitive menu, right click and select Order Biochemical or press Ctrl+B. The Order Biochemical window shown in Figure 3-5 opens.**

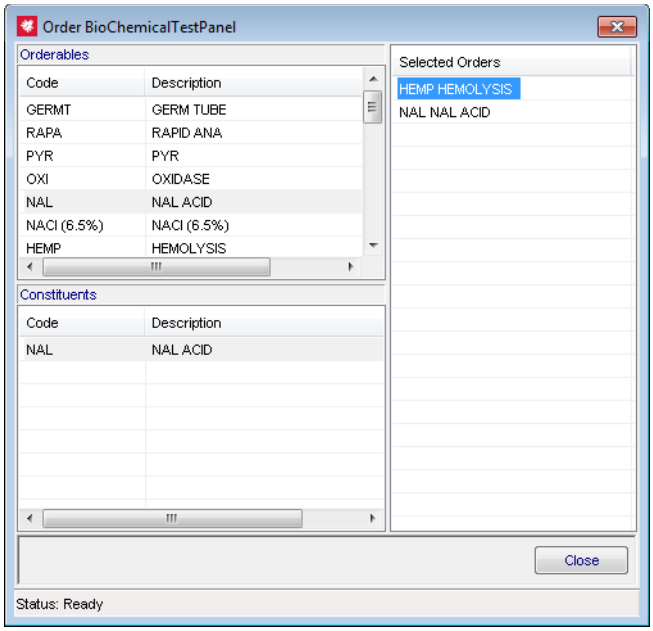



Figure 3-5 - Order Biochemical Window

**The upper left list shows all biochemical panels that are available. Click each to see the constituent biochemicals in the list below.**

4 **Double-click a biochemical panel to add it to the selected orders on the right.**

5 **Click Close to close the window and save the order.**

## Entering Biochemicals

### To enter biochemicals results on an isolate, follow these steps:

1 **Access the culture by one of the search parameters described in Accessing Cultures.**

2 **Select the isolate in the directory tree for which you want to enter biochemical results.**

3 **Using the context-sensitive menu, right click and select Result Biochemicals or press Ctrl+Shift+B. The Result Biochemical window shown in Figure 3-6 opens.**

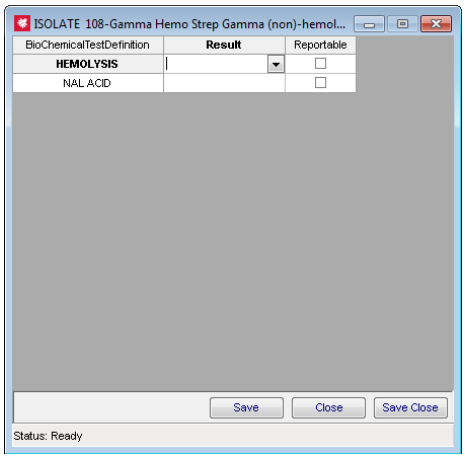



Figure 3-6 - Result Biochemical Window

4 **Listed are the biochemicals that have been ordered. Select the result for each or free-text the result depending on Library setup.**

5 **Check the *Reportable* check box for each one as appropriate.**

6 **Click Save to save the results and keep the window open.**

**Click Close to close the window without saving the results.**

**Click Save Close to save the results and close the window.**

## Ordering Antibiotics

### To order sensitivities on an isolate, follow these steps:

1 **Access the culture by one of the search parameters described in Accessing Cultures.**

2 **Select the isolate in the directory tree for which you want to order sensitivities.**

3 **Using the context-sensitive menu, right click and select Order Antibiotics or press Ctrl+Y. The Order Antibiotics window shown in Figure 3-7 opens.**

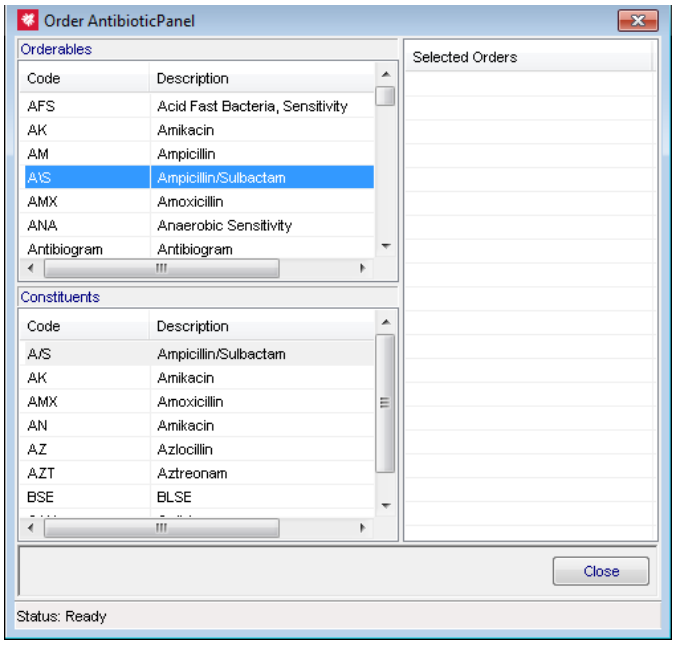



Figure 3-7 - Order Antibiotics Window

**The upper left list shows all sensitivity panels that are available. Click each to see the constituent antibiotics in the list below. The constituents of the panels cannot overlap.**

4 **Double-click a sensitivity panel to add it to the selected orders on the right.**

**Click Close to close the window and save the order.**

# Entering Sensitivities

**To enter sensitivity results on an isolate, follow these steps:**

1. **Access the culture by one of the search parameters described in Accessing Cultures.**
2. **Select the isolate in the directory tree for which you want to enter biochemical results.**
3. **Using the context-sensitive menu, right click and select Result Sensitivities or press Ctrl+Shift+Y. The Result Sensitivities window shown in Figure 3-8 opens.**

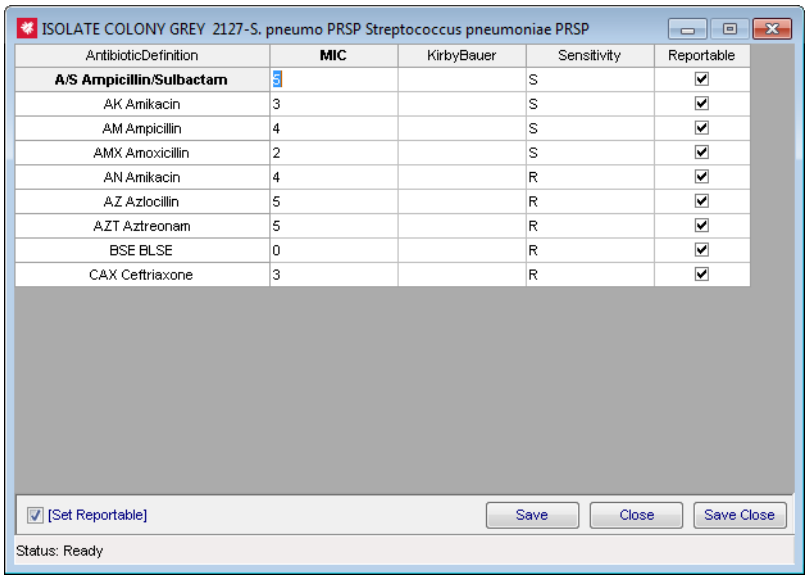



Figure 3-8 - Result Sensitivities Window

4. **Listed are the sensitivities that have been ordered. Enter the result for each, either MIC, Kirby Bauer numeric value, or SIR translation, whichever is appropriate.**
5. **Check the** *Reportable* **check box for each one as appropriate or click the** *[Set Reportable]* **check box to report all results.**
6. **Click Save to save the results and keep the window open.**

   **Click Close to close the window without saving the results.**

   **Click Save Close to save the results and close the window.**

   Figure 3-9 show a culture that has both biochemicals ordered in the directory tree.

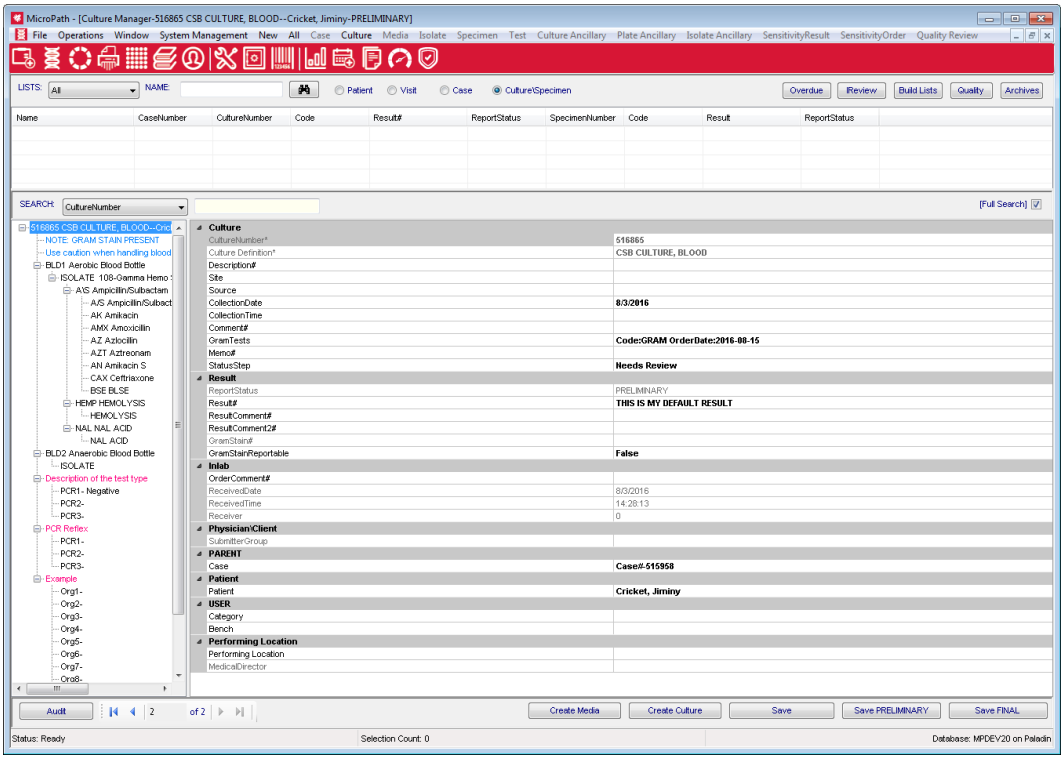



Figure 3-9 - Culture Window with biochemicals and sensitivities ordered

## Workup Manager

When you create an isolate using the context-sensitive menu (right-click on a plate) and select **New Isolate [Full]** or press **CTRL+I**, the *Full New Isolate* window shown in Figure 3-10 opens. In this window all isolate information may be entered in one place, including biochemicals and sensitivities, making this an efficient way to enter results.

At any time once an isolate has been created, the Full Isolate window may be opened by selecting **Workup Manager** from the context-sensitive menu when the isolate is selected or by pressing **Ctrl+Shift+W**.

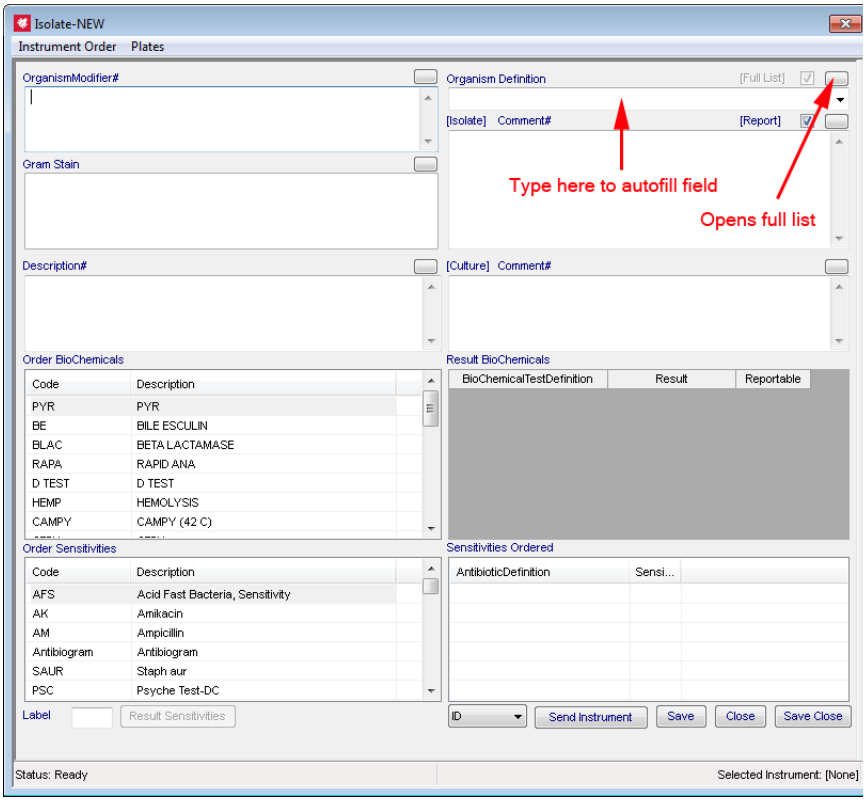



Figure 3-10 - Workup Manager

## Enter results in the Full Isolate window as appropriate for the isolate:

1 **Organism Modifier#**

**May be included with Organism identification; selected from Comment Definitions or free-text and describes the quantity of the isolate (e.g. MODERATE, <10,000 colonies).**

2 **Organism Definition**

**Select the Organism name from list of available organisms for that culture type or click [Full List] to get a list of all organisms in the system. Free text is prohibited.**

3 **Gram Stain - Enter\select the Gram Stain result for the isolate**

4 **[Isolate] Comment#**

**Enter an Isolate comment that may be free text or selected from the Comment Definition list by entering #. Click the [Report] check box to include the comment in the report. This is typically used for preliminary results, such as GRAM POSITIVE COCCI or a physical description of the isolate such as SMALL DRY WHITE.**

5 **Description#**

**Isolate description.**

6 **[Culture] Comment#**

**Enter a culture comment that may be free text or selected from the Comment Definition list by entering #.**

7 **Order Biochemicals**

**Double-click biochemicals from the Order Biochemicals list on the left to add them to the ordered list on the right.**

8 **Result Biochemicals**

**Enter biochemical results the same as you would in the Result Biochemical window shown in Figure 3-4.**

9 **Order Sensitivities**

Double-click sensitivities from the Order Sensitivities list on the left to add them to the ordered list on the right.

10 **Sensitivities Ordered**

**To enter results for sensitivities, an Organism Definition must be entered in the Organism Definition field.**

**Click the Result Sensitivities button to open the Result Sensitivities window shown in Figure 3-6.**

11 **Instrument Order Menu OR Selection Button - choose one. When selecting from menu, order is sent immediately.**

- Order **ID** - to send ID order to selected instrument
- Order **Sensitivity** - to send Sensitivity order to selected instrument
- Order **ID\Sensitivity** - to send ID and Sensitivity orders to selected instrument

**Message, formatted according to preference, is inserted in the description in that isolate. e.g. "PSY sent Sensi to Vitek on 9/27/2016"**

12 **Send Instrument - Click to send order selected from selection button to instrument.**

**NOTE:** *To Set Instrument - Select Instrument from the Instrument Order menu, if multiples exist*

13 **Click Save to save the results and keep the window open.**

**Click Close to close the window without saving the results.**

**Click Save Close to save the results and close the window.**

14 **Alerts**

**Micropath offers 4 types of alerts. Alerts are based on rules and library configurations. When an alert situation arises, Micropath displays the alert message in red on the Workup Manager and on the Culture Manager. These preferences are SiteWideReserved and can be managed by Psyche Systems with training to follow.**

**The alerts are as follows:**

**Organism Alerts - Any organism can be defined to display an alert. In the library manager, set the ShowAlert attribute to any organism in which you'd like to display an alert. The message that is displayed is also customizable at the application level. This can be set via the *OrganismAlertMessage* preference.**

**Sensitivity Pattern Alerts -Sensitivity results that violate defined patterns will display alert. In the library manager, valid sensitivity patterns can be defined for any culture\organism combination. The message that is displayed is also customizable at the application level. This can be set via the *PatternAlertMessage* preference.**

**Gram Stain Alert - Isolate based gram stain results can also trigger an alert if the result is in violation with an organisms defined gram stain result. In the library manager, valid gram stain results can be created and applied to organisms. If the results on a given isolate is contradiction with that or the isolates found organism, an alert will be display. The message that is displayed can be set via the *IsolateGramStain* preference.**

**Aerobic\Anaerobic Alerts - Mismatches between plate and organism aerobic\anaerobic classifications will also display an alert. From the library manager, you can define the classification of a plate, as well as of an organism. If an invalid combination is found, an alert is displayed. The message that is displayed can be set via the *AerobicAnerobicMismatchMessage*.**

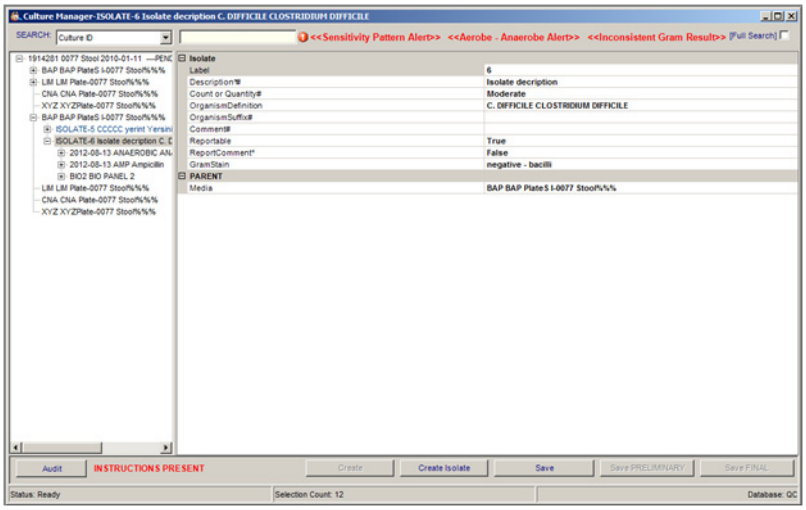



Figure 3-11 - Alerts

Alerts are displayed in red on the Culture Manager screen as seen in Figure 3-11 - Alerts.

## Workup Manager Menus

From the Workup Manager window the following menu options are available:

| | |
|---|---|
| **Instrument Order Menu** | |
| Order **ID** | Sends ID order to selected instrument |
| Order **Sensitivity** | Sends Sensitivity order to selected instrument |
| Order **ID and Sensitivity** | Sends ID and Sensitivity orders to selected instrument |
| Set Instrument | Allows you to select the instrument where orders will be sent; instrument name is then displayed at lower right of window. |
| Set Label Quantity | Used to overwrite the default number of isolate labels that will print when an order is sent to the instrument. Available is SiteWide preference 'PrintIsolateLabelOnInstrumentLabel' is set to True. |
| **Plates Menu** | |
| Set Organism to Plates | Allows you to select which plates to add the isolated organism |

## Resulting Culture Tests

Culture records may also be defined to contain up to two additional tests. Such tests, when defined, appear in the AdditionalTests section of the selected culture record.

### Saving Culture Test results:

1. **Select the test to Result**
2. **Either free text the result or select from the defined list**
3. **Set the test as reportable**
4. **Click Save**

## Canceling Ordered Cultures, Specimens or Tests

Users can Cancel Cultures or Tests when needed. The record is saved with a reason and the original record displays the cancellation.

### Canceling Cultures, Specimens or Tests:

1. **Select the Culture, Specimen or Test to Cancel.**
2. **Right click on the item and select Cancel.**
3. **Fill in the reason: User will be asked to fill this in.**
4. **Press OK.**

The date/time, reason, and user who performed the cancellation is stored with the item that was canceled.

**NOTE:** *If Cancellation occurs in error, users can 'Un-Cancel' as well by right clicking on what was originally canceled. Results cannot be entered on canceled items.*

## Saving as Preliminary or Final

Once all results for all isolates for the day are entered on a culture, the culture may be saved as preliminary or final, depending on its status and your local workflow.

### To save a culture report as preliminary or final:

1. **Select the culture in the directory tree.**
2. **Click the Save Preliminary button to save a preliminary report.**

   **Or click the Save Final button to save a final report.**

   **Depending on your system configuration, you may be presented with a formatted representation of all results that were entered and that will make up the specific report.**

   **When saving final reports, the Charges window may open where you can select the charges to apply.**
3. **Click OK.**

**The Report Status will change from PENDING to PRELIMINARY or FINAL if Save Final was clicked.**

**NOTE:** *If Save Final is clicked and there are orders that have not received results, you may be presented with a warning message indicating what results are pending. You may cancel the Final report and enter those missing results first.*

# Other culture operations

## Canceling a culture

To cancel an existing culture, select the culture in the directory tree, then select Cancel from the Culture menu. Canceled cultures remain in the database, but you can not enter results on them. The report is no longer available for the report interface.

Canceled results are flagged with the date the culture was canceled and who performed the cancelation.

## Correcting a Final report

Once a culture has been made final, any additional results must be added as a corrected report.

### To make a corrected report:

1. **Access the culture by one of the search parameters described in the section above.**
2. **Open the result in the Result# field by clicking the ellipsis button (...).**
3. **Enter whatever additional information you need to add. Click OK.**
4. **Click Save Corrected. The report preview window is displayed for review.**
5. **View the corrected report, enter the required corrected comment and click OK.**

   Unless the corrected comment is entered and OK is clicked, the corrected result will not be available for reporting.

## Saving a PDF

In order to save a PDF from the Process window, the SiteWideReserved preference AdvancedResultReports must be set to True. This preference is managed by Psyche Systems therefore contact Psyche Systems to modify this preference if needed.

### To save a PDF file from the Process window:

1. **Open a culture.**
2. **Right-click on the culture and click on Result Report.**
3. **Click Save, and choose a name and file type.**

## Resulting Micro Tests

Entering results on Micro Tests may be done from the Results Tests window, but they are also resulted in the Culture Manager.

### While processing test results, follow these steps to enter results.

1. **Access the test by one of the search parameters described in Accessing Cultures.**
2. **Make sure the test is selected in the directory tree.**
3. **Enter the result either free text or from the defined selection lists.**
4. **If a parasite or additional result detail is applicable, it can be entered in the "Result Detail" field. Click the ellipsis to enter a modifier, parasite, and stage and comment result information.**

## Saving Micro Tests as Preliminary or Final

Once micro test are entered, the test may be saved as preliminary or final, depending on its status and your local workflow.

### To save a test report as preliminary or final:

1. **Select the test from directory tree.**
2. **Click the Save Preliminary button to save a preliminary report.**

   **Or click the Save Final button to save a final report. Depending on your system configuration, you may be presented with a formatted representation of all results that were entered and that will make up the specific report.**

   **When saving final reports, the Charges window may open where you can select the charges to apply.**
3. **Click OK.**

# Culture Manager Menu

| Menu | Option |
|---|---|
| File | **Show User** - shows current user<br>**Version** - displays current MicroPath version, with install date<br>**Exit** - exits MicroPath |
| Operations | **Accession** – opens the Accession window<br>**Culture Manager** – opens the Culture Manager window<br>**Batch Result** – opens the Batch Result window<br>**Batch Label** – opens the Batch Label window<br>**Result Tests** – opens the Result Tests window<br>**Batch Steps** – opens the Batch Steps window<br><br>**Library** – opens the Library window<br>**Human Resources** – opens the Human Resources window<br><br>**Configuration** – opens the Configuration window<br>**Storage Manager** – opens the Storage Manager window<br>**Storage Find** – allows you to find the location of a specimen<br>**Label Designer** – opens the Label Designer window<br><br>**Run Management Reports** – opens the Management Reports window to select and run reports<br>**Antibiogram Report** – opens the Antibiogram Report window<br><br>**Design Result Reports** – opens the Report Designer window<br>**e.Dashboard** – if purchased, opens the e.Dashboard window – see separate documentation<br>**e.Monitor** – if purchased, opens the e.Monitor window – see separate documentation |
| Window | Shows currently opened windows to select |
| System Management (Admin users) | **Deactivation** - executes the deactivation process<br>**Purge Orders** - executes the order purge process |
| New | **Patient (Ctrl+N)** - opens the patient window to add a new patient<br>**Visit (Ctrl+V)** - opens the visit window to add a new visit<br>**Case (Ctrl+E)** - opens the case window to add a new case<br>**Culture (Ctrl+C)** - opens the culture window to add a new culture<br>**Media (Ctrl+P)** - opens the media window to add new media<br>**Specimen** - opens the specimen window to add a new specimen<br>**Test** - opens the micro test window to add a new test |
| All | **Save (Ctrl+S)** - save current record<br>**Audit (Ctrl+T)** - shows audit table of current record<br>**Delete (Ctrl+Shift+D)** - deletes current accessed item |

| Menu | Option |
|---|---|
| Culture | **Flag Inlab (Ctrl+F)** - flags the culture as in the lab<br>**Print Label (Ctrl+H)** - prints label for culture to default printer<br>**Print Media Labels (Ctrl+Shift+H)** - prints labels for all plates to default printer<br><br>**Order Gram Stain (Ctrl+O)** - orders a gram stain<br>**Cancel Gram Stain** - cancel selected gram stain<br>**Order Culture Ancillary** - if ancillary tests are used, opens ancillary profile window to add ancillary profiles<br>**Order Media** - opens the media window to add media<br><br>**Print Label (Ctrl+H)** - prints label(s) for the current culture to default printer<br>**Print Media Labels (Ctrl+Shift+H)** - prints media label(s) for the current culture to default printer<br><br>**Media Description (Ctrl+L)** - opens a window where you can update the description of the media, which is usually the organism name and date recorded<br>**Set Plate Descriptions (Ctrl+L)** - opens window of available plates allowing batch entry of plate descriptions<br>**Preview (Ctrl+W)** - shows a preview of report (un-formatted), and also enables re-sending the latest report to the result report interface.<br>**Result Report (Ctrl+R)** - displays and allows you to print formatted report<br>**Charges (Ctrl+G)** - open charges list to add charges to culture Isolate Report Order -<br><br>**Save Preliminary** - saves and flags status as preliminary<br>**Save Final** - saves and flags status as final<br>**Save Corrected** - saves and flags status as corrected<br>**Save Amended** - saves and flags status as amended<br><br>**Cancel** - cancels culture; data remains in database<br>**Reactivate** - used by administrators if culture happens to need reactivation; usually handled automatically by program<br><br>**Document Link (Ctrl+D)** - accesses the document images location, which must be previously defined in preferences. If not, error is displayed<br><br>**LOINCs -** opens a list of predefined LOINC codes that you may select and apply to the culture<br>**SNOMEDs -** opens a list of predefined SNOMED codes that you may select and apply to the culture |

| Menu | Option |
|---|---|
| Media | **Print Label (Ctrl+J)** - prints media label for selected media to default printer<br>**Sub Media (Ctrl+Shift+P)** - creates a single sub media<br>**Sub Media Panel** - Creates one or more sub media based on selected plate panel<br>**Order Plate Ancillary** - if configured, allows you to order an ancillary profile<br><br>**New Isolate [Full]** - opens the isolate window<br>**New Isolate [Quick]** - creates an isolate without opening isolate window<br>**New Isolate [Template]** -allows you to choose a template, if any specified for the media, and opens the isolate window with that template<br>**New Isolate [Template - Quick]** - allows you to choose a template, if any specified for the media, and creates the isolate with the selected template without opening the isolate window |
| Specimen | **Flag Inlab (Ctrl+F)** - flags specimen inlab<br>**Print Label (Ctrl+H)** - prints specimen label<br><br>**Print Test Labels (Ctrl+Shift+H)**- Prints a label for all tests on the specimen to default printer<br>**Order Profile** - orders profile<br>**Result Report** - displays and allows you to print formatted report<br>**Charges (Ctrl+G)** - open charges list to add charges to specimen<br><br>**Cancel** - cancels specimen; data remains in database<br>**Reactivate** - used by administrators if specimen happens to need reactivation; usually handled automatically by program |
| Isolate | **Print Label** - prints an isolate label to default printer<br><br>**Order Antibiotics (Ctrl+Y)** - orders selected sensitivity panel<br>**Order Biochemical (Ctrl+B)** - orders selected biochemical panel<br>**Order Isolate Ancillary** - if configured, allows you to order an ancillary profile<br>**Workup Manager (Ctrl+Shift+W)** - displays the Workup Manager<br>**Result Sensitivities (Ctrl+Shift+Y)** - allows entry of sensitivity results<br>**Result Biochemicals (Ctrl+Shift+B)** - allows entry of biochemical results<br>**Set Organism To Plates** - allows you to add the selected isolate to additional plates<br><br>**LOINCs -** opens a list of predefined LOINC codes that you may select and apply to the isolated organism<br>**SNOMEDs -** opens a list of predefined SNOMED codes that you may select and apply to the isolated organism |

| Menu | Option |
|---|---|
| Test | **Print Label (Ctrl+Shift+H)** - prints a test label to the default printer<br><br>**Preview** - shows a preview of report (unformatted), and also enables re-sending the latest report to the result report interface.<br>**Save Amended** - saves and flags status as amended<br><br>**Cancel** - cancels test<br>**Un-Cancel** - makes the test active again<br><br>**LOINCs -** opens a list of predefined LOINC codes that you may select and apply to the test<br>**SNOMEDs -** opens a list of predefined SNOMED codes that you may select and apply to the test |
| Quality Review | **Flag Reviewed** - flags specimen as having been reviewed<br>**Review Details** - allows detailed entry of review |
| Sensitivity Result<br>Sensitivity Order | **LOINCs -** opens a list of predefined LOINC codes that you may select and apply to the antibiotic or order |

## Context Sensitive Menus

While using the Culture Manager Window, many context sensitive actions may be accessed by right-clicking on one of the items in the *result tree*. The following table lists the actions menus that may be accessed by right-clicking that item in the tree. A menu specific to that tree item is displayed, where you can select the action you want to perform.

These actions may also be invoked by pressing the shortcut key for that action.

Context Sensitive menus are also available from the Accession window tree, but they are more extensive and used more frequently in the Result Manager.

| Menu Option | Description | Accessed From | Shortcut |
|---|---|---|---|
| Save | Saves visit | Visit | Ctrl+S |
| Audit | Displays audit trail for the visit | Visit | Ctrl+T |
| Delete | Deletes visit | Visit | Ctrl+Shift+D |
| Save | Saves Case | Case | Ctrl+S |
| Audit | Displays audit trail for the case | Case | Ctrl+T |
| Delete | Deletes case | Case | Ctrl+Shift+D |
| Result Report | If system is configured with a formatted report, opens and allows printing | Case | Ctrl+R |
| Document Link | If configured, opens system for managing images | Case | Ctrl+D |
| Print Label | Prints label for case, if format available | Case | Ctrl+H |

| Menu Option | Description | Accessed From | Shortcut |
|---|---|---|---|
| Save | Saves culture | Culture | Ctrl+S |
| Audit | Displays audit trail for the culture | Culture | Ctrl+T |
| Delete | Deletes culture | Culture | Ctrl+Shift+D |
| Flag Inlab | Flags culture as being *in-the-lab* | Culture | Ctrl+F |
| Print Label | Prints label for culture, if format available | Culture | Ctrl+H |
| Print Media Labels | Prints label for media, if format available | Culture | Ctrl+Shift+H |
| Send to Plate | Sets plate status as pending for culture | Culture | |
| Order Gram Stain | Orders gram stain on culture | Culture | Ctrl+O |
| Cancel Gram Stain | Cancels gram stain, if one exists | Culture | |
| Order Culture Ancillary | Opens window to order Ancillary profiles | Culture | |
| Order Media | Opens window to order media on culture | Culture | |
| Media Description | Allows entering a media description | Culture | Ctrl+L |
| Set Plate Descriptions | Allows entering description to batch of plates | Culture | |
| Review | Shows preview of culture report | Culture | Ctrl+W |
| Result Report | If formatted report is in use, displays report and allows printing | Culture | Ctrl+R |
| Charges | Open Charges window for culture | Culture | Ctrl+G |
| Isolate Report Order | Opens window where reportable isolates may be rearranged to control their order on reports | Culture | |
| Save Preliminary | Saves culture as preliminary | Culture | |
| Save Final | Saves culture as final | Culture | |
| Save Corrected | Saves changes made to finalized culture and prompts for reason | Culture | |
| Save Amended | Saves a case that has been corrected after final and prompts for reason | Culture | |
| Cancel | Allows privileged users to cancel culture; prompts for reason | Culture | |
| Reactivate | Activates culture that has been deactivated so it will appear on build lists | Culture | |
| Document Link | If configured, opens system for managing images | Culture | Ctrl+D |
| LOINCs | Opens window to add LOINC codes, if using | Culture | |
| SNOMEDs | Opens window to add Snomed codes, if using | Culture | |
| Save | Saves media | Media | Ctrl+S |
| Audit | Displays audit trail for the media | Media | Ctrl+T |

| Menu Option | Description | Accessed From | Shortcut |
|---|---|---|---|
| Delete | Deletes media | Media | Ctrl+Shift+D |
| Print Label | Prints label for media, if format available | Media | Ctrl+J |
| Sub Media | Adds a second media of same type under current media | Media | Ctrl+Shift+P |
| Sub Media Panel | Adds a sub media based on selected plate panel | Media | |
| Order Plate Ancillary | If configured, allows you to order one or more ancillary profiles | Media | |
| New Isolate [Full] | Creates a new isolate and opens the Isolate window for entry | Media | |
| New Isolate [Quick] | Creates a new isolate without opening the Isolate window | Media | |
| New Isolate [Template] | Allows you to choose a template, if any specified for the media, and opens the isolate window with that template | Media | |
| New Isolate [Template - Quick] | Allows you to choose a template, if any specified for the media, and creates the isolate with the selected template without opening the isolate window | Media | |
| Save | Saves isolate | Isolate | Ctrl+S |
| Audit | Displays audit trail for the isolate | Isolate | Ctrl+T |
| Delete | Deletes isolate | Isolate | Ctrl+Shift+D |
| Print Label | Prints label for isolate, if format available | Isolate | |
| Order Antibiotics | Opens window to order antibiotics on isolate | Isolate | Ctrl+Y |
| Order Biochemical | Opens window to order biochemicals on isolate | Isolate | Ctrl+B |
| Order Isolate Ancillary | Opens window to order ancillary profile on isolate | Isolate | |
| Workup Manager | Opens the Workup Manager window | Isolate | Ctrl+Shift+W |
| Result Sensitivities | Allows entering sensitivities results | Isolate | Ctrl+Shift+Y |
| Result Biochemicals | Allows entering biochemical results | Isolate | Ctrl+Shift+B |
| Set Organism to Plates | Allows you to add the selected isolate to additional plates on the culture | Isolate | |
| LOINCs | Opens window to add LOINC codes, if using | Isolate | |
| SNOMEDs | Opens window to add Snomed codes, if using | Isolate | |
| Save | Saves specimen | Specimen | Ctrl+S |
| Audit | Displays audit trail for the specimen | Specimen | Ctrl+T |

| Menu Option | Description | Accessed From | Shortcut |
|---|---|---|---|
| Delete | Deletes specimen | Specimen | Ctrl+Shift+D |
| Flag Inlab | Flags specimen as being *in-the-lab* | Specimen | Ctrl+F |
| Print Label | Prints label for specimen, if format available | Specimen | Ctrl+H |
| Print Test Labels | Prints label for specimen test, if format available | Specimen | Ctrl+Shift+H |
| Order Profile | Opens window to order any profile | Specimen | |
| Result Report | Displays and allows printing formatted reports | Specimen | Ctrl+R |
| Charges | Open Charges window for specimen | Specimen | Ctrl+G |
| Cancel | Allows privileged users to cancel specimen, prompts for reason | Specimen | |
| Reactivate | Reactivates specimen | Specimen | |
| Save | Saves test | Test | Ctrl+S |
| Audit | Displays test | Test | Ctrl+T |
| Delete | Deletes test | Test | Ctrl+Shift+D |
| Print Label | Prints label for test if format available | Test | Ctrl+Shift+H |
| Review | Displays the report for review | Test | |
| Cancel | Allows privileged users to Cancel selected test; prompts for reason | Test | |
| LOINCs | Opens window to add LOINC codes, if using | Test | |
| SNOMEDs | Opens window to add Snomed codes, if using | Test | |
| Save | Saves selected Ancillary profile | Ancillary | Ctrl+S |
| Audit | Displays audit trail for the Ancillary profile | Ancillary | Ctrl+T |
| Delete | Deletes Ancillary profile | Ancillary | Ctrl+Shift+D |
| Print Label | Prints label for Culture Ancillary, if format available | Ancillary (Culture) | |
| Result Ancillary | Opens Ancillary Result Entry window | Ancillary | Ctrl+R |
| Cancel | Allows provileges users to cancel selected Ancillary profile; prompts for reason | Ancillary | |

# Chapter 4
# Batch Result

The *Batch Result* window is where batch culture processing is performed. You access the Batch Result either through the Batch Result button on the left or from the Operations Menu.

Batch resulting is used to enter the same result for many cultures at one time, such as **NO GROWTH IN 24 HOURS** for blood cultures. Before any culture can be processed, they must be created (or logged in) in the Accession window and flagged Inlab.

## Batch Result window

When you first open the Batch Result window, shown in Figure 4-1, the culture list section is blank. The top of the window has fields and buttons used in culture selection. The bottom of the window has fields and buttons that are used to select and process the batch results.

### Culture Selection

| Field or Button | Description |
|---|---|
| Culture Number | Individual culture numbers are entered or scanned here |
| Set Type | To check for a specific culture type, select from the drop-down list and click the following check box |
| [Check Type] checkbox | Click to check specified culture type in previous field |
| Auto | Opens the Auto Process selection screen. |
| Close | Closes the Batch Result window |

### Culture Processing

| Field or Button | Description |
|---|---|
| Result# | Enter # to select from available Culture Results |
| [Overwrite Resulted] checkbox | Check to overwrite results if one has already been entered in the culture list |

| Field or Button | Description |
|---|---|
| Set Results | Fills in the result entered in the previous field for all the cultures in the list or only those without results if [Overwrite Resulted] is unchecked. |
| Comment# | Enter # to select from available Comments |
| [Overwrite Comments] checkbox | Check to overwrite comments if one has already been entered in the culture list |
| Set Comments | Fills in the comment entered in the previous field for all the cultures in the list or only those without comments if [Overwrite Comments] is unchecked. |
| Description# | Enter # to select from available Descriptions |
| [Overwrite Descriptions] checkbox | Check to overwrite descriptions if one has already been entered in the culture list |
| Set Descriptions | Fills in the description entered in the previous field for all the cultures in the list or only those without descriptions if [Overwrite Descriptions] is unchecked. |
| Status drop-down list | If you want to set the culture status to something other than the natural next status, select one from this list and click Set Status. Normal status goes from PENDING > PRELIMINARY > FINAL > CORRECTED. |
| Set Status | Sets the status specified in the Status drop-down list for all cultures in the list |
| Save | Saves all the culture in the list with the set results and comments |
| Remove | Removes selected culture from the culture list |
| Remove All | Removes all cultures from the culture list |

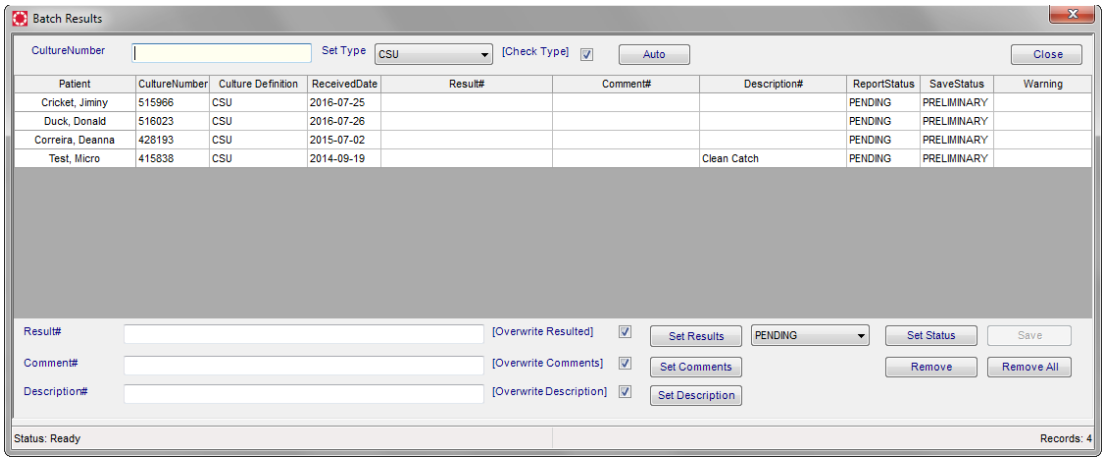



Figure 4-1 - Batch Result Window

## Culture List Section Columns

- Patient - patient name
- Culture Number
- Culture Definition
- Received Date
- Result#
- Comment#
- Description#
- Report Status - current report status
- Save Status - what the status of the culture will be once it has been saved
- Warning - information regarding the culture that may be pertinent to the user when processing a final report. e.g."Gram Stain is Pending"
- ViewAlerts - if Alert Rules is enabled.

# How to create a batch of cultures for processing

1. **Enter the culture number or scan in the barcode for each culture you want to process. Your Batch Result window will look similar to Figure 4-1.**
2. **If there are one or two cultures that need a result or comment that is an exception to all the others, you can enter those results and comments first on the individual culture row. If not, skip this step.**
3. **To enter results for all the cultures that have a blank result, select the result from the result library by entering # in the Result# field and then picking from the list.**
4. **Make sure [Overwrite Resulted] is not checked if you entered exceptions in Step 2.**
5. **Click the Set Results button.**

   The result for each culture row will display the result you selected in Step 3. See Figure 4-2.

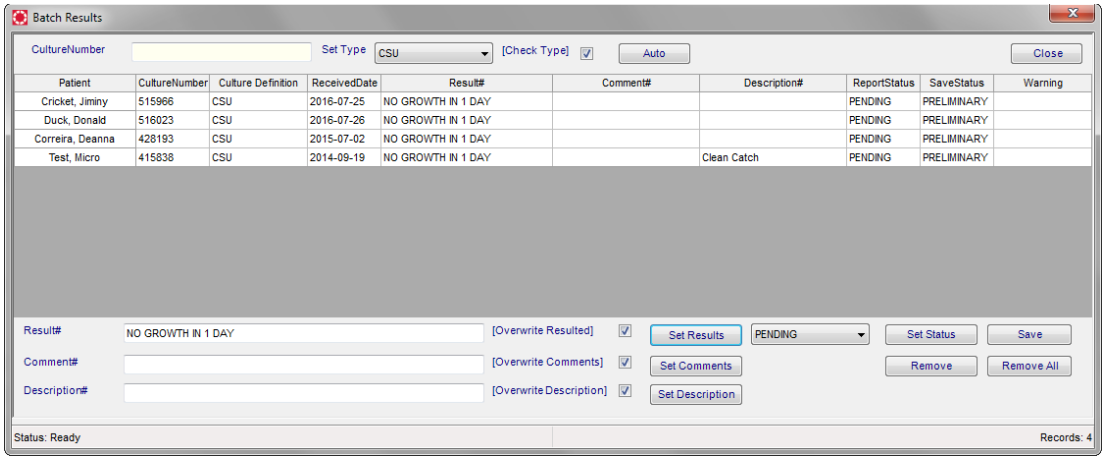



Figure 4-2 - Batch Result Window with results selected

6. **Repeat Steps 2 through 5 for comments, except using the comment fields, and descriptions using the description fields.**
7. **The Report Status does not need to be changed unless you want to change it to something other than the normal next status. e.g. PENDING > PRELIMINARY; PRELIMINARY > FINAL; FINAL > CORRECTED. If you change it, you must set by clicking the Set Status button.**

8 **Before you click the Save button, make sure all the results and comments and the Save Status is what you want.**

9 **Click Save. The Report Status changes to the new status and the Save Status changes to what the Report Status would become if you clicked Save again, as in Figure 4-3.**

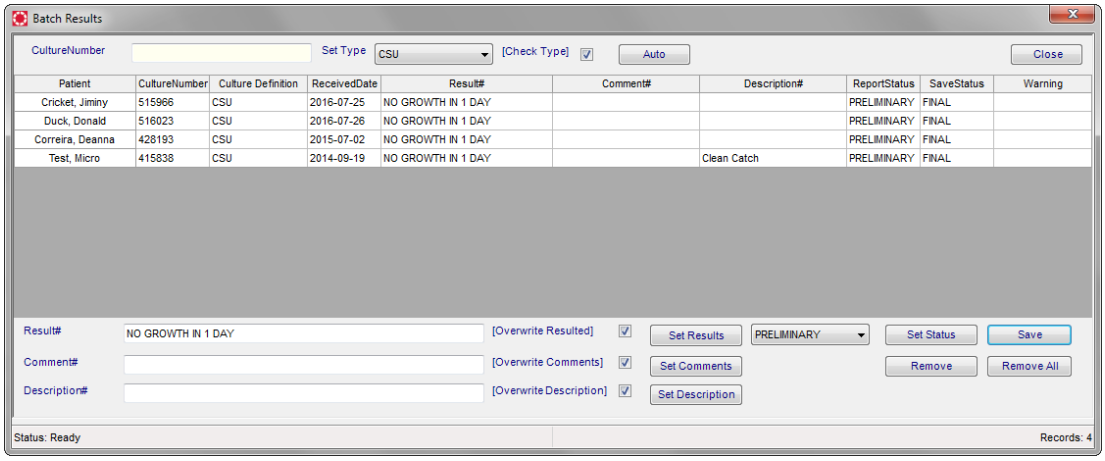



Figure 4-3 - Batch Result Window after saving a batch

**NOTE:** *If you are working on a batch of culture of the same type, you may want to select that culture type from the drop-down selection and check the [Check Type] checkbox. This checks that the culture type for the number is correct and prompts you if not, but you have the option to accept it.*

Click the **Remove** button after selecting a culture if you need to remove it from the culture list.

Click the **Remove All** button to remove all cultures from the list.

**NOTE:** *There is a SiteWide Preference that determines whether or not batch result entry can be performed on cultures that have an organism defined. See the Configuration Chapter for that preference.*

## Auto Batch Processing

*Auto Batch Processing* is used to enter standard results for large numbers of cultures that have had no growth for a set amount of time. When you click the **Auto** button, a dialog box opens allowing you to select the culture type and the appropriate no growth time period. Figure 4-4 shows the *Auto Batch* dialog box.

*Auto Batch* will search for cultures that fit the time frame you specify. For example, if you select **`> = 24 AND < 48`**, it will find all cultures that have been flagged inlab for over or equal to 24 hours, but less than 48 hours and have not yet received a result.

**NOTE:** *The culture type must have Auto Batch Result set to True.*

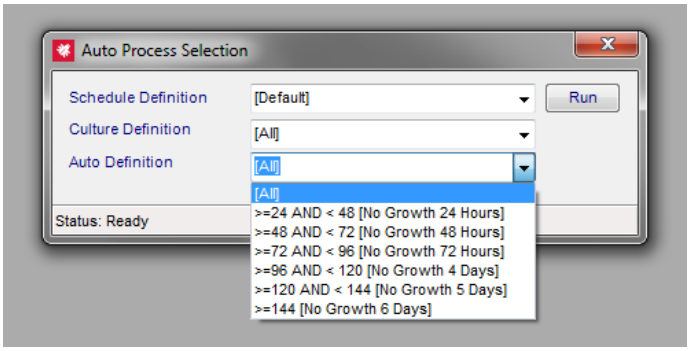



Figure 4-4 - Auto Batch Dialog Box

In order for a culture type to be a candidate for the Auto Batch Processing window, the following criteria must be true about the culture type.

- **Enable Auto Batch Review** must be set to **True** in the Culture Definition table of the *Library*.
- The culture needs to be flagged inlab.

### To run an Auto Batch, perform the following steps:

1. **Click Auto. The dialog box in Figure 4-4 appears.**
2. **If optional user-defined schedule definitions are defined in the AutoScheduleDefinition table, select the appropriate schedule you want to auto batch result within the Schedule Definition drop-down list or leave the default.**
3. **Select the culture type you want to auto batch result in the Culture Definition drop-down list or leave the default of All to search through all culture types.**
4. **Select the time frame for outstanding cultures in the Auto Definition with the appropriate result that will be entered. Time frames are configurable based on culture type in the library manager by Psyche.**

| | |
|---|---|
| > = 24 and < 48 [No Growth 24 Hours] | Searches for cultures that were flagged inlab greater than or equal to 24 hours, but less than 48 hours, and fills in the result No Growth 24 Hours. |
| > = 48 and < 72 [No Growth 48 Hours] | Searches for cultures that were flagged inlab greater than or equal to 48 hours, but less than 72 hours, and fills in the result No Growth 48 Hours. |
| > = 72 and < 96 [No Growth 72Hours] | Searches for cultures that were flagged inlab greater than or equal to 72 hours, but less than 96 hours, and fills in the result No Growth 72 Hours. |
| > = 96 and < 120 [No Growth 4 Days] | Searches for cultures that were flagged inlab greater than or equal to 96 hours, but less than 120 hours, and fills in the result No Growth 4 Days. |
| > = 120 and < 144 [No Growth 5 Days] | Searches for cultures that were flagged inlab greater than or equal to 120 hours, but less than 144 hours, and fills in the result No Growth 5 Days. |

| | |
|---|---|
| > = 144 [No Growth 6 Days] | Searches for cultures that were flagged inlab greater than or equal to 144 hours and fills in the result No Growth 6 Days. |

5 **Click Run and the Batch Result culture fills in with the found cultures based on your criteria.**

6 **Make any other necessary changes in the culture list and click Save.**

All cultures in the list automatically receive the result you specified in Step 4.

## View Alerts Window

If the *DisplayAlertRules* SiteWideReserved preference is enabled, the ViewAlerts column is added to the Batch Result window. See Figure 4-5.

Click **<Alerts Exist>** to open the *View Alerts* window displaying any alerts that are present on the culture. Alerts types are listed in the following order:

- Culture Alert
- Case Alert
- Visit Alert
- Patient Alert

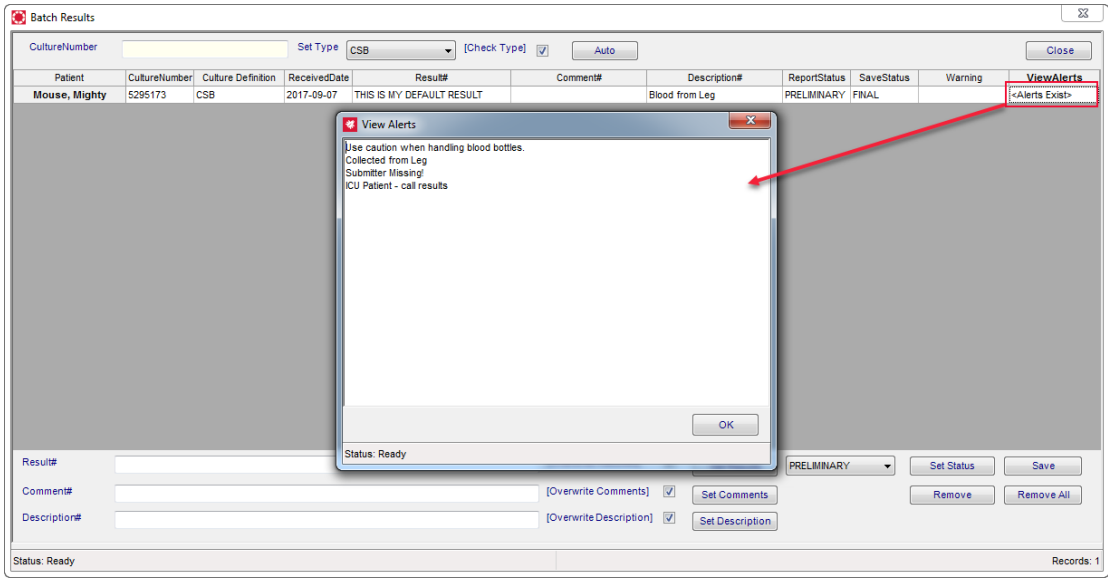



Figure 4-5 View Alerts from Batch Result Window

**NOTE:** *If there is an error in the alert rule to be applied, the View Alerts window displays the following message:*

```
ERROR LOADING ALERTS
```

# Chapter 5
# Batch Label

The *Batch Label* window is where batch label printing is performed. MicroPath gives you the option of printing specimen and plate labels as cultures are being accessioned and flagged inlab, but you may also skip label printing at accessioning and print them in a batch.You access the Batch Label either through the Batch Label button on the left or from the Operations Menu.

Batch label printing is useful if cultures are accessioned in bulk and then labeled in a large batch instead of as they are accessioned.

## Batch Label window

When you click the **Batch Label** button, the Batch Labels window shown in Figure 5-1 is displayed. The top of the window has fields and buttons used in culture and specimen selection. The bottom of the window has fields and buttons that are used to select label type and print the labels.

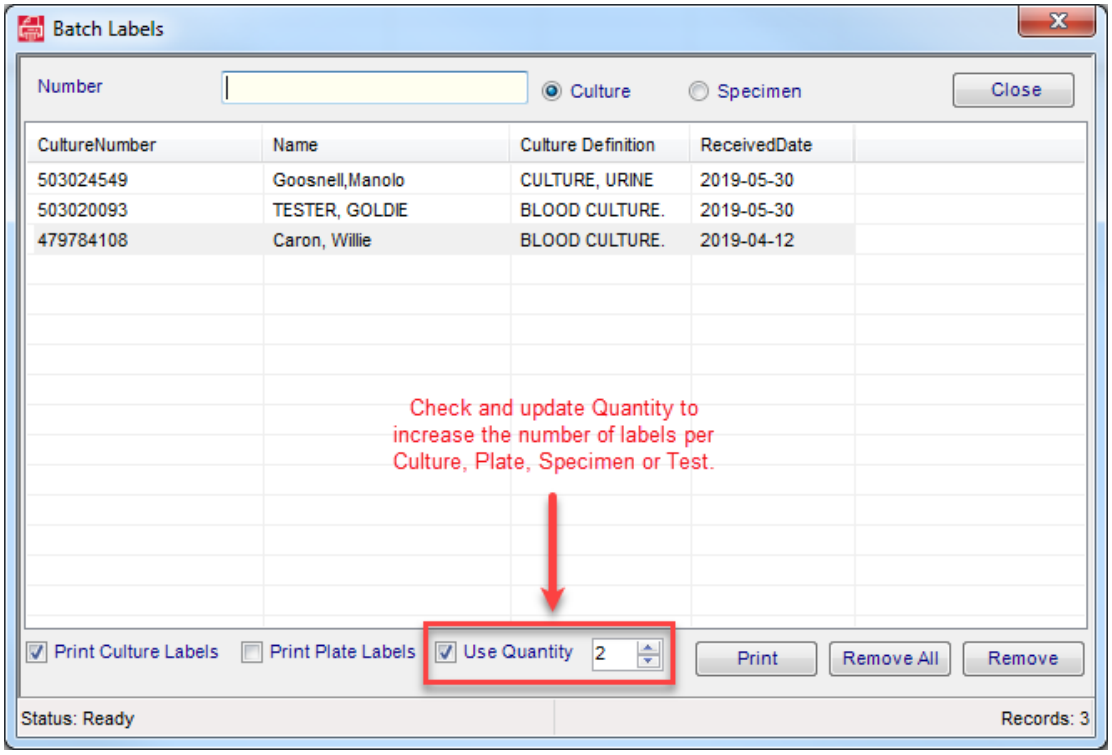



Figure 5-1 - Batch Label Window

## Culture or specimen selection

| Field or Button | Description |
|---|---|
| Culture Number | Individual culture numbers are entered or scanned here |
| Culture radio button | Click to print culture labels |
| Specimen radio button | Click to print specimen labels |
| Close | Closes the Batch Result window |

## Culture/Specimen List

Between the selection section and the label printing buttons, the list box lists all cultures and specimens for which labels will print. This list displays the following for each culture when **Culture** is selected above:

- Culture Number
- Name - patient name
- Culture Definition - culture type
- Received Date - date specimen was flagged as in the lab

When **Specimen** is selected above, the following is displayed in the list:

- Specimen Number
- Name - patient name
- Received Date - date specimen was flagged as in the lab

## Label Printing options

| Field or Button | Description |
|---|---|
| Print Culture Labels<br>Print Specimen Labels | Depending on whether the Culture or Specimen radio button is checked above, one of these will be available |
| Print Plate Labels<br>Print Test Labels | Depending on whether the Culture or Specimen radio button is checked above, one of these will be available |
| Use Quantity | Check the radio button and use the arrows to increase the number of labels that will print, when Print is clicked. |
| Print | Click to print the specified labels for all the cultures or specimens in the list. |
| Remove | Removes selected culture from the culture list |
| Remove All | Removes all cultures from the culture list |

# Printing labels

## To print culture labels

1. **Make sure the Culture radio button is checked.**
2. **Enter or scan from a barcode the culture number into the Culture Number field.**
3. **Continue Step 2 until all cultures are in the list.**
4. **Click Print Culture Labels to print labels for the cultures.**
5. **Click Print Plate Labels to print labels for the culture plates.**

   **NOTE:** *You may print both culture and plate labels at the same time or one or the other.*
6. **Use the Use Quantity checkbox and increase the label count to print more than 1 label per culture or plate.**
7. **When the culture list is complete, click Print.**
8. **You are prompted with a standard Printer selection box to select your labels printer. Select the printer and the labels immediately print.**

## To print specimen labels

1. **Make sure the Specimen radio button is checked.**
2. **Enter or scan from a barcode the specimen number into the Culture Number field.**
3. **Continue Step 2 until all specimens are in the list.**
4. **Click Print Specimen Labels to print labels for the specimens.**
5. **Click Print Test Labels to print labels for the tests.**

   **NOTE:** *You may print both specimen and test labels at the same time or one or the other.*
6. **Use the Use Quantity checkbox and increase the label count to print more than 1 label per specimen or test.**
7. **When the specimen list is complete, click Print.**

   You are prompted with a standard Printer selection box to select your labels printer. Select the printer and the labels immediately print.

## Notes

# Chapter 6
# Result Tests

The *Result Tests* window is where batch test result entry is performed. You access the Result Tests either through the Result Tests button on the left or from the Operations Menu.

Batch test resulting is used to enter the same result for many tests at one time, such as **NEGATIVE** or **NONE SEEN** for O&P. Before any test can receive a result, they must be created (or logged in) in the Accession window and flagged Inlab.

## Result Tests window

When you first open the Result Tests window, shown in Figure 6-1, the test list section is blank. The top of the window has fields and buttons used in test and specimen selection. The bottom of the window has fields and buttons that are used to select and process the test results.

### Test Selection

| Field or Button | Description |
|---|---|
| Test Definition | To limit search to a single test, click the drop-down arrow to select the test from the test definition list |
| Specimen Number | Individual specimen numbers are entered or scanned here |
| Test Number | Individual test numbers are entered or scanned here |
| Received Date From<br>Received Date To | Click the drop-down arrow to select a From or To date from the calendar popup |
| [Use Dates] checkbox | Click to check specified date range if using dates |
| [Un-resulted Only] checkbox | Click to search for tests that have not received a result |

# Test Result Processing

| Field or Button | Description |
|---|---|
| Result | Click the drop-down arrow to select a result from the available list; this list is generated from the defined list of possible results for the test definition if a single test is in the test list |
| Pending Detail | Becomes available depending on test setup |
| Set Detail | Sets the result detail |
| Set All | Sets the result specified in the Result column for all tests in the list |
| Save | Saves all the test in the list with the specified results |
| Set All Status | Sets the status specified in the status drop down list for all tests in the list. |
| Remove All | Removes all tests from the test list |
| Remove | Removes selected test from the test list |
| Close | Closes the Result Tests window |
| [Overwrite Resulted] checkbox | Check to overwrite results if one has already been entered in the test list |

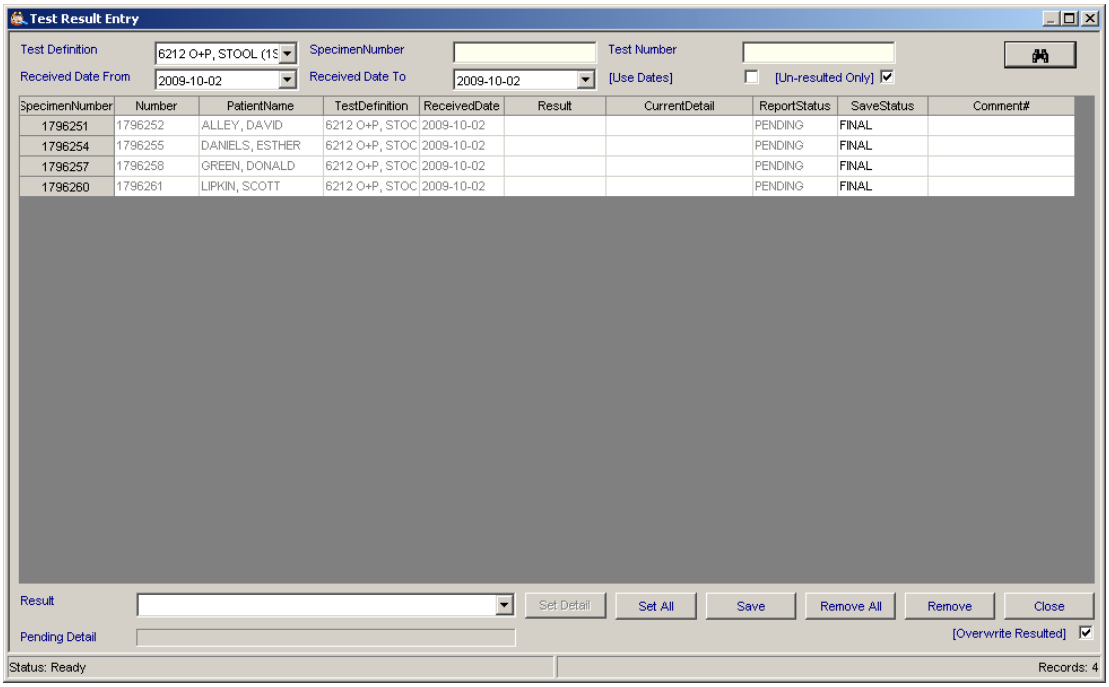



Figure 6-1 - Result Tests Window

## Test List Section Columns

- Specimen Number
- Number - test number
- Patient Name
- Test Definition - selected from list of Micro Test Definitions in the Library
- Received Date
- Result - selected from list of available results for that particular test
- Current Detail
- Report Status - current report status
- Save Status- what the status of the culture will be once it has been saved
- Comment# - optional comment selected from available comment definitions

# How to create a batch of tests for result entry

### To enter results for a batch of tests:

1 **If you are entering results for a single type of test, select the test in the Test Definition drop-down field.**

2 **Enter or scan in the barcode number for each specimen or test you want to result. If specimen numbers are entered, all test on that specimen will be loaded unless a test filter was added in Step 1.**

3 **You may also select tests by entering a Received Date range in the From and To fields and checking the [Use Dates] checkbox.**

4 **Click the [Un-resulted Only] checkbox to search for tests that have not yet received a result.**

5 **To enter results for all the tests in the list, type in the result in the Result field or select the result from the result library by clicking the drop-down arrow on the Result field and then picking from the list. This list is only available when a single test definition is in the list.**

**NOTE:** *If a test on the list is defined in the MicroTestDefinition table with RestrictiveList=True, that result cannot be entered with free text.*

6 **If the result selected in Step 5 has Enable Result Detail set to True in the Library, you may also enter detailed results for each test. Click the Set Detail button to open the Set Test Result Detail window shown in Figure 6-4 and described below.**

7 **Click Set All to fill in the result from the Result field (and optional details) in all test rows in the list.**

8 **If there are a few tests that need a result that is an exception to all the others, you can enter those results on the individual test row. If not, you can skip this step.**

The result for each culture row will display the result you selected in Step 5. (Figure 6-2)

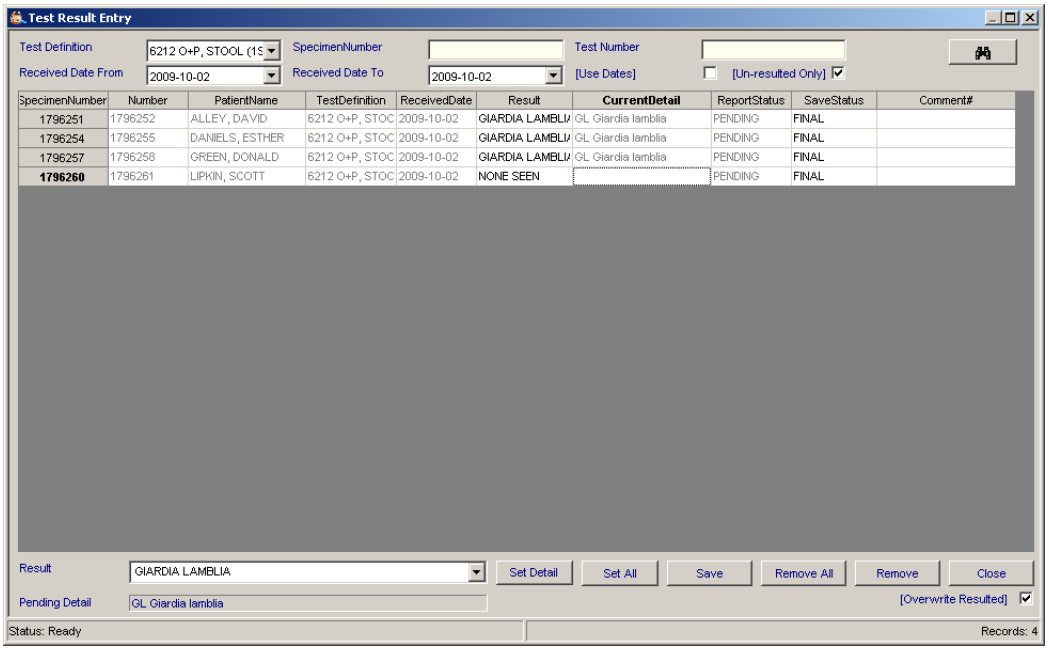



Figure 6-2 - Result Tests Window with results selected

**9** **Before you click the Save button, make sure all the results and the Save Status is what you want.**

**10** **Make sure [Overwrite Resulted] is not checked if you entered exceptions in Step 8.**

**11** **Click Save. The Report Status changes to the new status and the Save Status changes to what the Report Status would become if you clicked Save again, as in Figure 6-3.**

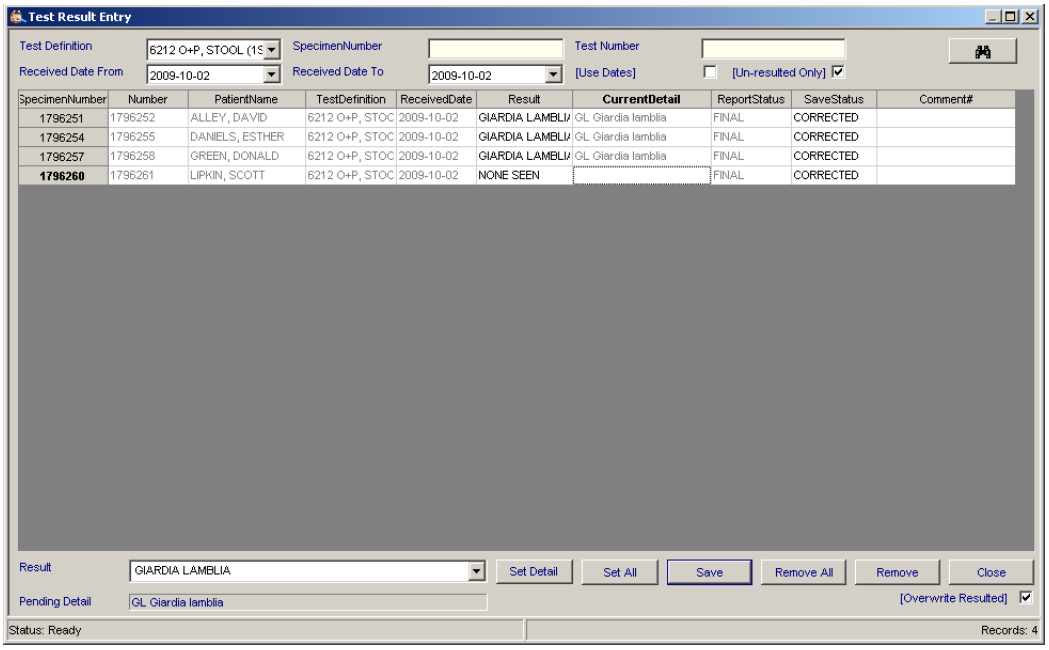



Figure 6-3 - Result Tests Window after saving a batch

Click the **Remove** button after selecting a test row if you need to remove it from the test list.

Click the **Remove All** button to remove all tests from the list.

Click **Close** to close the Results Tests window.

## Set Test Result Detail window

When a result is entered in the Result Tests window, whether in the batch field at the bottom or on an individual test row, if the result has *Enable Result Detail* set to True in the Library, then the Set Detail button and the Current Detail column become available in the test list. Clicking either opens the Set Test Result Detail window shown in Figure 6-4.

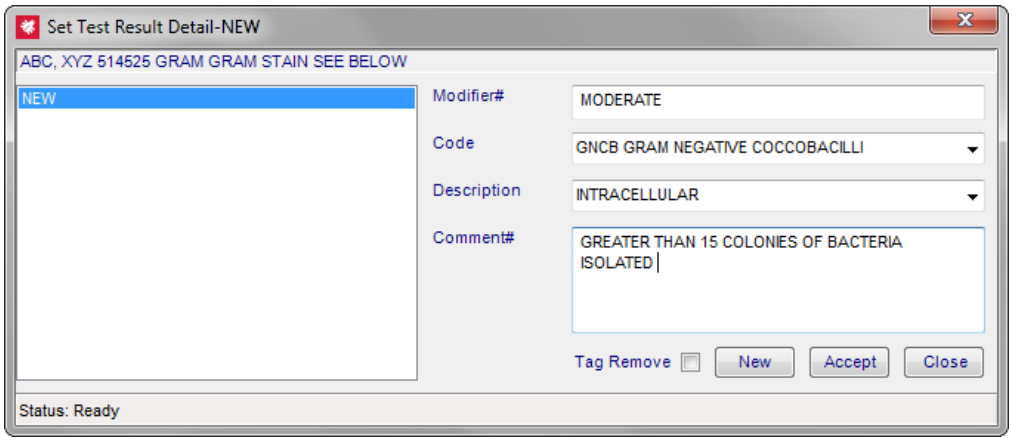



Figure 6-4 - Set Test Result Detail Window

**The first time you enter this window, you are set to enter a new detailed result.**

1. **Enter a modifier or enter pound (#) to select from a list.**
2. **Select the code and description from the respective drop down lists.**
3. **Enter a comment or enter pound (#) to select from a list.**
4. **Click the Accept button.**
5. **Click Close to close the window.**

- When you are viewing a detailed result that has already been entered, click **New** to enter a new detailed result.
- To remove a previously entered detailed result, click the **Tag Remove** checkbox and the detailed result will be removed when the Accept button is clicked.
- Once a detailed result has been accepted, a brief description is displayed in the *Current Detail* column for the test.
- Once a detailed result has been accepted in the batch result field at the bottom of the window, that detailed result will be applied to all results in the test list when the Set All button is clicked.

## Notes

# Chapter 7
# Batch Steps

The *Batch Steps* window is where cultures and cases that have predefined batching steps assigned to them can be moved to the next process step in one window. You access Batch Steps either through the Batch Steps button on the left or from the Operations Menu.

Batch Steps resulting is used to enter the same result for many tests at one time, such as **NEGATIVE** or **NONE SEEN** for O&P. Before any test can receive a step status change, they must be created (or logged in) in the Accession window and flagged Inlab.

## Batch Steps Window

When you first open the Batch Steps window, shown in Figure 7-1, the window is blank. The top of the window has fields and buttons used in culture and case selection. The bottom of the window has a batch step drop down list and buttons that are used to specify and process the batch.

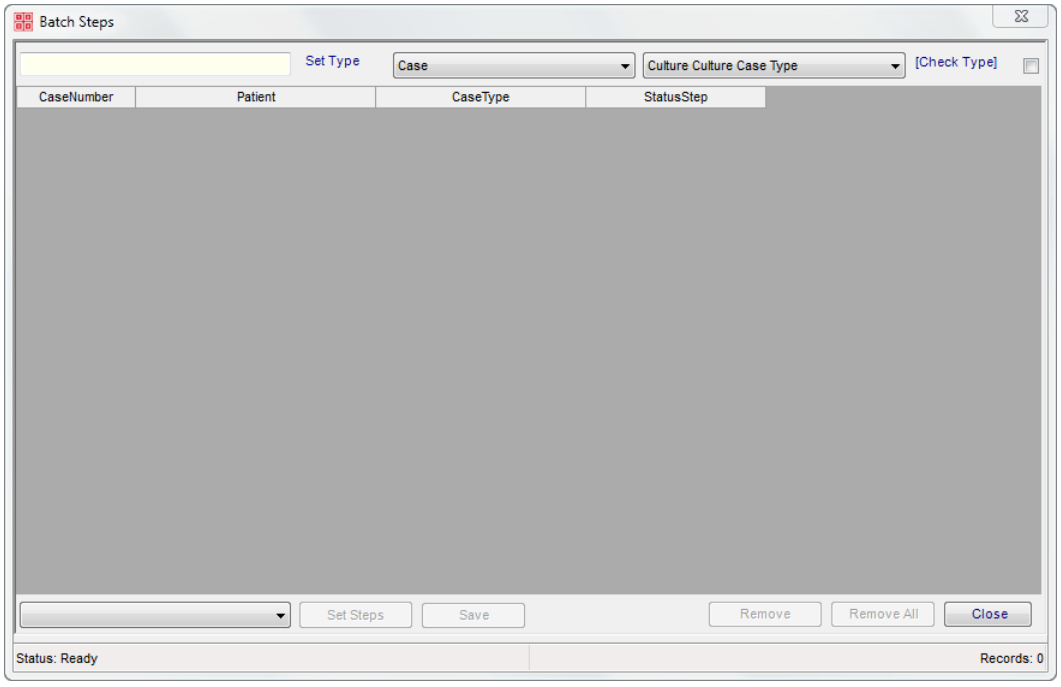



Figure 7-1 - Batch Steps Window

## Before you can use Batch Steps

- Definitions for Batch Status Steps must be defined in the Status Step Definition table in the Library. *See Chapter 8.*
- The types of cultures and/or cases that you want to set status steps in Batch Steps must have a Status Step associated with them in the Cultures Definition or Case Type Definition tables in the Library.

## Processing cultures using Batch Steps

In the following example, we have a Status Step Definition of **Culture** that includes the typical steps for processing cultures, such as:

- Received
- Plated
- Incubation
- Subplate
- Isolate
- Preliminary
- Ready for Final.

The Culture Definition for urine culture (CSU) has the Step Definition of **Culture** assigned to it.

### To create a batch using Batch Steps:

1. **Open the Batch Steps window by selecting it from the Operations menu.**
2. **Select Culture or Case from the Set Type drop-down list, depending on whether your lab prefers to use culture or case numbers. (In this example culture was selected)**
3. **Select the culture or case type you want to use from the next drop-down list. (In this example Urine Culture (CSU) was selected)**
4. **Click the [Check Type] checkbox to check for culture type before adding to the list.**
5. **In the first field, either scan or enter the culture or case number (depending on your choice in Step 2) you want to process. The culture or case is added to the list.**
6. **Continue Step 5 until all cultures/cases you want to process are in the Batch Steps window. See Figure 7-2**

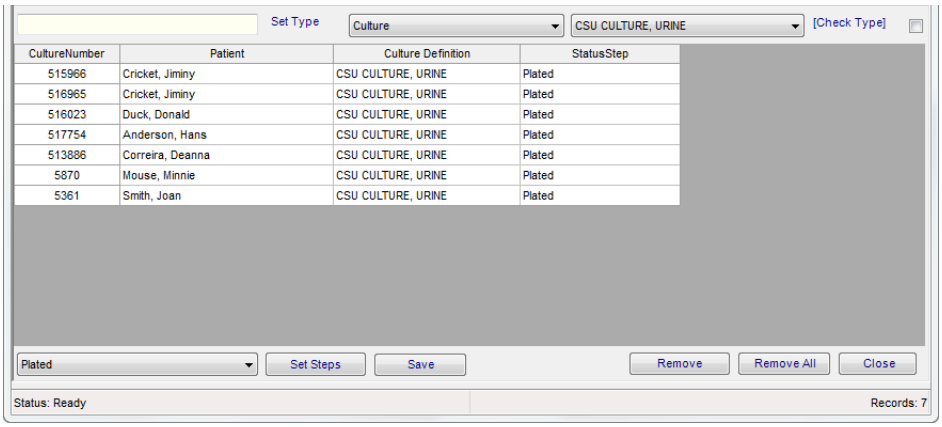



Figure 7-2 - Batch Steps Window loaded with selected cultures to process

### To set the batch to the next status step:

1. **Select the next status step from the Status Step drop-down list. In this case we are moving them from the current status of *plated* to *incubate*.**
2. **Click the Set Steps button to set the step to Incubation for all the cultures. All cultures will show the new Status Step as shown in Figure 7-3.**
3. **If there are some cultures on the list you want to skip, you can modify individual culture steps in the row(s) by selecting that culture's Status Step drop-down list and choosing another.**
4. **Click the Save button to save your changes.**
5. **Use the Remove or Remove All buttons to remove selected or all cultures from the list.**
6. **Click Close to exit the Batch Steps window.**

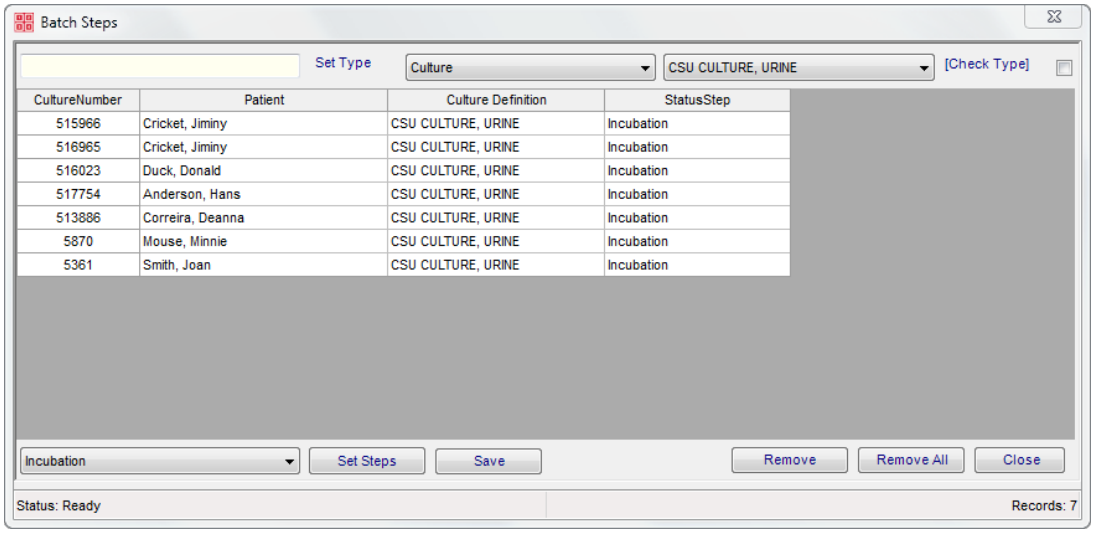



Figure 7-3 - Batch Steps Window after setting step to 'Incubated'

**NOTE:** *Cultures can also be moved to the next status step with the Culture Manager window.*

## Status Step processing buttons

| Drop-down or Button | Description |
|---|---|
| Status Step drop-down list | Click the drop-down arrow to select a status step from the available list; this list is generated from the defined list of possible status steps for the Status Step Definition assigned to the culture or case. |
| Set Steps | After selecting a Status Step from the drop-down list, sets the selected status for all cultures/cases in the batch |
| Save | Saves the new status step for all cultures/cases in the batch |
| Remove | Removes the selected culture or case from the batch list, selected by highlighting the row field other than culture/case number |
| Remove All | Removes all the cultures or cases from the Batch Steps window |
| Close | Closes the Batch Steps window; prompts for verification if specified status steps were not saved |

# Chapter 8
# Library

The *Library* is where all data definitions are made for all parameters in the MicroPath system. You access the Library either through the Library button on the left or from the Operations Menu. Users are required to have the Admin privilege in order to access the Library.

Each type of definition is stored in a separate table that has its own fields specific to the parameter that is stored. Usually there is at least a code and a description associated with each parameter.

The library definition tables include the following:

- AlertRule
- AncillaryProfile (optional)
- AncillaryTestDefinition (optional)
- AntibioticDefinition
- AntibioticPanel
- AntibioticResultDefinition
- AutoScheduleDefinition (optional)
- BiochemicalTestDefinition
- BiochemicalTestPanel
- BiochemicalTestResultDefinition
- CaseTypeDefinition
- ChargeDefinition
- ClinicalVialDefinition
- CommentDefinition
- CultureDefinition
- CultureTestDefinition
- DB CanvasDefinition (optional)
- DB Definition (optional)
- DB ItemDefinition (optional)
- DB MetricDefinition (optional)
- e.Query Data Models (optional)
- GramStainResultDefinition
- ICDDefinition
- InstrumentDefinition
- InsuranceDefinition
- InterfaceController
- Interface Map
- IsolateTemplateDefinition
- LOINC Definition
- MediaDefinition
- MediaPanelDefinition

- MicroTestDefinition
- MicroTestResultDefinition
- MIdentity (optional)
- MTranslation (optional)
- OrganismClassificationDefinition
- OrganismDefinition
- OrganismFamilyDefinition
- Parasite\GramDefinition
- ParasiteStageDefinition
- ProfileDefinition
- ReferenceLab (optional)
- SensitivityGroupDefinition
- SensitivityPattern (optional)
- SiteDefinition
- SnomedDefinition
- SourceDefinition
- Status Step Definition
- Storage Rack Definition
- User Role
- ZipCode

**NOTE:** *Modifications to the Code/Descriptions must only be made if it is a global change and one that affects all cases: past, present and future.Otherwise, it is best to 'Retire' the old code and create a new one for the present and future cases.*

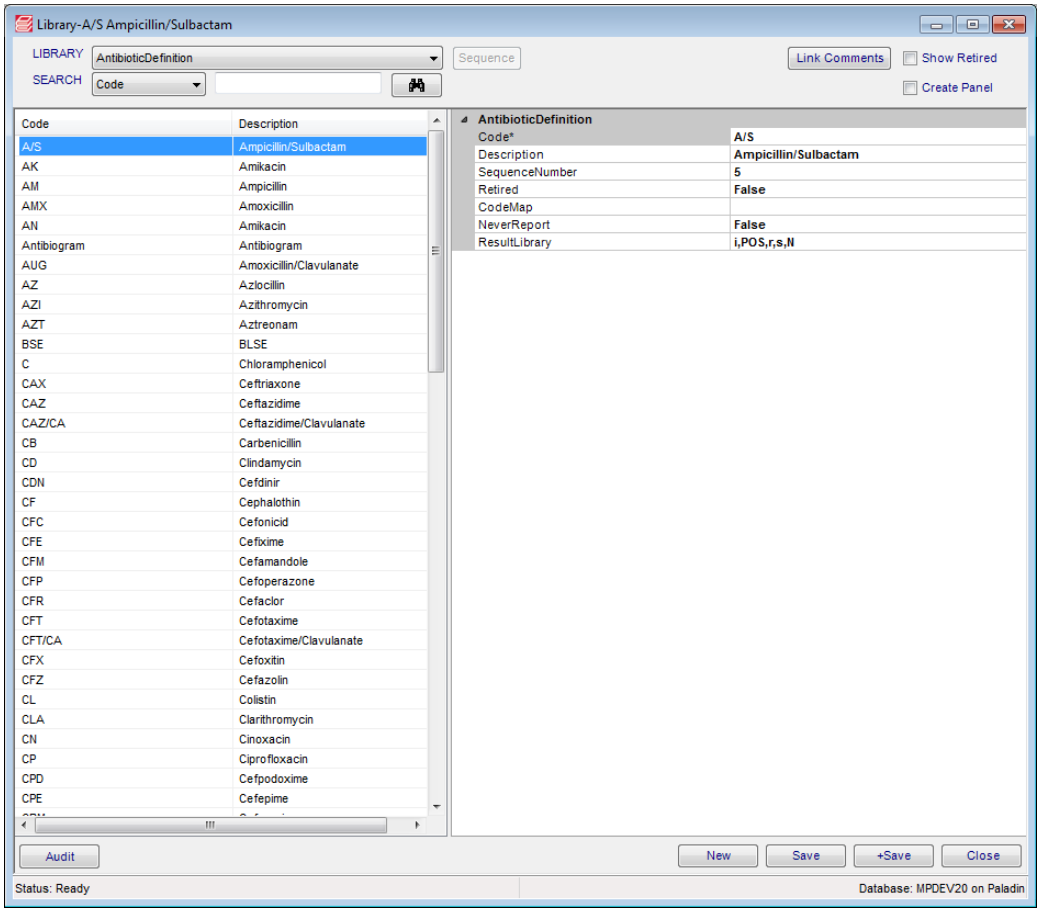



Figure 8-1 - Antibiotic Definition Table

## Library Basics

When you first open the Library, the window is blank. Figure 8-1 shows the Library window with the Antibiotic Definition table displayed. When each Library table is selected from the *Library Selection* drop-down menu, the fields change according to the current table.

The center of the Library window is split in half, with the left showing the list of codes and some descriptive field and the right showing all the fields that are associated with the current table.

The **Save** button saves the current window. The **Save+** button saves the current window and displays a blank one.

The *Show Retired* check box displays the retired library items in addition to the active ones when a search is performed. Retired items will display in red font.

While building a BioChemical Test, *Create Panel* allows you to create a panel at the same time consisting of that biochemical test only. This is so single biochemical tests can be ordered since all biochemicals must be ordered as part of a panel.

**Link Comments** is a powerful tool that allows you to create subsets of the total comments in the library and specify what fields from which they will be available. Link Comments is displayed later in the chapter with the Comment Definition table.

The **Audit button** allows you to view a simple audit log of any changes that were made to the current record.

The **Sequence** button becomes visible when a library definition that supports sequencing is selected. (i.e. Antibiotics, Antibiotic Panels, Biochemical Test Panels - See Library tables section for details).

**Superscript** and **Subscript** may be defined for data elements by entering the text with rich text formatting (RTF) characters in the data text. This will enable the super/subscript format to print on reports that have that field set to RTF=True in the report designer. For example, to make the following text appears as this "Latex[nb 1]", enter Latex{\super\[nb 1]} in the text description. The same format is used for numeric superscript, such as Latex{\super\2}, but when super or subscripting alpha beginning characters, a space is needed after the second "\". For example, use IgE{\sub\ xy} to print $IgE_{xy}$.

## Searching the library

In every table you have the option to search for a given record by either code or description.

To search by Code, select **Code** from the Search selection drop-down, enter the code you want in the second criteria field and click the binoculars button.

To search by Description, select **Description** from the Search selection drop-down, enter the description you want in the second criteria field and click the binoculars button.

With either method, if you leave the second field blank, you will get a complete list of the table. Highlight the specific record you want to see in the data tree and the details are displayed on the right.

**NOTE:** *You may also search by pressing* ***<Ctrl+R>***.

# Library Tables

## AlertRule

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description* | Full description for the rule |
| AlertType | Click the ellipsis to select from the following list of Alert Types: Patient, Visit, Case, Culture, Specimen, Test, Media, Isolate |
| Expression | Click ellipsis to open the Edit Expression window where you select the table to use and create the query to apply.<br><br>**Note:** If an alert rules needs to be built with a single quote as part of the rule, the single quote should be replaced by the "[`]" characters. |
| CustomRule | Optional rule to apply instead of defined Expression |
| AlertDisplay | Text to display when rule is met |
| Retired | True/False |

## AncillaryProfile (optional)

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description* | Full description for the profile |
| Constituents | What is contained in the profile. Pick from list of available *AncillaryTestDefinitions*, or add new. |
| ChargeCodes | Define charge codes that will be automatically billed upon selection of the profile. |
| StepDefinition | Define the Status Step Definition to use, if needed |
| AlwaysReportMessage | Additional information to report about the profile |
| Methodology | Description of how the profile results are obtained |
| Retired | True/False |
| User | |
| User1 | Optional user-defined field for profile |
| User2 | Optional user-defined field for profile |
| Result Entry Definitions | |
| ResultEntryDefinition | Set structure for the user to result, highly configurable; described in the section *Ancillary Profiles - Result Entry Definition* later in this chapter. |

## AncillaryTestDefinition (optional, used with AncillaryProfile)

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description* | Full description for the ancillary test |
| ResultList | List of general valid results; e.g. NEG,POS; click the ellipsis to open a picklist of ancillary test results to select or add new. |
| Retired | True/False |

## AntibioticDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the antibiotic |
| SequenceNumber | Defines the order in which the item will appear on formatted reports |
| Retired | True/False |
| CodeMap | The antibiotic code used in the instrument, if interfaced |
| NeverReport | True - Will suppress the item from result output<br><br>False - Will not suppress the item from result output |
| ResultLibrary | Defines applicable results for the antibiotic (S, I, R are available if none are defined) |

## AntibioticPanel

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the antibiotic panel |
| Constituents | What is contained in the panel. Pick from list or add new. |
| ChargeCodes | Pick from list or add new. |
| Retired | True/False |
| CodeMap | The antibiotic code used in the instrument, if interfaced |
| SequenceNumber | Defines the order in which the item will appear when ordering |

## AntibioticResultDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description of the antibiotic result. This value appears in selection lists and entered as result as is with defined case, IF code is not S,I,R or s,i,r. |
| Retired | True/False |

## AutoScheduleDefinition

| Table Field | Description |
|---|---|
| Code* | User define up to 50 characters in length |
| Description* | Full description of the item |
| DefinitionDetails | Enables defining auto schedule intervals and results |
| Retired | True/False |

## BioChemicalTestDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the biochemical test |
| ResultLibrary | Creates a pick list of appropriate result responses. When the Result library window is displayed, possible choices will be in the Tree of the window and the results that have been selected will be in the Property Grid. Users can pick from list or add new. This list is generated from the BioChemicalTestResultDefinition |
| RestrictiveList | True/False; whether to restrict result entry to only those results specified in the above list from the Result Library |
| Retired | True/False |
| CodeMap | The biochemical code used in the instrument, if interfaced |

## BioChemicalTestPanel

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the biochemical test panel |
| Constituents | What is contained in the panel. Pick from list or add new. |

| Table Field | Description |
|---|---|
| ChargeCodes | Pick from list or add new. |
| Retired | True/False |
| CodeMap | The biochemical panel code used in the instrument, if interfaced |
| SequenceNumber | Defines the order in which the item will is displayed when ordering |

## BioChemicalTestResultDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the biochemical test result |
| Retired | True/False |

## CaseTypeDefinition

Use the Case Type Definition table to assign specific processing steps by case type.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the case type |
| Retired | True/False |
| StepDefinition | List of steps to be used for the cast type |

## ChargeDefinition

Used in Cultures, Tests, Biochemical panels, and Antibiotic panels, however charges can also be added manually as needed. (Credits can be applied by checking the Credit box and re-adding the charge. Once the charge is added, the Credit field will populate and show True.) Use with either a billing interface, Brio queries or Management Reports.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description* | Full description for the charge type |
| Charge Type | Additional charge type may be added to use in sorting charges in Charges window when finalizing culture. |
| Retired | True/False |

## ClinicalVialDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the clinical vial type |
| AmountFluid | Amount of fluid capacity in the vial |
| AmountUnits | Units of measure for the type of vial |
| LabelCount | The number of labels to print on InLab. |
| Retired | True/False |

## CommentDefinition

The Comment Definition table stores the comment codes and expansions to be used for all the Comment fields in MicroPath. You can tell an entry field accesses the Comment Definition table by the presence of the pound **(#)** character after the field label. (e.g. VisitComment#)

To use a comment code in a comment field, type the **#** symbol in the field for a full list of available comments.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the comment |
| Retired | True/False |

## Link Comments

Because this table holds all comments and information used in a variety of field entries, it is best to try to categorize the comments so users will see only the comments that apply to the type of data that needs to be entered. This is done with the **Link Comments** button, which opens the *Edit Coded Comments Links* window shown in Figure 8-2.

In this window you can create field specific lists of coded comments available for result entry. You can even specify that a group of comments are only available for a particular culture type.

The left side shows the list of all coded comments in the system. The right displays the *Entry Field*, *Limit Type* and *Limit Selection* drop-down fields.

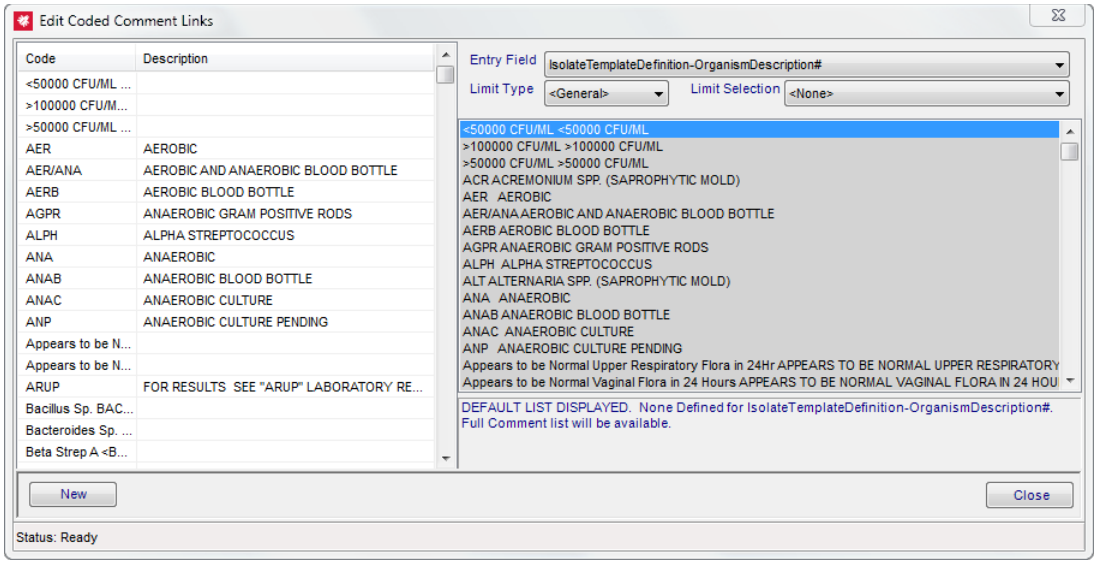



Figure 8-2 - Edit Coded Comments List Window

### Follow these steps to create a selected list of available comments for a given field:

1. **Select the comment field you want from the Entry Field drop-down list.**
2. **In the Limit Type field select Culture Definition if you want to limit the list based on the culture type. Then select the particular culture type from the Limit Selection drop-down list.**

   **Or leave the Limit Type to <General> to apply the list to all culture types.**
3. **If this is a new list, the comment list box on the right will contain all comments in the table and will be filled in with gray to tell you that all comments are currently available for that field.**
4. **To start creating the list of comments linked to the field, double-click on a comment on the left side. You will be asked if you want to Override the default list and replace with the selection? Click Yes.**
5. **Continue double-clicking comments from the left to add them to the right.**
6. **When done click Close to save the linked list and close the window.**

   **NOTE:** *To delete a comment from a linked list, double-click on that comment on the right to remove it.*

# CultureDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the type of culture |
| ChargeCodes | Pick from list or add new. |
| OverdueDays | Enter the number of days that it takes to process a certain culture. Any days beyond that it would be considered 'overdue'. A brio query could be built to just show the overdue cultures ('pending list'). Could also use the 'build list' function but this function is for display purposes only. |
| SiteDefault | Selects from the Site Definition table; if present, automatically entered as the site when the culture is ordered |
| SourceDefault | Selects from the Source Definition table; if present, automatically entered as the source when the culture is ordered |
| LabelCount | The number of labels to print on InLab. |
| IsUrine | Tag as urine culture for instrument interface communication |
| Retired | True/False |
| CodeMap | The culture code used in the instrument, if interfaced |
| StepDefinition | If using Batch Steps, enter Step Definition for culture. |
| **Additional Testing** | |
| OrderGramStain | True/False. If a gram stain is ordered (set to true), when the specimen is InLab'ed, a message will be displayed asking if a label should be printed. |
| ReportGramStainDefault | True/False. Determines whether or not to ALWAYS report a gram stain. This can be changed on a case-by-case basis at the Culture Manager level. Note: If the gram stain is set to true, then the "Reportable" field is changed to default as true but can be modified if needed. |
| CultureTest1 | Defines a culture test to be performed always for this culture (pick form the culture test definition library) |
| CultureTest2 | Defines a culture test to be performed always for this culture (pick from the culture test definition library) |
| AncillaryProfiles | Optional associated ancillary profiles |
| **Auto Processing** | |
| EnableAutoBatchReview | True/False; allows you to use the Auto Result button in Batch Review window for that culture type. Set to true to allow plates to exist and maintain auto batch status |
| EnableAutoBatchPlates | Set to true to allow plates to exist and maintain auto batch status |
| AutoDefinition | Set the applicable Auto Schedule (pick from the auto schedule library) |

| Table Field | Description |
|---|---|
| **Plates** | |
| PlatePanel | Choose plate panel to be ordered when this culture is requested. Pick from list or add new. |
| PlateLabelsToSuppress | Enter the number of labels to suppress. For example, if it was a split plate. |
| **Resulting** | |
| AlwaysReportMessage | A standard comment that will appear on every report that is generated that contains this particular culture. |
| Organisms | This field is used to limit the possible organisms that may be entered as results on a given culture. It opens the Organism Definition table to select specific organisms. If none are listed here, all organisms are available to result the for the particular culture type |
| ResultDefault | Default result to apply to the culture |
| ReportOnInlab | Create preliminary report automatically on inlab |
| SuppressComment | Suppress culture comments from appearing on the formatted report |
| MaintainResult | True/False; keeps the original culture result on reports, even if an isolate has been created |
| **Culture Viability** | (If SpecimenViability Preference enabled) |
| SpecimenViabilityOverrideDefault | True/False; True activates next four override options for culture |
| SpecimenViabilityEnabled | True/False; False deactivates viability checking for this culture |
| SpecimenViabilityHours | Number of hours to use as override for the culture |
| SpecimenViabilityInvalidDisplay | Invalid Viability Comment to use instead of default |
| SpecimenViabilityValidDisplay | Valid Viability Comment to use instead of default |
| **USER** | |
| User1 | Optional user-defined field for culture |
| User2 | Optional user-defined field for culture |
| User3 | Optional user-defined field for culture |

## CultureTestDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description | Full description of the item |
| AutoOrder | Set to true to order automatically |
| ChargeCode | Pick from the list or add new |
| ReportDefault | Default reportable flag |
| Required | Set to true if required to result |
| ResultLibrary | Possible valid results for test |
| Retired | True/False |

## e.Query Data models

The e.Query Data Models library is used to create additional *views* to be used with the e.Query Management Report Designer. MicroPath comes with a standard number of views to use with the e.Query Designer, but if your specific data is not included in any of the supplied views, you may need to create a special view for your purposes. Creating views requires a good understanding of your database.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description* | Description of the view; displayed in e.Query Query Designer window. |
| Full Description | Optional lengthy description of view; displayed in the e.Query Query Designer window by right-clicking selected view name. |
| View Definition | Clicking the ellipsis opens the *Edit View Definition* window where tables are selected to add to the view. |
| View Name *(read only)* | Name of the view as stored in the database and created with the Edit View Definition window |
| Retired | True/False |
| **ADMIN** | |
| Is Standard *(read only)* | True/False; whether the view was created as a Psyche standard |
| Is Static *(read only)* | True/False |

## GramStainResultDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description | Full description of the gram stain result code |
| Morphology | Basic organism morphology (cocci, rods) |
| Result | Result to be reported |
| Retired | True/False |

## ICDDefinition

| Table Field | Description |
|---|---|
| Code* | ICD code |
| Description | Full ICD code description |
| Retired | True/False |

## InstrumentDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description of the instrument. This value appears in selection lists. |
| Retired | True/False |

## InsuranceDefinition

**NOTE:** *Will not accept duplicate codes*

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Name | Carrier Name |
| Description | Full description for the type of insurance |
| Retired | True/False |
| Type | Optional insurance type or category |
| **Address** | |
| Street | Free text |
| Street2 | Free text |

| Table Field | Description |
|---|---|
| Street3 | Free text |
| City | Free text |
| State | Information comes from a selection list, which allows you to have a pick list without any validation of the fields. See zip below. |
| Zip | If a zip code is entered the city and state populate automatically. |
| **Contact** | |
| Phone | Free text |
| Fax | Free Text |
| CustomerServicePhoneNumber | Free text |
| ProviderRelationsPhoneNumber | Free text |
| ProviderRelationsContactName | Free text |

## InterfaceController

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description* | Description of Interface Controller |
| ServiceName* | Name of service |
| Server* | Name of server |
| UserID | User ID to connect with |
| Password | User password |
| Domain | Domain name |
| AppKey | Appplication Key |
| Retired | True/False |

## Interface Map

Used to map codes from different sources for interface and other purposes.

| Table Field | Description |
|---|---|
| Mapping Type* | Speciifies the type of mapping (table used): CASE, INS, ORDER, PHY, SOURCE, TESTS. *Custom* may be available if defined in Complex Mapping preference. |
| **Mapped Values** | |
| Internal Code* | Lab Code |

| Table Field | Description |
|---|---|
| External Code* | Vendor Code |
| **Additional** | |
| Description | Full description of the item |
| Retired | True/False |

## IsolateTemplateDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description | Full description for the item |
| OrganismModifier# | Set the organism modifier applicable to the template |
| Organism | Set the organism applicable to the template |
| OrganismDescription# | Set the organism description applicable to the template |
| Comment# | Set the comment applicable to the template |
| CommentReportable | Set the comment reportable status applicable to the template |
| Retired | True/False |
| Additional Testing | |
| AntibioticPanels | Set antibiotic panels to order as part of the template |
| BioChemicalPanels | Set biochemical panels to order as part of the template |
| Ancillary Profiles | Set any ancillary profiles to order as part of isolate template |

## LOINC Definition

| Table Field | Description |
|---|---|
| Code* | Test or culture code |
| Description | User -defined description of test/culture |
| Name | Long name for test/culture (e.g. Bacteria identified in Throat by Culture) |
| ShortName | Short name for test/culture (e.g. Bacteria Throat Cult) |
| Number | LOINC code # (e.g. 626-2) |
| ObservationClass | Arbitrary classification (e.g. MICRO) |
| Retired | True/False |

## MediaDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the type of media |
| LabelCount | Set the number of plate labels to print |
| Retired | True/False |
| Additional Testing | |
| IsolateTemplates | Select isolate templates that are applicable to this (pick from the isolate template definition library). If media has one Isolate Template defined, that template is automatically ordered when new Isolate Template is added to media. |
| AncillaryProfiles | Select ancillary profiles that are applicable to this entry (pick from the ancillary profile library). |

## MediaPanelDefinition

Determines which media are automatically created when a culture is marked Inlab.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the type of media panel |
| Constituents | The tests that will automatically be ordered as part of the panel. Pick from list or add new. |
| Retired | True/False |

## MicroTestDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length |
| Description | Full description for the micro test |
| ResultLibrary | Creates a pick list of appropriate result responses. When the Result library window is displayed, possible choices will be in the Tree and the results that have been selected will be in the Property Grid. Users can pick from list or add new. This list is generated from the Micro Test Result Definition. |
| RestrictiveList | True/False; whether to restrict result entry to only those results specified in the above list from the Result Library |
| ChargeCodes | Pick from list or add new |
| AlwaysReportMessage | A standard comment that will appear on every report that is generated that contains this particular test |

| Table Field | Description |
|---|---|
| OverdueDays | Enter the number of days that it takes to process a certain culture. Any days beyond that it would be 'overdue'. A Brio query could be built to just show the overdue cultures ('pending list'). Could also use the 'build list' function to create a list of pendings however this function is for display purposes only. |
| AllowPrelim | Set to true to allow this test to be resulted Preliminary |
| Container | Select from list from the Clinical Vial Definition |
| LabelCount | The number of labels to print on Inlab |
| Parasites | Selection list of parasites applicable to the test |
| Retired | True/False |
| **USER** | |
| User1 | Optional user-defined field for test |
| **GramStainResulting** | |
| UseGramResult | True/False; True displays gram result from Culture GramTests field if ordered on same case as culture. |
| **ParasiteResulting** | |
| UseParasiteResult | True/False |

## MicroTestResultDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the micro test result |
| ApplicableComment | Comment to add to result |
| EnableResultDetail | Allows an additional detail window to be available in result entry |
| Retired | True/False |

## OrganismClassificationDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description of the item. |
| Retired | True/False |

## OrganismDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the organism name |
| Snomed | Pick from list or add new. |
| ShowAlert | Set to true to alert when this organism is selected |
| Retired | True/False |
| ChargeCodes | Define charge codes that will be automatically billed upon selection of this organism |
| **USER** | |
| User1 | Optional user-defined field for organism |
| **Class** | |
| Family | Optional organism family from the Organism Family Definition |
| GeneralClassification | Used as classification on antibiogram reports (optional) |
| Classification | Classification as in Aerobic/Anaerobic to be used to generate alerts in Culture Manager when organism is identified on media with mismatched classification. Note: Aerobic Anaerobic Mismatch Message preference must be turned on with message defined. |
| ValidGramResult | Defines a valid gram stain result for this organism, triggers alert when invalid results are selected |
| **Critical** | |
| Critical | Set to true to define the organism as critical |
| CriticalInputRequired | Set to true to require a user input prompt to acknowledge the critical organism |
| CriticalPrompt | Set the critical prompt |
| **Instrument** | |
| InstrumentRequirements | Biochemicals that the instrument may require with the order |
| CodeMap | The organism code used in the instrument, if interfaced |
| **Reporting** | |
| AlwaysReportMessage | A standard comment that will appear on every report that is generated that contains this particular organism |

## OrganismFamilyDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |

| Table Field | Description |
|---|---|
| Description | Full description for the organism family |
| Retired | True/False |
| CodeMap | The organism family code used in the instrument, if interfaced |

## ParasiteGramDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the parasite name |
| Retired | True/False |

## ParasiteStageDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the parasite stage |
| Retired | True/False |

## ProfileDefinition

In the Profile Definition table you may define groups of tests that can be ordered by entering a single code. These orders can include both cultures and micro tests and as many of each as needed. Using profiles can save a great deal time in the accession process.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the ordering profile |
| Constituents | Comes from CultureDefinition |
| TestConstituents | Comes from MicroTestDefinition |
| Retired | True or False |
| **Container** | |
| AmountFluid | Amount of fluid required in the vial |
| AmountUnits | Units of measure for the type of vial |
| VialCode | Vial code from Clinical Vial Definition |

## ReferenceLab

In the ReferenceLab table you may define various Performing Locations where specimens may be sent to perform the testing.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Name | Name of the Performing Location |
| Description | Full description for the Reference Lab |
| Contact | Contact name from the Performing Location |
| Phone | Contact phone from the Performing Location |
| Retired | True or False |
| **Address** | |
| Address | Address of the Performing Location |
| Address2 | Address2 of the Performing Location |
| City | City of the Performing Location |
| State | State of the Performing Location |
| Zip | Zip of the Performing Location |
| **Physician\Client** | |
| MedicalDirector | Medical Director Name |
| MedicalDirectorLocation | Select the Medical Director Location |

## SensitivityGroupDefinition

This applies to groups defined for antibiotics and are applied to the organisms ranges.

These can also be updated a few at a time by going into the sensitivity range window or individually by going into the menu bar item Other and then clicking on Sensitivity Ranges.

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the sensitivity group |
| Constituents | What antibiotics are to be ordered. Pick from list or add new. |
| UseKB | True/False |
| UseMIC | True/False |
| Retired | True/False |

The KB, and user MIC will be dithered unless ranges have been entered.

### How to enter antibiotic ranges and SIR/MIC:

1. **Create a group of antibiotics**
2. **Set up range for antibiotics and Organisms (combined). Note: You only need to define the intermediate range. The system calculates the high and low.**
3. **Apply the ranges to the organism(s) (S=Sensitive, I=Intermediate and R=Resistant)**

## SensitivityPattern

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description* | Full description for the item |
| AlertMessage* | Sets the alert to display when this pattern fails. |
| Organisms | Set the organisms in which th is pattern applies |
| Cultures | Sets the cultures in which this pattern applies |
| DefinedPattern | Enter the details of the SensitivityPattern rules |
| Retired | True/False |
| Status | Enabled/Disabled (not in use) |

## SiteDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the culture site |
| ChargeCodes | Define charge codes that will be automatically billed upon selection of this site |
| Retired | True/False |

## SnomedDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the Snomed code |
| Retired | True/False |

## SourceDefinition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length. |
| Description | Full description for the culture source |
| ChargeCodes | Define charge codes that will be automatically billed upon selection of this source |
| Retired | True/False |

## Status Step Definition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length to define the process of steps (e.g. Culture) |
| Description* | Full description for the process steps definition |
| StepItems* | Click the ellipsis to open a picklist where you can add, delete, rearrange steps in the process |
| Retired | True/False |

## Storage Rack Definition

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length to define the storage rack |
| Description* | Full description for the storage rack |
| Columns | # of columns in the storage rack |
| Rows | # of rows in the storage rack |
| Retired | True/False |

## User Role

Using the User Role table you may create standard sets of allowed privileges that define what a type of user can or can't perform. For example, you may have one User Role for Accessioning, another for Bench Work, and another for Supervisors.

Each of these roles can have their own individual processes within MicroPath they can perform based on the Role settings. You can also limit the specific management reports each Role can run.

If no User Role is defined for a given user that is also not an Admin user, a system "default" role is used that allows the following abilities:

- CanAccession
- CanManageCultures
- CanBatchResult
- CanBatchResultTests
- CanBatchLabel

| Table Field | Description |
|---|---|
| Code* | User defined up to 50 characters in length to define the user role (e.g. Accession) |
| Description | Full description for the user role |
| Retired | True/False |
| **Role - User Operations** | |
| CanAccession | True/False; determines whether user run Accession |
| CanManageCultures | True/False; determines whether user can run Culture Manager; if true, BuildLists field is open to limit the user's available build lists. |
| CanBatchResult | True/False; determines whether user run Batch Result |
| CanBatchLabel | True/False; determines whether user run Batch Label |
| CanBatchResultTests | True/False; determines whether user run Batch Result Tests |
| CanBatchSteps | True/False; determines whether user run Batch Steps |

| Table Field | Description |
|---|---|
| **Role - System Manager Operations** | |
| CanManageLibrary | True/False; determines whether user can run Library |
| CanManageUsers | True/False; determines whether user can run Human Resources |
| CanConfigureSystem | True/False; determines whether user can run Configuration |
| CanDesignLabels | True/False; determines whether user can run Label Designer |
| CanDesignResultReports | True/False; determines whether user can run Design Result Reports |
| **Role - Additional Operations** | |
| CanRunManagementReports | True/False; determines whether user run Management Reports; if true, opens ManagementReports field to optionally limit the reports user can run. |
| ManagementReports | List of Management reports the user can run; only available if user role CanRunManagementReports is True. If left blank, user role can run all management reports. |
| CanRunAntiBiogram | True/False; determines whether user can run Antibiogram |
| CanStorage | True/False; determines whether user can run Storage Manager |
| CanStorageFind | True/False; determines whether user can run Storage Find |
| CanStatusStep | True/False; determines whether user can change the culture status step in Culture Manager or Batch Steps |
| CanReferenceLabViewer | True/False; determines whether user can open the Reference Lab Viewer window, if Reference Lab Module is configured. |
| CanReferenceLabRequisitionDesigner | True/False; determines whether user can open the Reference Lab Requisition Designer and Reference Lab Label Designer windows, if Reference Lab Module is configured. |
| BuildLists | List of Build Lists role can run; only available if user role Can ManageCulture is True. If left blank, user role can run all lists. |
| CanDeliveryReview | True/False; determines whether user can run Delivery Monitor |
| **Role - User Privs** | |
| CanQualityReview | True/False; determines whether user can run Quality Review |
| CanDeactivateRecords | True/False; determines whether user can deactivate records |
| **Role - Dashboard** | |
| Can e.Dashboard | True/False; whether user can run e.Dashboard, if purchased. True opens up the following four fields. |
| Dashboards | Select from a picklist the available Dashboards to allow the user to access. If none are selected, user can access all available Dashboards. |
| CanDashboardCreate | True/False; whether user can create new Dashboards |
| CanDashboardEdit | True/False; whether user can edit existing Dashboards |

| Table Field | Description |
|---|---|
| CanDashboardRetire | True/False; whether user can retire existing Dashboards |
| **Role - Modules** | |
| Can e.Docs | True/False; whether user can run e.Docs, if purchased |
| Can e.Monitor | True/False; whether user can run e.Monitor, if purchased |

## ZipCode

| Table Field | Description |
|---|---|
| Code* | US Zip code |
| Description | Full description for the zip code location |
| City | City related to Zip code |
| State | State related to Zip code |
| Retired | True or False |

# Library Menu

| Menu Name | Menu Options |
|---|---|
| File | **Show User** - shows current user<br>**Version** - shows the current MicroPath version in use<br>**Exit** - exits MicroPath |
| Operations | **Accession** – opens the Accession window<br>**Culture Manager** – opens the Culture Manager window<br>**Batch Result** – opens the Batch Result window<br>**Batch Label** – opens the Batch Label window<br>**Result Tests** – opens the Result Tests window<br>**Batch Steps** – opens the Batch Steps window<br><br>**Library** – opens the Library window<br>**Human Resources** – opens the Human Resources window<br><br>**Configuration** – opens the Configuration window<br>**Storage Manager** – opens the Storage Manager window<br>**Storage Find** – allows you to find the location of a specimen<br>**Label Designer** – opens the Label Designer window<br><br>**Run Management Reports** – opens the Management Reports window to select and run reports<br>**Antibiogram Report** – opens the Antibiogram Report window<br><br>**Design Result Reports** – opens the Report Designer window<br>**e.Dashboard** – if purchased, opens the e.Dashboard window – see separate documentation<br>**e.Monitor** – if purchased, opens the e.Monitor window – see separate documentation |
| Window | Shows currently opened windows to select |
| System Management (Admin) | **Deactivation** - executes the deactivation process<br>**Purge Orders** - executes the order purge process |
| Search | **Run (Ctrl+R)** - searches using current criteria |
| All | **New (Ctrl+N)** - new record for current table<br>**Save (Ctrl+S)** - save current record<br>**Save+ (Ctrl+Shift+A)** - save current record and open new window<br>**Audit (Ctrl+T)** - shows audit table of current record |
| Other | **Selection Lists -** Allows you to create selection or “pick” lists for most fields<br>**Sensitivity Ranges** - define sensitivity ranges<br>**Sensitivity Groups** - define sensitivity groups<br>**Pattern Map** - |

## Selection Lists

The *Selection Lists* option from the Library Other Menu allows you to set valid entries for most fields in MicroPath. When you choose the Selection Lists option, the window shown in Figure 8-3 opens.

### To add valid entries for a field:

1. **Locate the table/window on the left grid of the window and highlight the table field for which you want add valid entries.**
2. **Enter each valid entry in the New Item field on the bottom and click Add. Each valid entry added is displayed in the CodedPhrase column.**

**NOTE:** *If using user-definable fields that are installed with a label of User#, etc., the field name may be re-defined from the System menu of the Configuration window.*

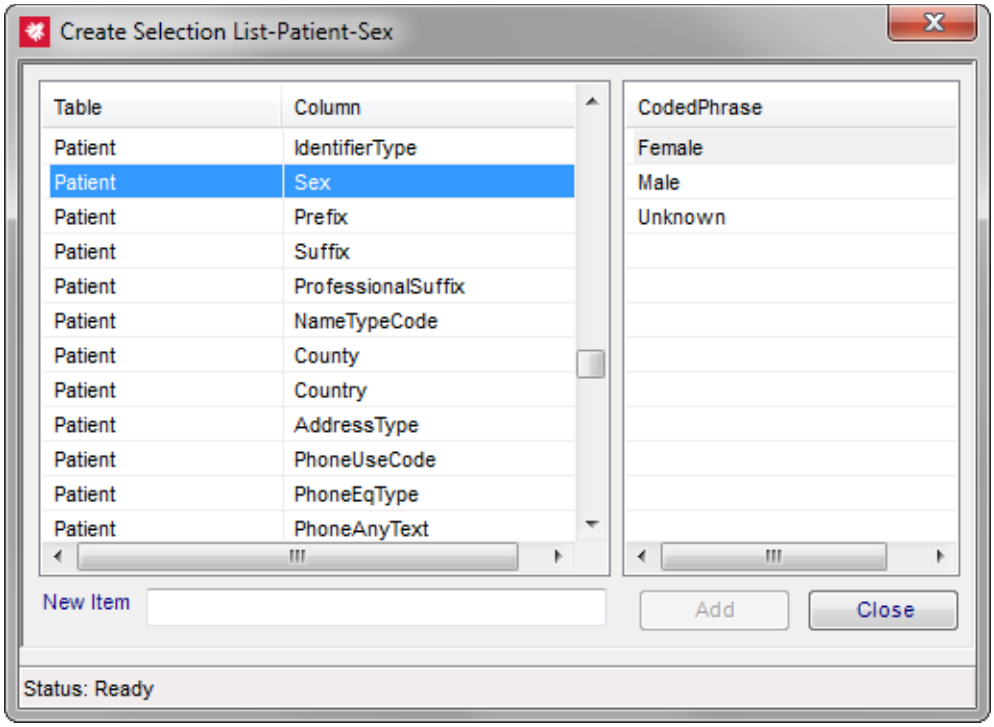



Figure 8-3 - Create Selection List Window

## Sensitivity Ranges

In the Sensitivity Ranges window shown in Figure 8-4, you can specify the Kirby Bauer and MIC ranges to be used for manual sensitivity entry. Selecting each antibiotic, you then enter the valid ranges for each organism in the organism grid.

Ranges are easily entered by entering the Intermediate range, which then calculates the Sensitive and Resistant values for you. If the Intermediate MIC range is entered, MicroPath calculates all the appropriate Kirby Bauer S,I,R values and MIC S,R values automatically.

### To specify sensitivity ranges for an antibiotic:

1. **Select the antibiotic in the top field.**
2. **In the organism grid, locate the organism you want to up and select the MIC-I value for that organism.**
3. **Enter the MIC-I range as 2-4, for example. All other ranges are automatically calculated.**
4. **Click Save to save when done, then click Close to close the window, or click Save Close to save and close in one step.**

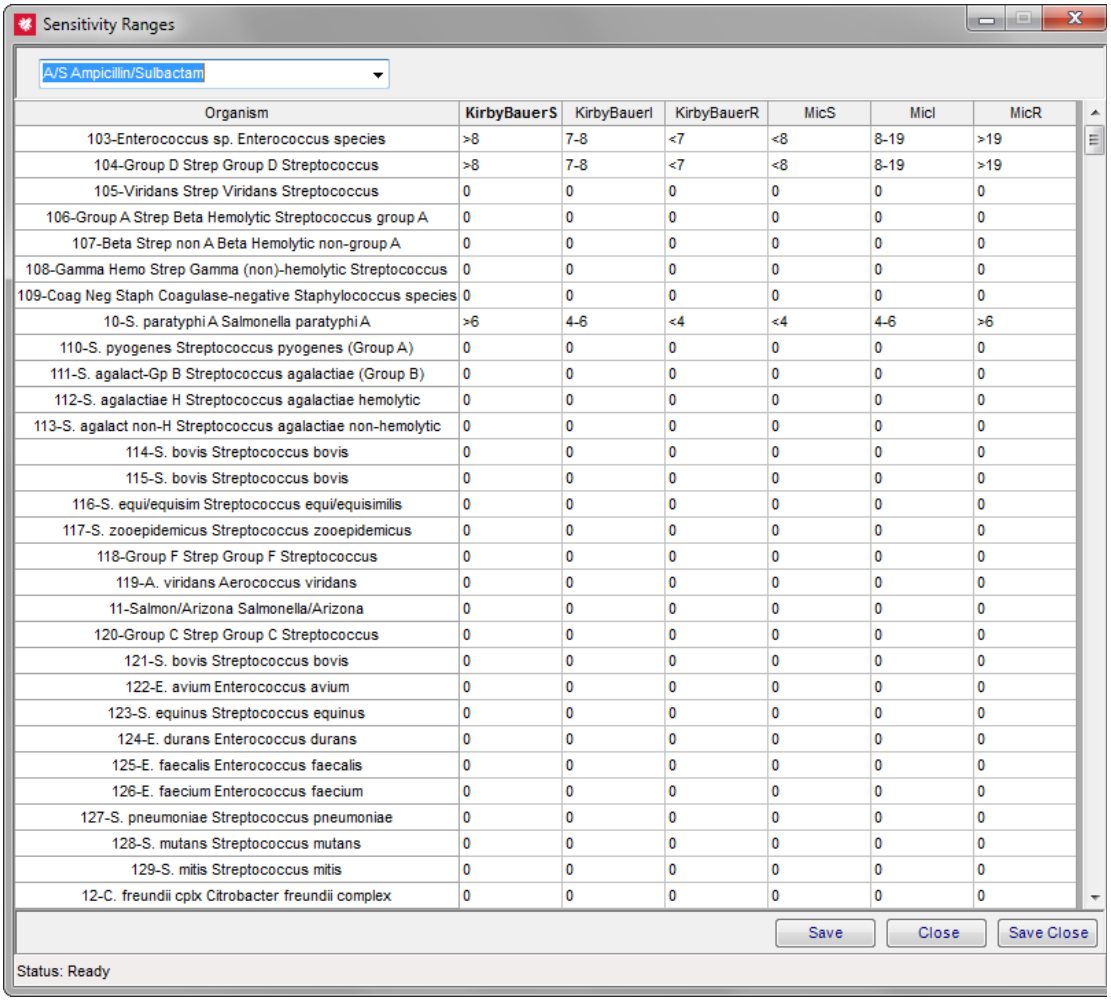



Figure 8-4 - Sensitivity Ranges Window

## Sensitivity Groups

If multiple organisms have similar sensitivity patterns, they may be defined together as sensitivity groups using the Sensitivity Groups window shown in Figure 8-5. This allows you to assign antibiotic ranges to multiple organisms in one place.

The definitions of the Sensitivity Group must be first defined in the Sensitivity Group Definition table in the library.

### To define a sensitivity group:

1. **From the Other menu, select the Sensitivity Groups to open the Sensitivity Groups window.**
2. **Select the predefined sensitivity group name in the Sensitivity Groups selection box. The Sensitivity Group Definition data stored in the library is displayed in the upper right corner of the grid and any sensitivity ranges defined for the constituent antibiotics is displayed in the Selected Group Antibiotic Ranges grid.**
3. **Add organisms that you want to add to this group by double-clicking each in the Organisms list. They are added to the Organism Selected Ranges section on the lower right.**
4. **Highlight each organism, click the check box for either Use KB or Use MIC, then click Apply. The displayed ranges and criteria will be used for that organism for all antibiotics listed.**

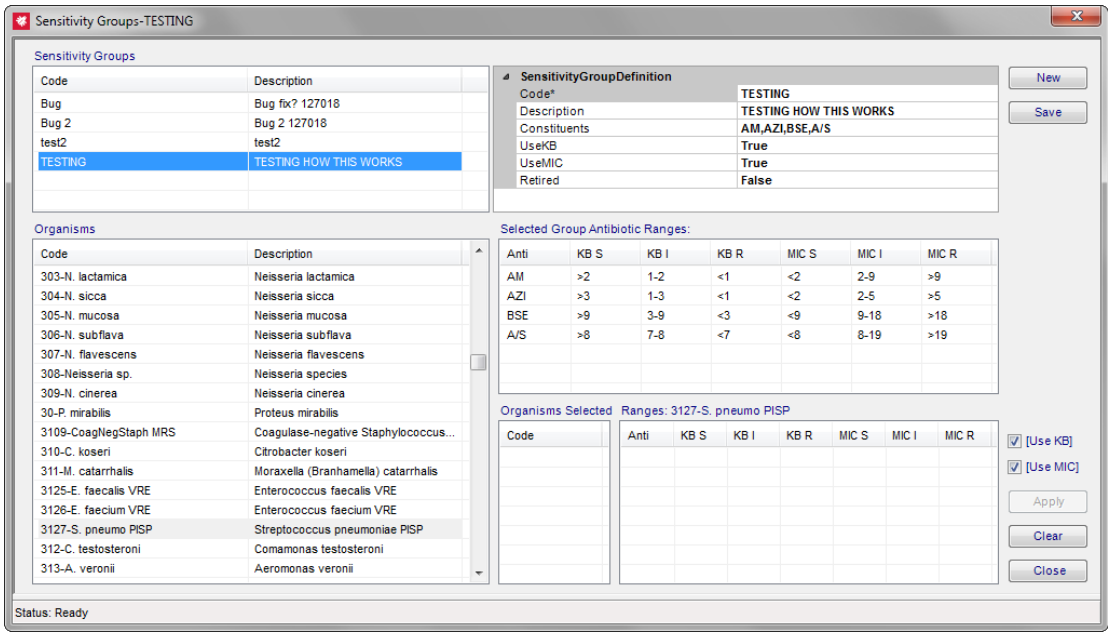



Figure 8-5 - Sensitivity Groups Window

## Pattern Map

If sensitivity range patterns have been defined, the Pattern Map window displays the count for each organism that has been reported with the expected sensitivity pattern per culture type.

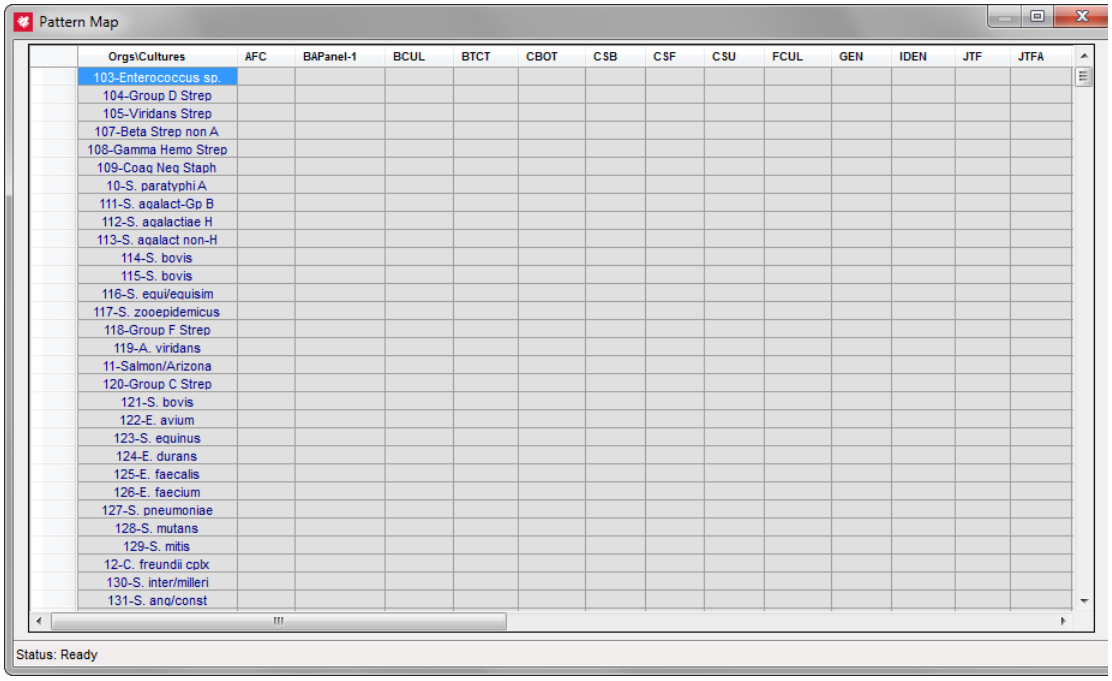



Figure 8-6 - Pattern Map Window

# Ancillary Profiles - Result Entry Definitions

*Ancillary Profiles* within MicroPath are used to order additional predefined test(s) to a case based on various criteria on multiple levels. Depending on how your system is defined, you may have Ancillary Profiles added to a case based on any or all of the following:

- Ordered culture type
- Media/plate used
- Isolate template used

The three tables - *Culture Definition*, *Media Definition*, and *Isolate Template Definition* have an Ancillary Profile field to define the profiles to be ordered with them.

Before you can set up Ancillary Profiles, the SiteWideReserved Preference for Ancillary Testing must be set to true for the method(s) you want to use. This is done by Psyche Support. Once this preference is on, the Ancillary Profile and Ancillary Test Definition tables are available.

## Configuring the Result Entry Definitions for Ancillary Profiles.

If *enabled* in your system, highly configurable result entry definitions that affect ordering, resulting and reporting may be defined for ancillary profiles. Ancillary profiles can be added to a case based on culture, media, or isolate.

Ancillary profiles have the field *Result Entry Definition*. When you click <Data Entry Definition> in the Result Entry Definition field, the ellipsis (...) appears, which when clicked, opens the Edit Result Entry Definition window for that profile. An example of this window for the BA Profile (Bacillus anthracis) is shown in Figure 8-2.

**NOTE:** *changes or modifications to any parameter in the Edit Result Entry Definition window take affect for profiles that are ordered after the modification has been made.*

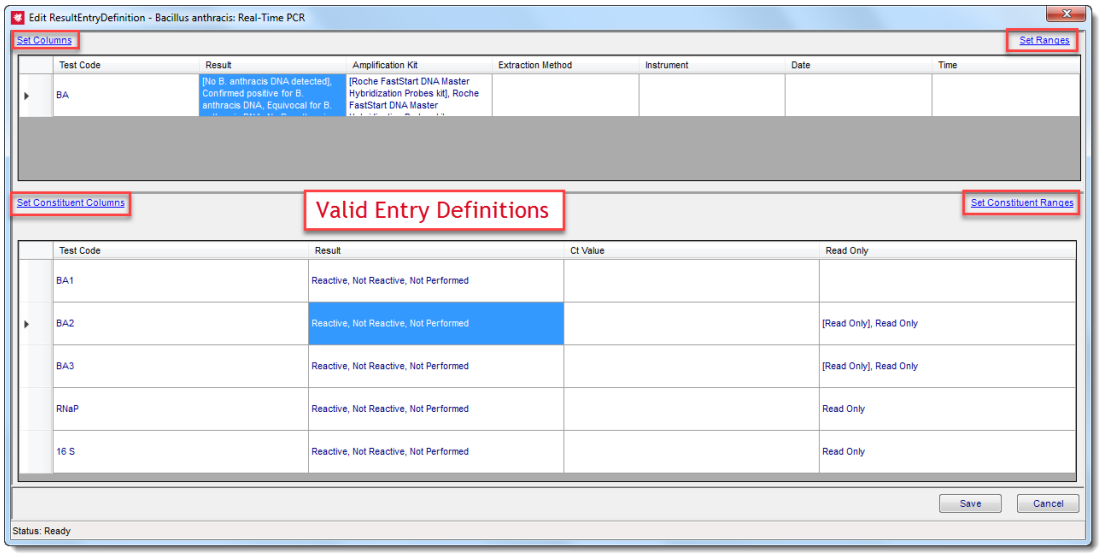



Figure 8-7 - Edit Result Entry Definition Window

The top grid lists any information that has been defined for the profile itself, while the bottom grid lists all the constituents that have been defined for the profile in the respective profile's *Constituents* field along with any result entry definitions for the constituents.

## Set Columns / Set Constituent Columns

The *Set Columns* link opens a window to define what fields are to be displayed in the profile's window of Result Manager. See sample Set Columns window in Figure 8-3.

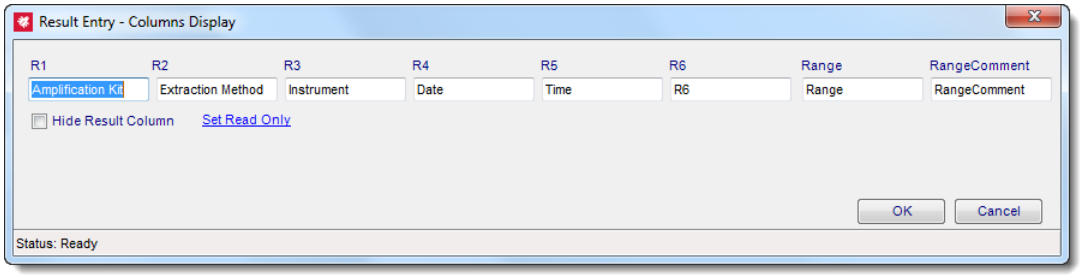



Figure 8-8 - Set Columns for Ancillary Profiles Window

Additional information to add to the profile result is defined in this window.

To add a field in addition to the result, add a label in the **Label** field for R1-R6 (Row 1-Row 6), which turns on that field and allows you to define the following for each:

- **Visible**: sets the row visible or not
- **Read Only**: sets the row to be read only or can be edited
- **Required**: set the row to require a response for profile completion

- **Range** and **Range Comments** can be defined here, but they are usually defined on the constituent level.
- Select an **Instrument** from the drop-down list if this profile is performed on an interfaced instrument and click the **Auto Order** checkbox to automatically send the order to the instrument when the profile is ordered.
- **Display Definitions** may also be used to alter the screen display of certain labels.
- Click **OK** to save changes or **Cancel** to exit without saving.

To remove a column on an existing profile, clear out the label for that column and the column will no longer be visible. New ordered profiles will reflect the change.

The *Set Constituent Columns* link opens a similar window to define the columns to be displayed during result entry of the BA profile, in this example, and is shown in the constituent section of the window. The definitions in this window determine what users will see when they result the constituents for the profile.

Figure 8-4 shows both the Set Constituent Columns window and the resulting Constituent Result Entry window it defined, when entering results in Result Manager. Although this profile has many constituents, when the profile was ordered, only the six constituents in the second Figure were selected.

**NOTE:** *The Set Constituent Columns window does not have any field to attach instruments to the constituents. That is done on the profile level.*

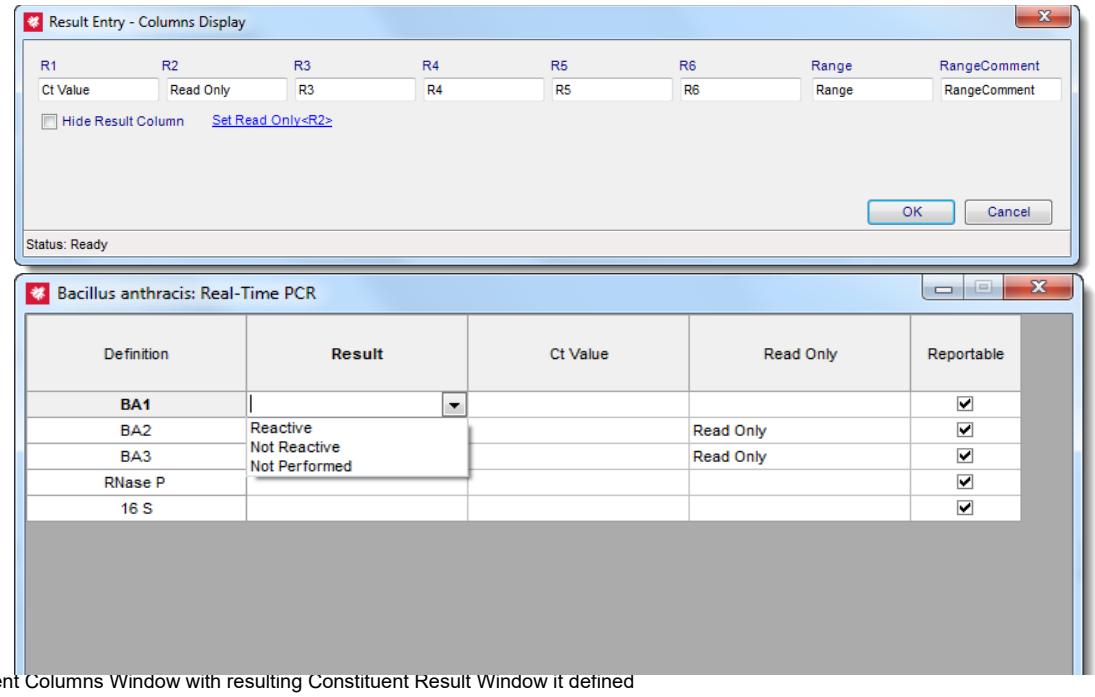



Figure 8-9 - Set Constituent Columns Window with resulting Constituent Result Window it defined

## Set Valid Entry Definitions

Once a profile's constituent columns/fields have been defined in the Set Constituent Columns window, valid entry definitions may be entered for each constituent column defined for the constituent.

While viewing a profile's constituent grid in the Edit Result Entry Definition window, double-click the cell (column field) for the values you want to add or modify. Figure 8-5, for example, shows the BA profile Edit Result Entry Definition window, double-clicking the **Result** column for constituent **BA2** opens the Result Entry Definition window for that field, where valid entries for the **BA2 Result** can be defined.

**NOTE:** *The Test Code field does not open a Result Entry Definition window.*

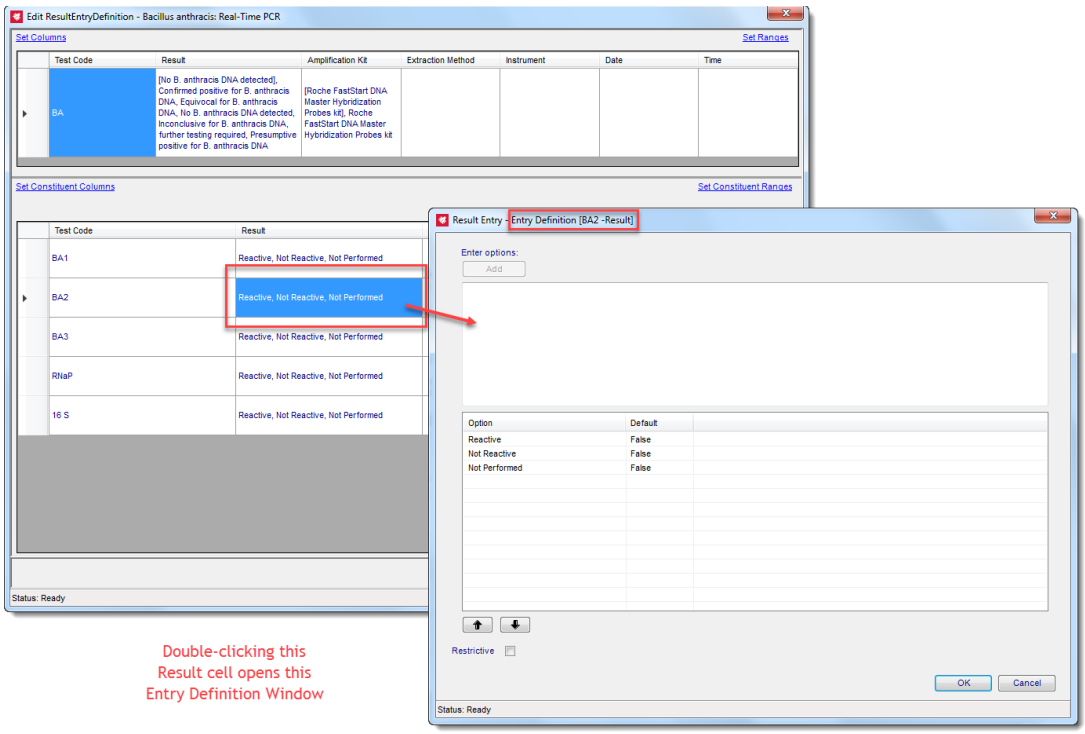



Figure 8-10 - Result Entry Definition Window for constituent [BA2 Result]

## Result Entry Definition Window

In any Result Entry Definition Window, valid entries are entered by typing in the text in the Options box at the top and clicking the Add button. Each entered definition is added to the defined list below with the **Default** set *False*.

Once added, you can change the parameters for each definition by right-clicking on the row and selecting one of the following from the context-sensitive menu:

- **Set As Default:** Makes this entry the default entry for the field. There can only be one default.
- **Edit:** Opens a window where you can edit the definition and then save it.
- **Remove:** Deletes the selected definition.

Below the list of definitions, the following buttons or fields can be used to:

- **Up / Down Arrows:** Moves the highlighted definition up or down in the list for organizational purposes.
- **Restrictive:** Prohibits free text from being entered in that field during result entry.

**NOTE:** *When entering Valid Entry Definitions for profile constituents, any set of definitions can be easily copied and pasted into another constituent right on the Edit Result Entry Grid. Select the entry cell you want to copy, right-click and select* ***Copy****. Then select the grid cell where you want to paste the definition, right-click and select* ***Paste****.*

## Set (Constituent) Ranges/Range Rules

The *Set Ranges* link opens a window to define additional range rules to be applied when the profile is resulted.

The *Set Constituent Ranges* link opens a similar window to define the range rules to be applied when the constituents are resulted. See Figure 8-6 below which displays the list of rules that have already been created for this profile.

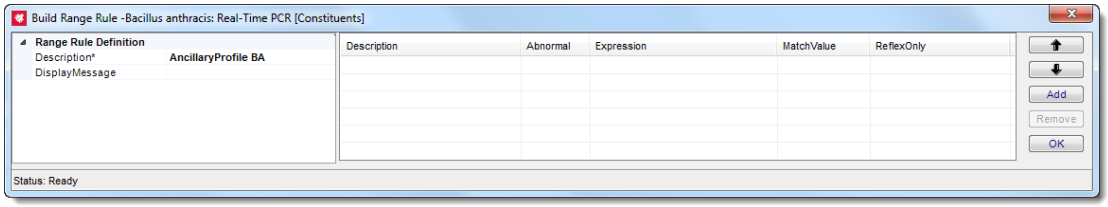



Figure 8-11 - Set Constituent Ranges

When editing or adding a new range rule, the *Range Rule Item Definition* window opens, shown in Figure 8-7. Here rules can be modified or created new.

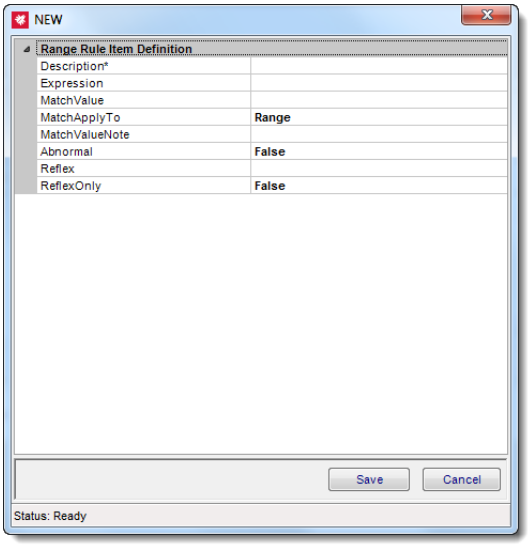



Figure 8-12 - Range Rule Item Definition Window

## Range Rule Item Definition Fields

| Field Label | Description |
|---|---|
| Description | User-defined descriptive text |
| Expression | Click ellipsis to open the Edit Expression window, where the rule is created.<br><br>You may access a consolidated pick list of all entry fields from the current profile by entering "#"in the Expression field. It will then be added to the Expression you build in the Edit Expression window.<br><br>If currently working with constituent ranges, the list will be a consolidation of all pick lists defined for constituents.<br><br>If working at the profile level, this pick list will be restricted to those items defined at the profile level. |
| Match Value (Text to display) | The value you want to be displayed, if the above expression is met |
| Match Apply To (Column to display text) | Click ellipsis to select one of the profile's field columns, which will display the Match Value to be displayed: R1-R6, Range, or Result. |
| Match Value Note (Internal comment about text) | Internal comment about the added text value |
| Abnormal | True/False; True flags the result as abnormal, if rule is met |
| Reflex | To initiate a Panel order when the rule is met, click the ellipsis and select the Panel code from the list. |
| Reflex Only | True/False; True evaluates the expression and performs the reflex order when rule is met, but does not display additional text. False performs both displays and reflex order, if present. |

### Editing a new range rule in the Edit Expression window

1. **Double -click to select the result item on which you want to apply the rule. It moves to the Expression building box.**
2. **Click the combination of operators you want to apply, clicking New Line if needed.**
3. **The built Expression is displayed in the Expression box.**
4. **When done, click the Check Syntax to make sure there are no errors.**

**Click OK when done, or Cancel to exit without saving.**

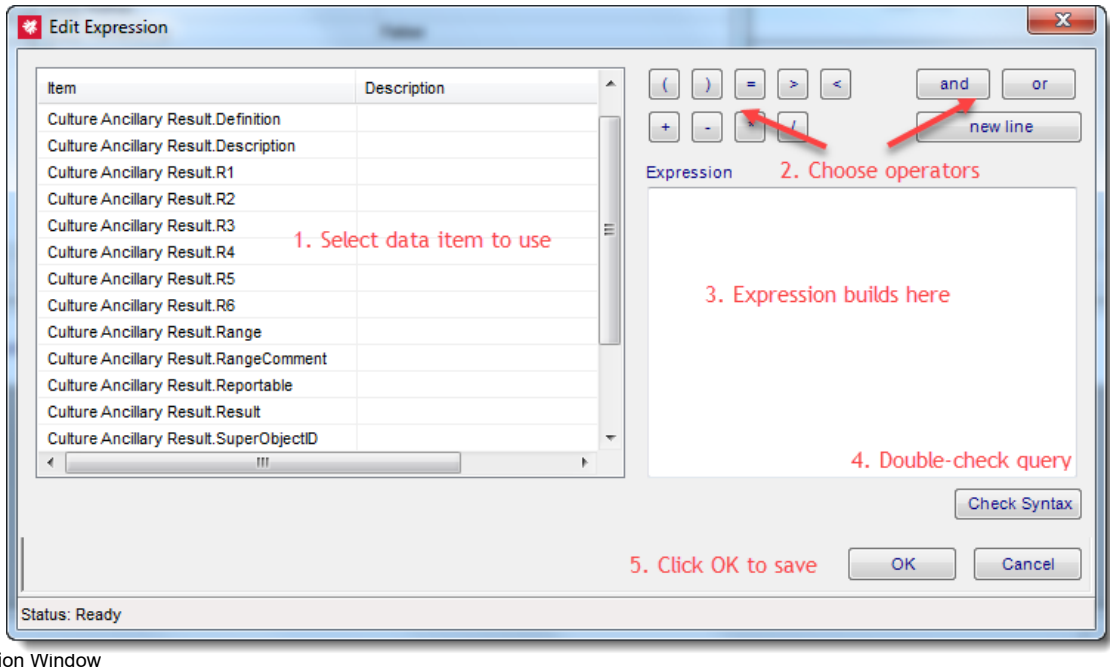



Figure 8-13 - Edit Expression Window

**NOTE:** *When creating the expression, you must use single quotes around the item definition and also value for alpha matches, but not numeric. e.g. '@Culture Ancillary Result.Result@' = 'normal' versus @Culture Ancillary Result.Result@ = 100.*

## Use of Wildcards Option

As of MicroPath, *wildcards (%)* may be used in creating expression with = that are evaluating text. This is an optional feature and must be enabled by preference.

Search text could then be entered in the rule as %ACK to locate any entries ending in ACK. ACK% and %ACK% matches entries beginning or including ACK, respectively.

## Notes

# Chapter 9
# Human Resources

*Human Resources* is where the users and physicians library information is stored in MicroPath. You access Human Resources to add new, modify existing, and retire both user and physician accounts for system access.

In order for anyone to use MicroPath, they must have a user account. Physician accounts are need in order to enter a physician in any of the physician related fields in the Accession window.

You access Human Resources either through the Human Resources icon on the left or from the Operations Menu. Users are required to have the Admin privilege in order to access Human Resources.

## Physicians

The *Physician table*, shown in Figure 9-1, is where all physicians and also physician groups are stored. You open the Physician table by selecting **Physician** from the *Library* drop-down menu. Once a physician is selected, all related fields are displayed in the detail grid.

The data tree on the left side of the window displays the following parameters by which you may search:

- Code
- Group
- Name

### Searching for Existing Physicians

To search by Code, select **Code** from the Search selection drop-down, enter the code you want in the second criteria field and click the binoculars button.

To search by Group, select **Group** from the Search selection drop-down, enter the group you want in the second criteria field and click the binoculars button.

To search by Name, select **Name** from the Search selection drop-down, enter the name (last, first) you want in the second criteria field and click the binoculars button.

With any method, if you leave the second field blank, you will get a complete list of the table. Highlight the specific record you want to see in the data tree and the details are displayed on the right.

**NOTE:** *You may also search by pressing* ***<CTRL+R>***

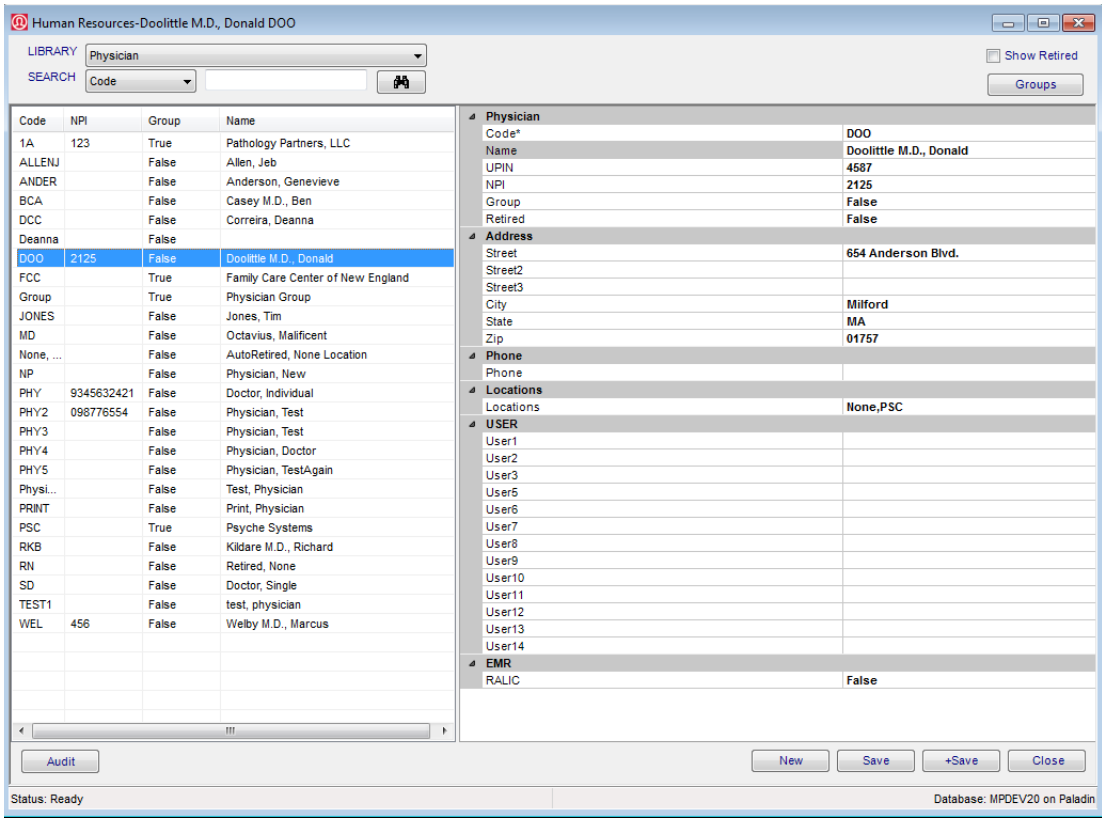



Figure 9-1 - Physician Table

# Physician table field descriptions

| Table Field | Description |
|---|---|
| Code* | Unique physician identifier; required field; used in pull down list when accessioning |
| Name | Physician's full name in the format (last, [space] first) |
| UPIN | Universal Physician Identification Number |
| NPI | National Provider Identifier |
| Group | True/False; used to specify whether record is an individual physician or a physician group |
| Retired | True/False; whether the physician is active/inactive |
| Address | |
| Street | Physician’s street address |
| Street2 | Second physician’s street address |
| Street3 | Third physician’s street address |
| City | Physician’s city |
| State | Physician’s state |

| Table Field | Description |
|---|---|
| Zip | Physician's zip code; accesses the Zip Code table and fills in the city and state if any |
| **Phone** | |
| Phone | Physician phone # |
| **Locations** | |
| Locations | Auto-filed with the physician's code; click the elipsis (...) to open Locations window where additional locations can be added. |
| **USER** | |
| User1 - User14 | Optional user-defined fields for physician |
| **EMR** | |
| EPassword | Used if client has purchased the EMR Integration Module |
| EStartDate | Used if client has purchased the EMR Integration Module |
| EMode | Used if client has purchased the EMR Integration Module |
| EReturnAs | Used if client has purchased the EMR Integration Module |
| **Outreach** | |
| WithholdGroupResults | Used if client has purchased Outreach |

## Physician Locations

To add, or modify a location, which is attached to a physician, click on locations in the data grid. The *Edit Locations* window is displayed showing the following data details.

| Table Field | Description |
|---|---|
| Location | The location code of the physician/group |
| Phone | Physician's phone number |
| Fax: | Physician's fax number |
| Email | Physician's email address |
| Retired | True/False |
| **Physician\Client** | |
| Group Physician: | Name of selected physician group |
| **USER** | |
| User1 - User3 | Optional user-defined fields for physician location |
| **OutReach** | |
| Withhold Group Results | Used if client has purchased e.Outreach |

In the edit location window, physician choices are limited to those entries that are designated as a group (group=true). All others will not be displayed in this list. The edit group physician window displays all entries marked with a group=true to be chosen in the group/Physician field in the edit locations window.

### To add a new physician:

1. **Click New. A blank detail grid is displayed.**
2. **Fill in the appropriate fields.**
3. **Click Save.**

### To modify an existing physician:

1. **Locate the physician by one of the search methods.**
2. **Change the field data to the new information.**
3. **Click Save.**

## Physician Groups

Physician Groups are added like physicians with the Group field set to True. When you have a physician selected in the grid, the Groups button in the upper right corner of the Physician window opens a window of all groups associated with that physician. With a Group selected, the Members button in the same window position opens a window displaying all the physicians associated with that group. Each window allows you to add a new physician or group on-the-fly.

# Users

The *User Table*, shown in Figure 9-2, stores all the information on valid MicroPath users. Every person who needs to use the MicroPath system must have a user account created. At installation, Psyche Systems will set up a Administrative account for you to start.

You open the User Table by selecting **User** from the *Library* drop-down menu. Once a user is selected, all related fields are displayed in the detail grid.

The data tree on the left side of the window displays the following:

- Code
- User name

## Searching for Existing Users

In the User Table you have the option to search for a given record by either code or user name.

To search by Code, select **Code** from the Search selection drop-down, enter the code you want in the second criteria field and click the binoculars button.

To search by User name, select **Username** from the Search selection drop-down, enter the username you want in the second criteria field and click the binoculars button.

With any method, if you leave the second field blank, you will get a complete list of the table. Highlight the specific record you want to see in the data tree and the details are displayed on the right.

**NOTE:** *You may also search by pressing* ***<CTRL+R>****.*

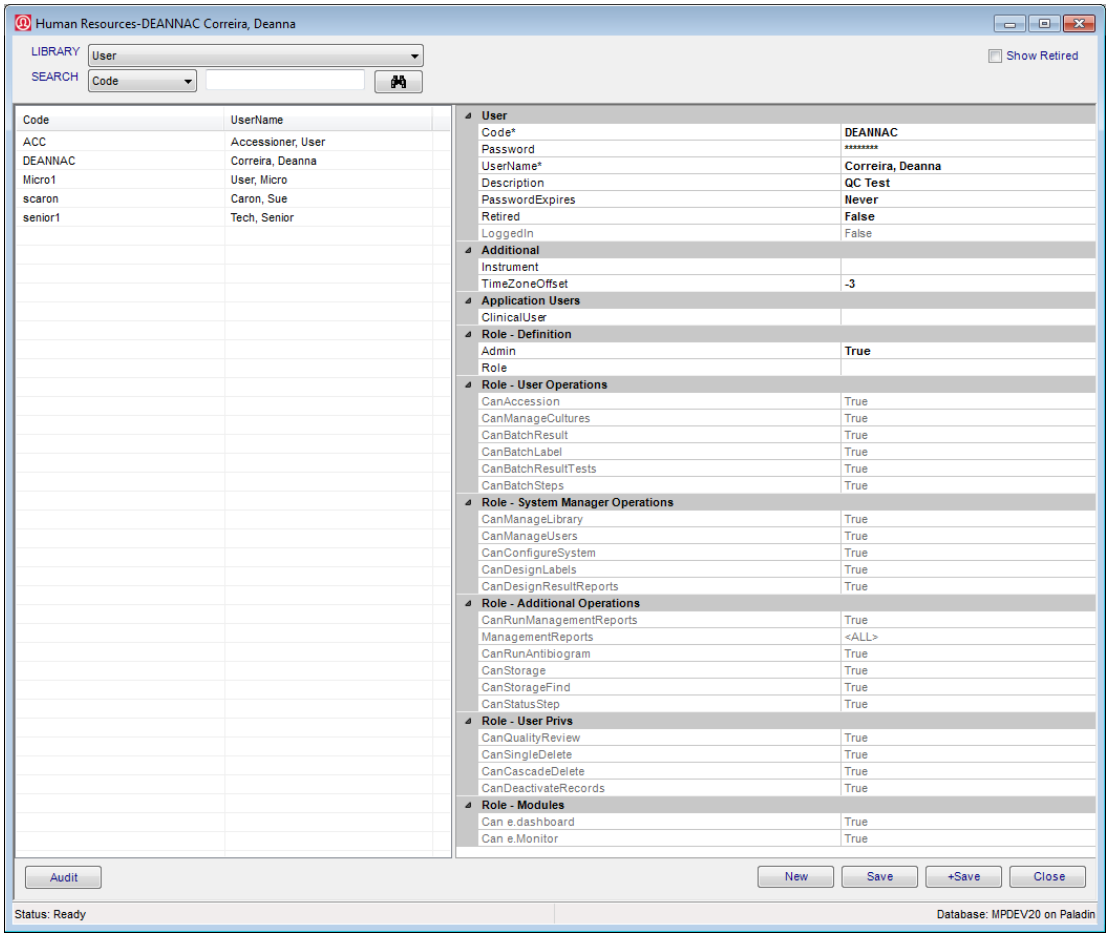



Figure 9-2 - User Table

## User table field descriptions

| Table Field | Description |
|---|---|
| Code | Required field; used as user code at login; not case sensitive. |
| Password | User passwords must be a minimum of 6 characters. Passwords are not required to be alphanumeric although it is recommended. Note: The System Manager can assign a default password for use at initial login. When the user logs on for the first time, they will be forced to change the default password. |
| Username | User's name in the format *(last, [space] first)* |
| Description | Free text. Anything for informational purposes is entered here. |

| Table Field | Description |
|---|---|
| Password Expires | The date at which the user must change their password before they are allowed to log in. To force the user to change their password at initial login, make the default password have an expiration date of the current date. |
| Retired | True/False; whether the user is active/inactive in the system |
| Logged In | True/False; dithered however will display whether or not a user is logged into the system |
| **Additional** | |
| Instrument | Default instrument in which to send orders |
| **Application Users** | |
| Clinical User | If MicroPath is connected to a clinical application, the clinical username for that user needs to be selected from the ellipsis listbox so that MicroPath may be accessed from the clinical product. |
| **Role - Definitions** | |
| Admin | True/False; whether or not the user should have rights to administrative functions (which are: Human Resources, Configuration, Label Designer, Library) on the system |
| Role | Enter the User Role defined in the User Role table to apply those privileges to the user or leave blank to not limit user. Note: If user has had a role assigned, then that role is cleared, the user's privilege settings returns to the default privileges. |
| **Role - User Operations**<br>**Role - System Manager Operations**<br>**Role - Additional Operations**<br>**Role - User Privs**<br>**Role - Dashboards**<br>**Role - Modules** | The rest of the fields are display only and show the settings for the specific role entered in the Role field above. Refer to the Library Chapter for more information on User Role settings. |

## To add a new user:

1. **Click New. A blank detail grid is displayed.**
2. **Fill in the appropriate fields.**
3. **Click Save.**

## To modify an existing user:

1. **Locate the user by one of the search methods.**
2. **Change the field data to the new information.**
3. **Click Save.**

# Human Resources Menu

| Menu Name | Menu Options |
|---|---|
| File | **Show User** - shows current user<br>**Version** - shows the current MicroPath version in use<br>**Exit** - exits MicroPath |
| Operations | **Accession** – opens the Accession window<br>**Culture Manager** – opens the Culture Manager window<br>**Batch Result** – opens the Batch Result window<br>**Batch Label** – opens the Batch Label window<br>**Result Tests** – opens the Result Tests window<br>**Batch Steps** – opens the Batch Steps window<br><br>**Library** – opens the Library window<br>**Human Resources** – opens the Human Resources window<br><br>**Configuration** – opens the Configuration window<br>**Storage Manager** – opens the Storage Manager window<br>**Storage Find** – allows you to find the location of a specimen<br>**Label Designer** – opens the Label Designer window<br><br>**Run Management Reports** – opens the Management Reports window to select and run reports<br>**Antibiogram Report** – opens the Antibiogram Report window<br><br>**Design Result Reports** – opens the Report Designer window<br>**e.Dashboard** – if purchased, opens the e.Dashboard window – see separate documentation<br>**e.Monitor** – if purchased, opens the e.Monitor window – see separate documentation |
| Window | Shows currently opened windows to select |
| System Management | **Deactivation** - executes the deactivation process<br>**Purge Orders** - executes the order purge process |
| Search | **Run (Ctrl+R)** - searches using current criteria |
| All | **New (Ctrl+N)** - new record for current table<br>**Save (Ctrl+S)** - save current record<br>**Save+ (Ctrl+Shift+A)** - save current record and open new window<br>**Audit (Ctrl+T)** - shows audit table of current record |
| User | Used by Admin user to reset login for other users left logged in inadvertently; may need to reopen Human Resources to access. |
| Transfer | **Export** - Used to export libraries<br>**Import** - Used to import libraries |
| Other | **EMR Client Set Up** - opens the EMR Client Configuration window for client set up, if available. |

## Notes

# Chapter 10
# Configuration

The Configuration button shown on the left is where the system manager defines the Site wide Preferences. They may also be accessed from the Operations Menu.

This window is where users with Administrator privileges can turn on or off many settings that affect how the system functions. Your system is installed with a standard set of preferences that may be changed at any time. Users without the Administration privilege will not be able to access the Preferences window.

Currently there are only site wide preferences to select.

## The Preferences Window

When you click the Configuration icon or select Configuration from the Operations menu, the Preferences window shown below opens. At first this window will be blank allowing you to search the preferences table in two ways.

- Click the drop-down arrow in the Search field box to display a list of preferences, then click the Search icon to find that preference.
- Leave the Search field blank and click the Search icon to get a list of all preferences.

**NOTE:** *The Scope selection should be left at All or Site Wide to see all preferences.*

When all preferences are listed, the Preferences window will look like the image displayed in Figure 10-1.

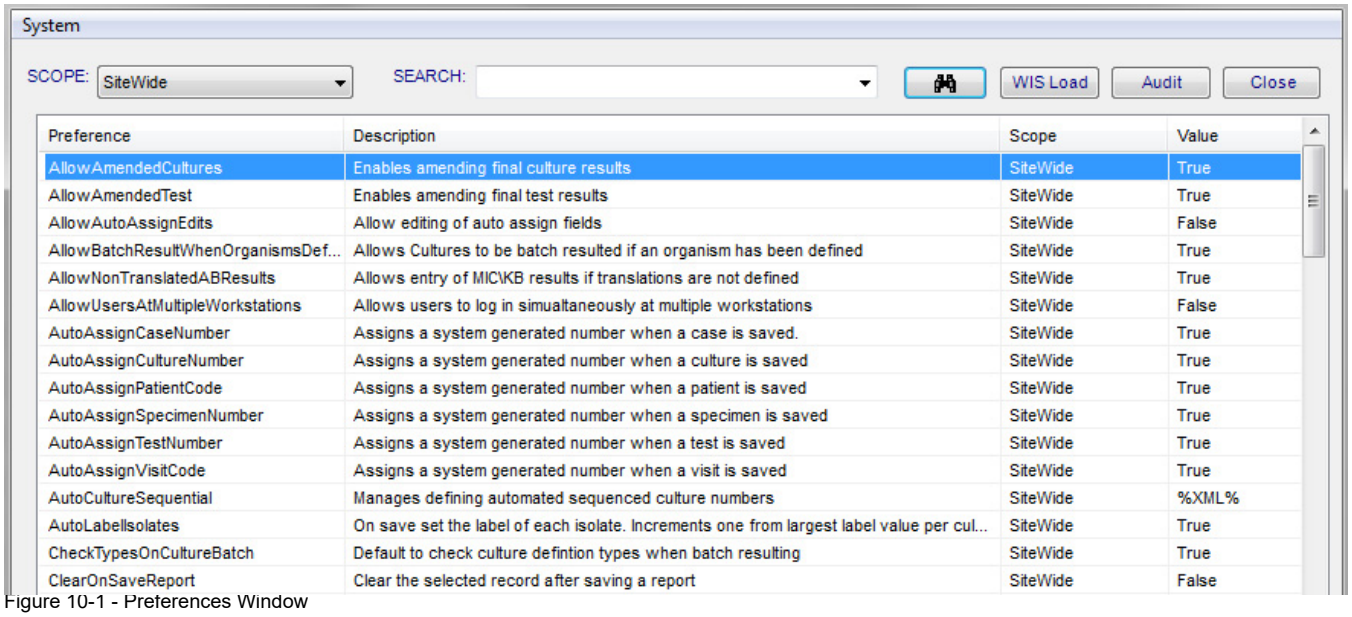


Figure 10-1 - Preferences Window

### The Preference window displays the following columns of information:

- Preference (name)
- Description
- Scope (All, SiteWide, User)
- Value (most are either True or False)

## Changing Preferences

With either a single or list of preferences displayed, double-clicking on a *True/False* preference prompts you if you want to change the preference to the opposite setting.

For those preferences that require a numeric or other value, a dialog box opens allowing you to enter the value.

The *DefaultAccessionSearch* preference is a special one in that you have a list of choices from which you may specify the default search parameter. You select your choice from a drop-down list that includes the following:

- CaseNumber
- CultureCode
- CultureDefinition
- CultureSpecimenNumber
- PatientCode
- PatientName
- SpecimenSite
- VisitCode

*The following table lists all the site wide preferences.*

# SiteWide Preferences

| Preference | Description | Scope | Value |
|---|---|---|---|
| AllowAmendedCultures | Enables amending final culture results | SiteWide | True/False |
| AllowAmendedTest | Enables amending final test results | SiteWide | True/False |
| AllowAutoAssignEdits | Allow editing of auto assign Fields. This option changes the fields that are auto assigned 'False' | SiteWide | True/False |
| AllowBatchResultWhenOrganismsDefined | Allows Cultures to be batch resulted if an organism has been defined. Organisms can't be resulted if they have an organism defined on a culture. Batch resulting is typically for organisms that are not worked up. | SiteWide | True/False |
| AllowNonTranslatedABResults | Allows entry of MIC/KB results if translations are not defined | SiteWide | True/False |
| AllowUsersAtMultipleWorkstations | Allow users to log in simultaneously at multiple workstations | SiteWide | True/False |
| AutoAssignCaseNumber | Assigns a system generated number when a case is saved | SiteWide | True/False |
| AutoAssignCultureNumber | Assigns a system generated number when a culture is saved | SiteWide | True/False |
| AutoAssignPatientCode | Assigns a system generated number when a patient is saved | SiteWide | True/False |
| AutoAssignSpecimenNumber | Assigns a system generated number when a specimen is saved | SiteWide | True/False |
| AutoAssignTestNumber | Assigns a system generated number when a test is saved | SiteWide | True/False |
| AutoAssignVisitCode | Assigns a system generated number when a visit is saved | SiteWide | True/False |
| AutoCultureSequential | Manages defining automated sequenced culture numbers | SiteWide | True/False |
| AutoLabelIsolates | On save set the label of each isolate. Increments one from largest value per culture. | SiteWide | True/False |
| CheckTypesOnCultureBatch | Default to check culture definition types when batch resulting | SiteWide | True/False |
| ClearOnSaveReport | Clear the selected record after saving a report | SiteWide | True/False |
| CollectionDateDefault | Default collection date of specimen and culture records | SiteWide | None, Yesterday, Today |
| DaysPasswordValid | Sets the number of days passwords are valid. When passwords are expired, users will be prompted to change their password at login. | SiteWide | # Days |
| DaysToMaintainCultureOrders | The number of days before canceling unreceived culture orders | SiteWide | # Days |

| Preference | Description | Scope | Value |
|---|---|---|---|
| DaysToMaintainFinals | The number of days to continue loading Final Cultures/Specimens. After this day, you can't access the finals in the Culture Manager. This will change the status from A=Active to I=Inactive. | SiteWide | # Days |
| DaysToMaintainSpecimenOrders | The number of days before canceling unreceived specimen orders | SiteWide | # Days |
| DefaultAccessionSearch | Sets the default search on the accession window | SiteWide | Case # (multiple options) |
| DefaultCultureManagerSearch | Sets the default search on the culture manager window (Utilizes F3 to return to default, if searching under another parameter.) | SiteWide | Search Parameter |
| DefaultIsolateCommentToReportable | Defaults isolate comment Reportable flag to true | SiteWide | True/False |
| DefaultIsolateToReportable | Defaults isolate Reportable flag to true | SiteWide | True/False |
| DefaultSensitivityToReportable | Defaults sensitivity reportable flag to true | SiteWide | True/False |
| EnableAdHocQualityReview | Enables Admin users to manually select cultures to perform quality review | SiteWide | True/False |
| EnableDaysToFinalCultures | Enables capability to set a minimum number of days inlab for Cultures before final reporting | SiteWide | True/False |
| EnableFormDisplay | Enables setting\saving display definitions for certain windows | SiteWide | True/False |
| EnableFullOrgList | Enables non Admin users capability to select organisms outside the defined list | SiteWide | True/False |
| EnableIsolateInstrumentOrdering | Enables orders to be placed on Isolates to Instruments\Interfaces | SiteWide | True/False |
| EnableIsolateReportOrder | Enabled setting report sequencing of reportable Isolates | SiteWide | True/False |
| EnableOrderIDOnInstrument | Enable ordering an id from the instrument | SiteWide | True/False |
| EnableOrderSensiIDOnInstrument | Enable ordering an id and sensitivity from the instrument | SiteWide | True/False |
| EnableOrderSensiOnInstrument | Enable ordering a sensitivity from the instrument | SiteWide | True/False |
| EnableOverdueReview | Enables lookup of overdue cultures and test | SiteWide | True/False |
| EnablePrelimTests | Enables use of Preliminary reports for selected Tests | SiteWide | True/False |
| EnableReportOnInlab | Enables cultures to automatically be reported as Preliminary on inlab | SiteWide | True/False |
| EnableSensiReview | Enables lookup of non final cultures with sensitivity results | SiteWide | True/False |

| Preference | Description | Scope | Value |
|---|---|---|---|
| EnableStorageManager | Enable utilizing and managing specimen storage racks | SiteWide | True/False |
| EnableTreeFonts | Enables defining display of tree nodes as Bold or Italic | SiteWide | True/False |
| FullSearchChecked | When True, sets Full Search as checked in the Culture Manager by default | SiteWide | True/False |
| GramStainChargeCode | Sets the charge code to bill when ordering a Gram stain. (Must correspond to a define charge code) | SiteWide | Defined charge code |
| IdleExit | The amount of idle system time (in minutes) allowed before logging a user out. (0 = Off) | SiteWide | Minutes |
| InstrumentOrderChargeCodes | Enables configuring charge codes to apply on instrument orders; charges can be set for:<br>IDChargeCodes<br>IDSensiChargeCodes<br>SensiChargeCodes | SiteWide | User Defined Codes |
| NewLineParasiteComment | Format Parasite comment on a separate line for Micro Test reports | SiteWide | True/False |
| OrderCommentIndicator | Message to display when an order comment exists | SiteWide | User defined message |
| PrependValueOnCaseNumberScan | Prepend value to scans involving the case number | SiteWide | User-defined |
| PreviewReportsOnSave | Prompts user to confirm and displays report preview on save | SiteWide | True/False |
| PreviewTestReportsOnSave | Prompts user to confirm and displays test report preview on save | SiteWide | True/False |
| PrintCultureLabelOnAccession | Defaults to printing culture\specimen labels on accession | SiteWide | True/False |
| PrintIsolateLabelOnInstrumentOrder | Print an isolate label automatically on instrument order | SiteWide | True/False |
| PrintIsolateLabelOnInstrumentOrderQuant | Set the number of isolate labels to print on instrument order | SiteWide | True/False |
| PrintOnPlateOrder | Automatically print plate labels when ordering plates | SiteWide | True/False |
| PrintPlateLabelOnAccession | Defaults to printing plate\test labels on accession | SiteWide | True/False |
| PrintSpecimenLabelOnAccession | Defaults to printing specimen labels on accession | SiteWide | True/False |
| PrintTestLabelOnAccession | Defaults to printing test labels on accession | SiteWide | True/False |
| PromptPendingGramStainOnSaveFinal | Prompt user if a culture grams stain is pending on a final report | SiteWide | True/False |

| Preference | Description | Scope | Value |
|---|---|---|---|
| PromptUnReportedSensitivitiesOnSaveFinal | Prompt user if sensitivities are set as not reportable on final report | SiteWide | True/False |
| ReportMICFormatted | Formatting - Displays MIC values on formatted report output | SiteWide | True/False |
| RequireABPanelOnInstrumentSensiOrder | Require an antibiotic panel when requesting a sensitivity from the instrument | SiteWide | True/False |
| RequireAntibioticResults | Require all antibiotics to be resulted when saving a final report | SiteWide | True/False |
| RequireBioChemicalResults | Require all BioChemicals to be resulted when saving a final report | SiteWide | True/False |
| RequireCultureAmendedComment | Require comment on amended culture results | SiteWide | True/False |
| RequireCultureCorrectComment | Require a comment when saving a corrected culture report | SiteWide | True/False |
| RequireIsolateLabelOnInstrumentOrder | Requires the isolate label to be present when ordering an instrument | SiteWide | True/False |
| RequireModifier | Require a modifier when saving an organism | SiteWide | True/False |
| RequireOrganismOnInstrumentOrder | Require an organism when sending an order to the instrument | SiteWide | True/False |
| RequireTestAmendedComment | Require comment on amended test results | SiteWide | True/False |
| RequireTestCorrectComment | Require a comment when saving a corrected test result | SiteWide | True/False |
| RequireUniqueIsolateLabelPerCulture | Requires isolate label values to be unique per culture | SiteWide | True/False |
| ReviewFlagsIsolateOnly | Only randomly flag cultures that have isolates for quality review | SiteWide | True/False |
| ReviewFlagPercentage | Sets the percentage of final cultures that are randomly flagged for quality review | SiteWide | % of cultures to flag |
| ReviewFlagTestPercentage | Sets the percentage of final tests that are randomly flagged for quality review | SiteWide | % of tests to flag |
| SuffixOnWorkUpManager | Display an organism suffix entry field on the workup manager | SiteWide | True/False |
| TestReportSourceSite | Display Source and Site on MicroTest Report | SiteWide | True/False |
| TreeItemHeight | Enables defining the height of nodes in the Tree (requires application restart) | SiteWide | -1 is default; 5-30 valid, but lower numbers overlap depending on font |

# System Menu

You access the System Menu within the Preferences window, as shown in Figure 10-2.

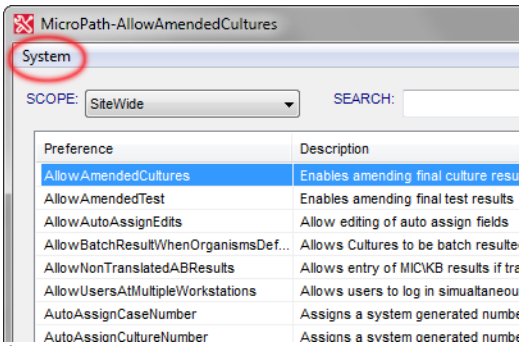



Figure 10-2 - Accessing System Menu from Preference Window

The System Menu gives you access to the following definitions:

- **Display Definitions** allows users to choose the information that will be displayed on the screen and will also allow the selection of colors.

**NOTE:** *The colors are only displayed in the tree view on the screen.*

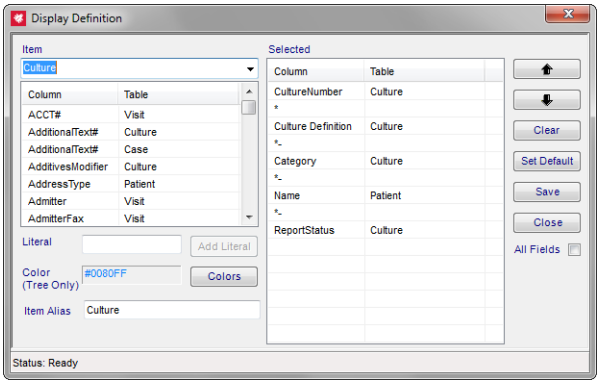



Figure 10-3 - Display Definition Window

- **Field Definitions** is where you can modify the display name for the fields on the various tables or add fields to a table. Usually there are three available user-defined fields per table.

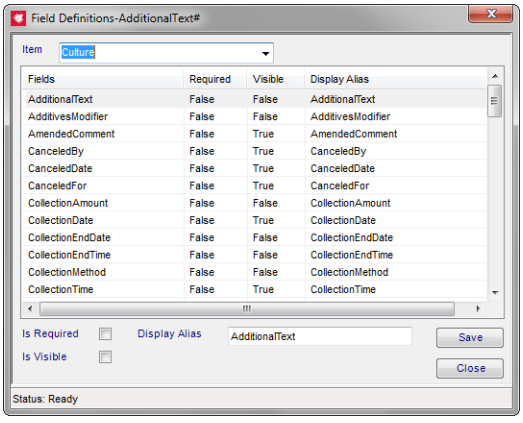



Figure 10-4 - Field Definition Window

## Notes

# Chapter 11
# Storage Manager / Storage Find

The *Storage Manager* window is where you define the locations of your stored specimens. You access the Storage Manager either through the Storage Manager button on the left or from the Operations Menu.

*Storage Find* is where you look to locate a specimen that has had it's storage defined through Storage Manager. Access Storage Find through the Operations Menu.

## Storage Manager Window

When you open the Storage Manager window, shown in Figure 11-1, you are presented with a grid based on the definition of the rack selected in the Select Rack drop-down list. Multiple configurations for storage racks may be defined in the *Storage Rack Definition* table of the Library. In the Storage Rack Definition table, you define the rack with the appropriate number of columns and rows and give it a recognizable name.

In the Storage Manager grid specimen numbers (or culture numbers) are entered by scanning specimen bar codes, or may be entered manually.

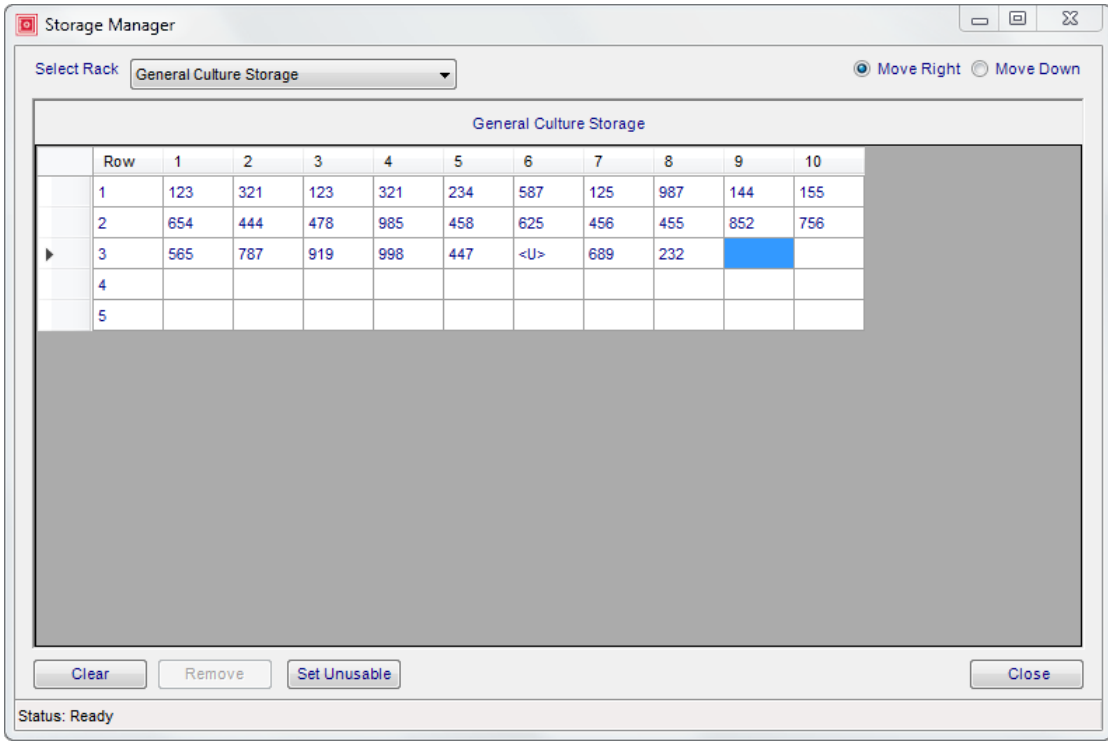



Figure 11-1 - Storage Manager Window

## Storage Manager Actions

| Field or Button | Description |
|---|---|
| Move Right | Selecting this radio button at the top right of the window sets the cursor to move right after each number is entered. |
| Move Down | Selecting this radio button at the top right of the window sets the cursor to move down after each number is entered. |
| Clear | Clears all culture numbers from the rack grid |
| Remove | Removes the selected culture number from the rack grid |
| Set Unusable | Marks the selected empty cell as unusable by inserting <U> in that cell |
| Close | Closes the Storage Manager window |

**NOTE:** *The default direction of cursor movement (right or down) is defined by the EnableStorageManager SiteWide Preference.*

### To create and update a storage rack

1. **Select a storage rack from the drop-down list.**
2. **If there are specimens already stored on the rack, you can start a new one by clicking the Clear button.**
3. **Select Move Right or Move Down from the radio button choices at the top left of the window.**
4. **Select the first empty cell, scan the specimen number, and the next field is selected based on the direction you chose in Step 3.**
5. **Continue until all specimens are entered for that rack.**
6. **Click the Remove or Set Unusable buttons on the bottom as needed.**
7. **Click Close to close the Storage Manager window and save your changes.**

# Storage Find

Once specimens are entered on a rack through the Storage Manager, you can easily locate any specimen through the Storage Find window, shown in Figure 11-2.

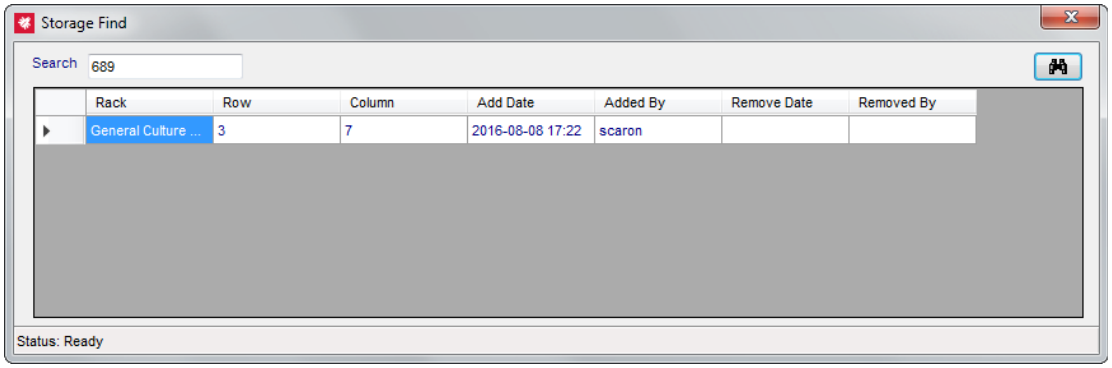



Figure 11-2 - Storage Find Window

Scan the barcode or enter the specimen number in the Search field and click the binoculars button. Storage Find will display the following location for that specimen:

- Rack
- Row
- Column
- The date/time the specimen was added to the rack
- The username of the person who added the specimen
- The date/time the specimen was removed from the rack, if it has been removed
- The username of the person who removed the specimen

Close Storage Find by clicking the windows [X] in the upper right corner of the window.

## Notes

# Chapter 12
# Label Designer

The *Label Designer* is where all labels used in MicroPath are created. You access the Label Designer either through the Label Designer button on the left or from the Operations Menu.

Before any kind of label can be printed, they must be created in the Label Designer window and saved. Your system is installed with a basic set of labels, but you will most likely want to configure them to your own laboratory's needs.

There are generally five types of labels available in MicroPath. Each label type can have one unique label design.

- Culture
- Isolate
- Media
- Specimen
- Test

## The Label Designer Window

The Label Designer window in Figure12-1 shows an example of a culture label that has been created. The Label Designer window consists of *label/field specifications* on the left, a *label detail window* on the right and several *operation buttons* at the bottom.

When you first open the Label Designer, the *label specifications* are what is displayed.

When you click on a field on a label, the specifications change to the *field specifications*.

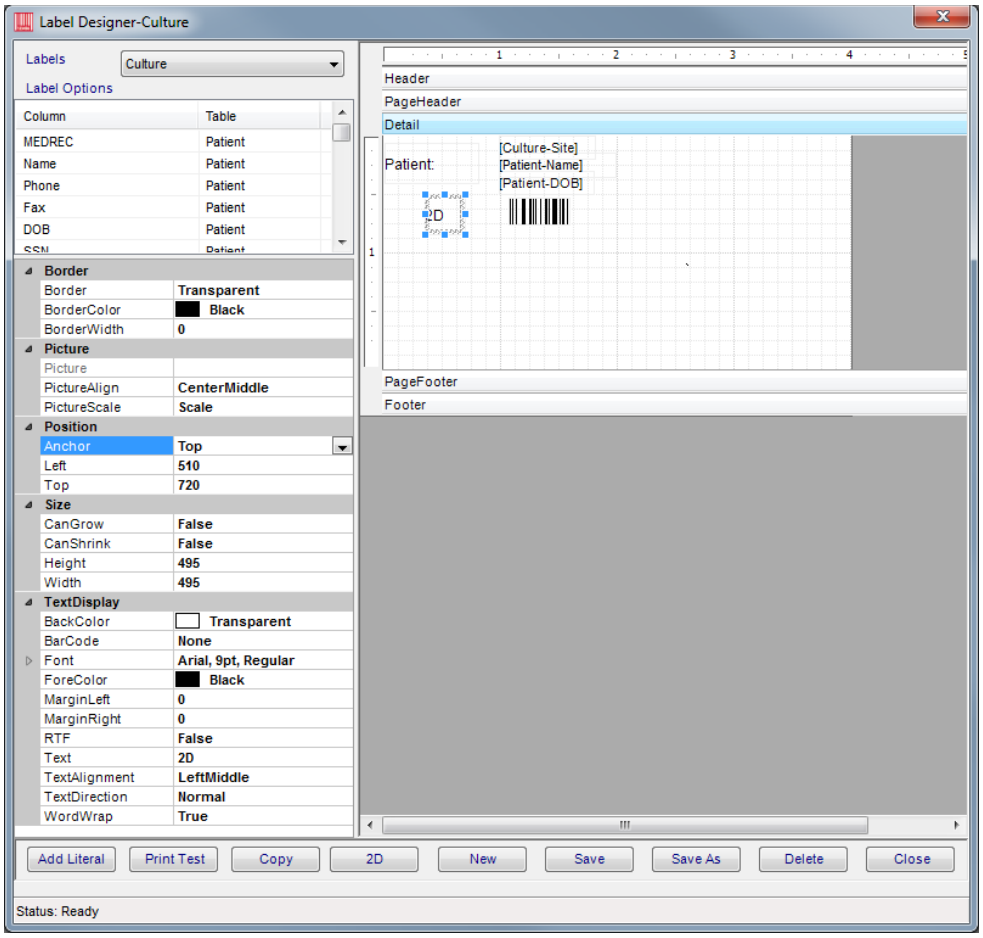



Figure 12-1 - Label Designer Window with field selected

DPI settings are for x and y coordinates of the label. The same numeric value must be set in both fields to enact the resolution change. This enables compression of the bar code size by using the DPI settings, for different label sizes. Values from 200-300 work well.

**NOTE:** *larger number = smaller size; smaller number= larger size. 300dpi may be too small, 250dpi works but is still very small and 200 works without any problems.*

## Label Specifications

| Label specification | Description |
|---|---|
| Labels | Drop-down menu to select a saved label filename |
| LabelOptions | Scrolling list of possible data fields that may be added to the label, organized by type of data; double-click to add one to the label detail section |
| **Label Parameters** | |
| Name | Filename of displayed label |
| LabelType | Drop-down menu to select one of the 5 available label types |

| Label specification | Description |
|---|---|
| Defaul Printer | Selected default test printer from those available on PC |
| BarCodeDPIx | BarCode printer DPI x value; such as 300 |
| BarCodeDPIy | BarCode printer DPI y value; such as 300 |
| PaperSize | Select paper/label size from drop down list; default is letter |
| CustomHeight | Custom label height can be entered; default is 0 |
| CustomWidth | Custom label width can be entered; default is 0 |

## Field Specifications

| Field Specification | Description |
|---|---|
| **Border** | |
| Border | Sets a border for the field; select style from drop-down list |
| BorderColor | Sets a color for the border; select from drop-down list |
| BorderWidth | Sets the thickness of the border |
| **Picture** | |
| Picture | *Currently not used* |
| PictureAlign | Sets the position of the bar code image within the field; select from drop-down list; center-middle will ensure that the bar code is centered and less likely to be truncated |
| PictureScale | Sets the scaling of the image; select from drop-down list; **Scale** will maintain image appearance and should be used for bar codes. |
| **Position** | |
| Anchor | Sets the position of the data within the field; select from drop-down list; useful to keep Anchor consistent for all fields |
| Left | Field position from left edge of report; measurement is in twips. *(Twips are screen-independent units to ensure that the proportion of screen elements are the same on all display systems. A twip is defined as being 1/1440 of an inch.)* |
| Top | Field position from top edge of report; measurement is in twips |
| **Size** | |
| CanGrow | True/False; allows data to expand as needed, if data exceeds field width |
| CanShrink | True/False; allows field size to shrink as needed |
| Height | Field height; measurement is in twips |
| Width | Field width; measurement is in twips |

| Field Specification | Description |
|---|---|
| **TextDisplay** | |
| BackColor | Allows you to set the background color for the section |
| BarCode | Select from a list of supported bar code formats to be used to format a numeric field (e.g. Code 128) |
| Font | Opens standard font selection box to select font, style and size |
| ForeColor | Sets the foreground color or text of the field; select from drop-down list |
| MarginLeft | The distance the contents will print from left edge of field; measured in twips |
| MarginRight | The distance the contents will print from right edge of field; measured in twips |
| RTF | When using *Rich Text Format* sequences in Library elements, True will print the RTF format appropriately for field |
| Text | The actual text that will print for Literal fields such as labels |
| Text Alignment | Positions the text within the text box; good for aligning fields |
| Text Direction | Sets the rotation of the text; either horizontal (normal, vertical from bottom to top (up), or vertical from top to bottom (down) |
| WordWrap | True/False; True allows the data in the field to continue on multiple lines within the field, if needed. |

## Label Detail Section

The *label detail* section is where you do all the layout of the label. When you double-click a field from the label options, a small standard field is placed in the upper left corner of the label grid. Each field added must be resized and repositioned.

To resize a field, click and drag the *handles* (black squares) on the edges of the field. To reposition a field, click in the center of a field and drag it to a new position. Once a field is selected, you may use the field specifications described below to format it.

To resize the actual size of the label, click and drag the edges of the label grid and resize.

## Label Operation Buttons

| Button | Description |
|---|---|
| Add Literal | Adds a generic text box to label that can be changed to any text |
| Print Test | Prints a test label of the displayed type to the default printer |
| Copy | Allows you to make a copy of an existing label and then save it with a new name |
| 2D | Allows for the creation of a 2D bar code. The user is prompted for data fields to include in the 2D bar code. Double-clicking an existing 2D barcode reveals the field specified within it. |

| Button | Description |
|---|---|
| New | Clears all fields to create a new label |
| Save | Saves the current label detail as using the label specifications on the left; if label type has been selected and a default already exists, you are warned the new label design will replace it |
| Save As | Prompts for a filename to save the displayed label with a new name; if the label type is selected and already exists, you are prompted whether you want to overwrite it as the default label for that type |
| Delete | Deletes the currently displayed label |
| Close | Closes the label designer |

## Creating a new label

### To create a new label:

1. **Click the New button. All fields and the label detail grid are cleared.**
2. **Select one of the 5 label types from the Label Type drop-down list.**
3. **Select the default test printer from the Default Printer drop-down list.**
4. **Double-click each data field you would like to appear on the label, dragging each one out of the way since they all start in the upper left corner.**
5. **Start resizing and repositioning all the labels, rotating them to the way you want.**
6. **Change the font and make any appropriate fields bar coded.**
7. **Click the Save As button and a box opens for you to enter the filename for the label.**
8. **Enter the filename and click OK.**
9. **If you are saving a label of a type that already exists, a message appears. For example if you are saving a culture label and a culture label exists with the filename LABEL1, the following message is displayed.**

   ```
   LABEL1 is already defined as the culture label. Are you sure you
   want to make this change? [The label will be saved regardless of
   your selection.]
   ```

10. **Click Yes to save the label with that filename and make it the default culture label.**

    **Click No to save the label with that filename, but not change the default culture label.**

    **NOTE:** *You should test your labels after creating them.*

## Notes

# Chapter 13
# ē.Query - Management Report Designer

MicroPath has the ability to design user-defined Management Reports, which are used for tracking and many other management statistics you need for your lab. These reports are stored and then may be run by designated MicroPath users. There is a great amount of flexibility built into the *e.Query Management Report Designer* allowing simple or complex reports to be created as needed. You may require assistance from Psyche to get your reports just right.

This chapter also describes the *e.Query Data Analysis Window*, which allows e.Query users to run *adhoc* queries on the database using e.Query functionality.

## e.Query Management Report Designer Window

You access the e.Query Management Report Designer Window by clicking the e.Query icon, shown on the left or from the Operations tool bar menu.

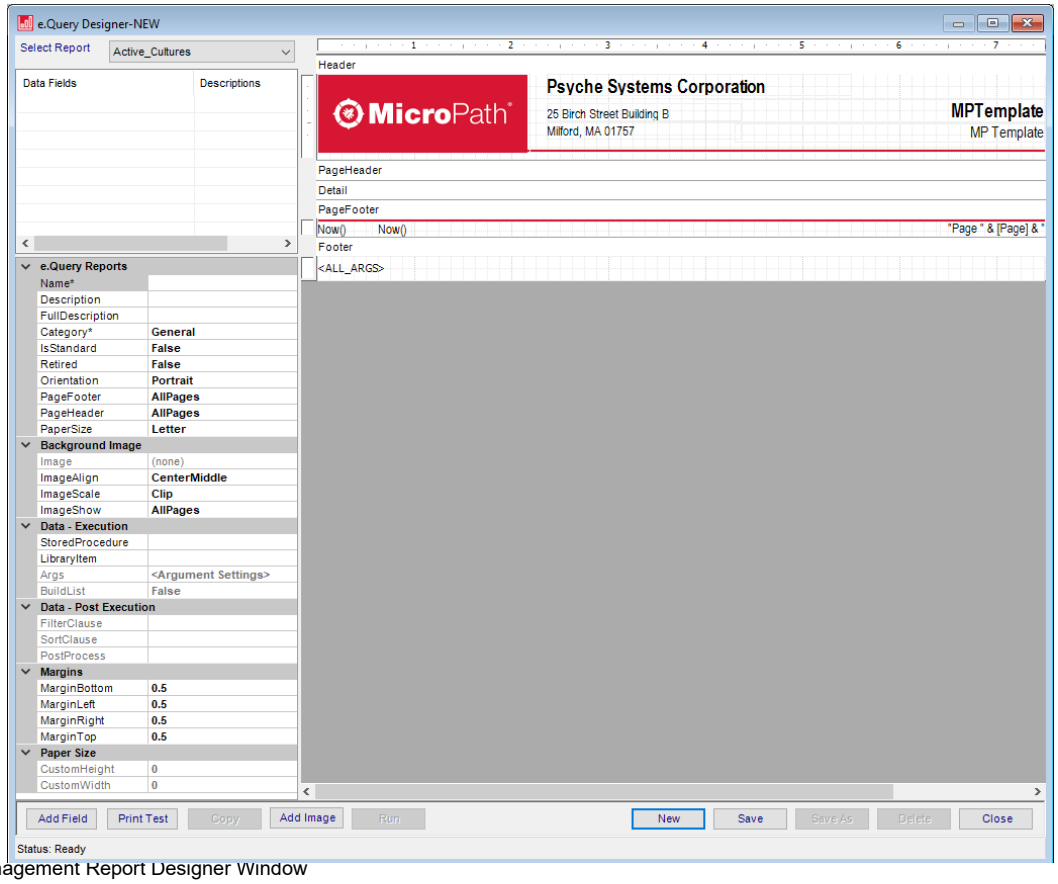



Figure 13-1 - e.Query Management Report Designer Window

The **Select Format** drop-down list allows you to select one of the existing report formats to review or modify.

Available **Data Fields** are displayed on the upper-left corner of the designer and added to the report by double-clicking the field. Each field can be set with certain parameters (e.g. height, width, font type, etc). Different report sections can be added to the report along with signatures for users, logos and defining information about the laboratory.

With the *e.Query Management Report Designer*, Data Fields can be easily added as you design your report in the Query Designer Window.

## Report Format Editing Notes

- MicroPath is installed with a set of standard management reports. As you use your system, additional management reports may have been added as requested.
- Report formats considered *Psyche Standard* may only be modified by Psyche. If you would like to use a standard report, but with a small modification, you will need to make a copy of it (Save As), modify as you wish, and use the copy in production.
- *Non-standard* report formats created prior to the availability of e.Query Management Report Designer may be modified by the System Admin or anyone who has been granted the *Can Design Management Reports* privilege through their *User Role*. These reports may be edited within the e.Query Management Report Designer main window.
- Only new reports created with the e.Query Management Report Designer can be modified through the **Query Designer Window,** described later in this chapter.

To distinguish between a management report format that was created prior to the e.Query Management Report Designer and one that was created using the Query Designer, refer to the **Data - Execution** parameter section of the report:

| For report formats created... | Field | Value |
|---|---|---|
| Prior to e.Query Management Report Designer | Query Name | Stored procedure name |
| With the e.Query Management Report Designer, using the Query Designer | Query Designer | **<Query Designer>** Click to open Query Designer window |

# Report parameters

Different *parameters* are available depending on whether you have selected the main report (click gray area), a section separator, or a field.

| Parameter | Description |
|---|---|
| **Standard Reports** | |
| Name | The name of the report seen in the Run Management Reports Report drop-down menu; entered in the Query Designer if using the enhanced version; name must be unique. |

| Parameter | Description |
|---|---|
| Description | Short description of the report that appears on the Management Report named “Management Reports”; will also automatically display in report header field named REPORT_DESC. |
| Full Description | Full description of the report that will appear on the Management Report named “Management Reports”. |
| Category | Select from list of available categories or enter new category name; categories are used to sort types of reports when selecting them in Run Management Reports. |
| IsStandard | True/False; indicates Psyche standard reports; only available for Psyche users. |
| Retired | True/False; True removes reports from the Management Report Designer list, unless the **Show Retired** command has been executed and also removes them from the Run Management Reports list. Psyche Standard Reports must be set to retired using the **Toggle Retired** command from the Commands Menu, since Psyche Standard Reports cannot be altered. |
| Orientation | Auto is default and usually works best, or can set to Portrait or Landscape, if using non-standard paper size. |
| PageFooter | Defines when the PageFooter should print: AllPages, NotWithReportHdr, NotWithReportFtr, NotWithReportHdrFtr. Report formats can have separate footers for pages versus the report itself. |
| PageHeader | Defines when the PageHeadeer should print: AllPages, NotWithReportHdr, NotWithReportFtr, NotWithReportHdrFtr. Report formats can have separate headers for pages versus the report itself. |
| Paper Size | Select from a list of standard paper sizes; default is Letter. |
| **Background Image** | |
| Image | Location and name of the image used as a background |
| Image Align | Multiple choices for alignment; Center Middle is common choice |
| Image Scale | Clip, Stretch, Scale, Tile, Hide |
| Image Show | NoPages, AllPages, FirstPage, AllButFirstPage |
| **Data – Execution** | |
| Query Name<br>Query Designer | **Stored procedure name** - For report formats created prior to the Enhanced Designer.<br>**<Query Designer>** - For report formats created with the e.Query Designer. Click the ellipsis to open the Query Designer window. |

| Parameter | Description |
|---|---|
| Args | Whether the report was created with the Query Designer Window or prior to its development, clicking the Args ellipsis opens the Argument Editor Window to make specific argument modifications. |
| Build List | True/False; Used for Build List printing; Read-only here. |
| **Data – Post Execution** | |
| Filter Clause | Additional filter may be added through Edit Filter Clause window. |
| Sort Clause | Sorting may be added through Edit Sort Clause window. |
| **Margins** | |
| MarginBottom | Distance report will print from bottom in inches |
| MarginLeft | Distance report will print from left in inches |
| MarginTop | Distance report will print from top in inches |
| MarginRight | Distance report will print from right in inches |
| **Paper Size** | |
| Custom Height | If Custom is selected as paper size, enter paper height in inches |
| Custom Width | If Custom is selected as paper size, enter paper width in inches |

## Section parameters

These parameters become available when a section is selected.

| Parameter | Description |
|---|---|
| **Section Display** | |
| KeepTogether | True/False; if a section is long enough that it will wrap onto another page the report will move that section to the next page in an attempt to keep the entire section on one page. In the event that a section is longer than a page in length the section will continue onto a second page regardless. |
| BackColor | Defines the background color of the report section |
| CanGrow | True/False; allows section to expand as needed |
| CanShrink | True/False; allows section to shrink as needed |
| ForcePageBreak | Causes a page break where positioned |
| Repeat | True/False; if true this section will repeat on every page. |
| Visible | True/False; if true this section will be visible on the report |

## Field Parameters

These parameters become available when a field is selected.

| Parameter | Description |
|---|---|
| **Identity** | |
| Name | Name to identify the field |
| **Border** | |
| Border | Transparent, Solid, Dash, DashDot, DashDotDot |
| BorderColor | Specifies border color |
| BorderWidth | Specifies border width with 0 equaling none |
| Picture | |
| Picture | Location of image if auto-loaded, such as a logo |
| PictureAlign | Specifies the alignment of the image withing the image box; LeftTop (default), CenterTop, RightTop, etc. |
| PictureScale | Clip, Stretch, Scale, Tile, Hide; Scale maintains image proportions |
| **Position** | |
| Anchor | Orientation for field position; Top, Bottom, TopAndBottom |
| Left | Distance from the left margin in *twips*. *(Twips are screen-independent units to ensure that the proportion of screen elements are the same on all display systems. A twip is defined as being 1/1440 of an inch.)* |
| Top | Distance from the top margin in *twips* |
| **Size** | |
| CanGrow | True/False; allows the data to exceed the size of the field, pushing any data following down the report. |
| CanShrink | True/False; use when the field is capable of shrinking based on the contents of the field; useful to hide images dynamically, if not present; property will not hide any borders present; Report Section must also be set to CanShrink |
| Height | Height of the field in *twips* |
| Width | Width of the field in *twips* |
| **TextDisplay** | |
| BackColor | Defines the background color of the field |
| BarCode | To print the data in barcode format, select one of the possible symbologies from the list: Code 39, Code 93, Code 128. 2D barcodes are added through the Commands menu. |
| Font | Defines the font and size for how the data is printed |
| ForeColor | Defines the color of the field text |

| Parameter | Description |
|---|---|
| HideDuplicates | True/False; if a field is repeated, additional instances of that field can be hidden. e.g. on a case with multiple specimens a single specimen number has multiple profiles. We don't need to see that specimen number listed next to each profile, so True can hide the specimen number next to successive profile name.<br><br>Right-clicking on the *HideDuplicates* link opens an option to check *ForceUniqueRows*, which ensures that rows that appear duplicate due to column selections appear on report, if unique for other fields. The default and general setting is to check both HideDuplicates and ForceUniqueRows. |
| KeepTogether | True/False; if a field wraps and is long enough that it will wrap onto another page the report, True will move that field to the next page in an attempt to keep the entire field on one page. In the event that a field is longer than a page in length, the field will continue onto a second page regardless. Note: any other fields in line with this field will also be moved down to the next page. |
| RTF | True/False; when True, rich text formatting may be entered in the text field; e.g. Result{\super\ xyz} will print as Result$^{xyz}$. |
| Text | For field labels, this is the actual text that will print on the report. |
| TextAlignment | Alignment of text within the field; LeftTop (default), CenterTop, RightTop, etc.; helpful to keep consistent |
| TextDirection | Direction of text within the field; Normal, Up or Down |
| WordWrap | Allows value to wrap to second line, if needed; use with CanGrow |

## Creating a Report with the Query Designer Window

If the e.Query Management Report Designer is configured in your system, clicking the **New** button on the Report Designer opens the Query Designer Window, shown below, for privileged users. The Query Designer Window displays the following three tabs that take you through building your management report.

- **Design Query Tab – where you select the fields to print on your report and define the filters to be used to select the data; displayed as the default**
- **Preview Query Data Tab – where you can get a preview of the selected data based on the query you created in the first tab**
- **Report Setup Tab – where you specify a name for the report and other formatting options**

**NOTE:** *To edit a query on a report that was previously created with the e.Query Designer version, click the ellipsis at the end of the* ***<Query Designer>*** *field.*

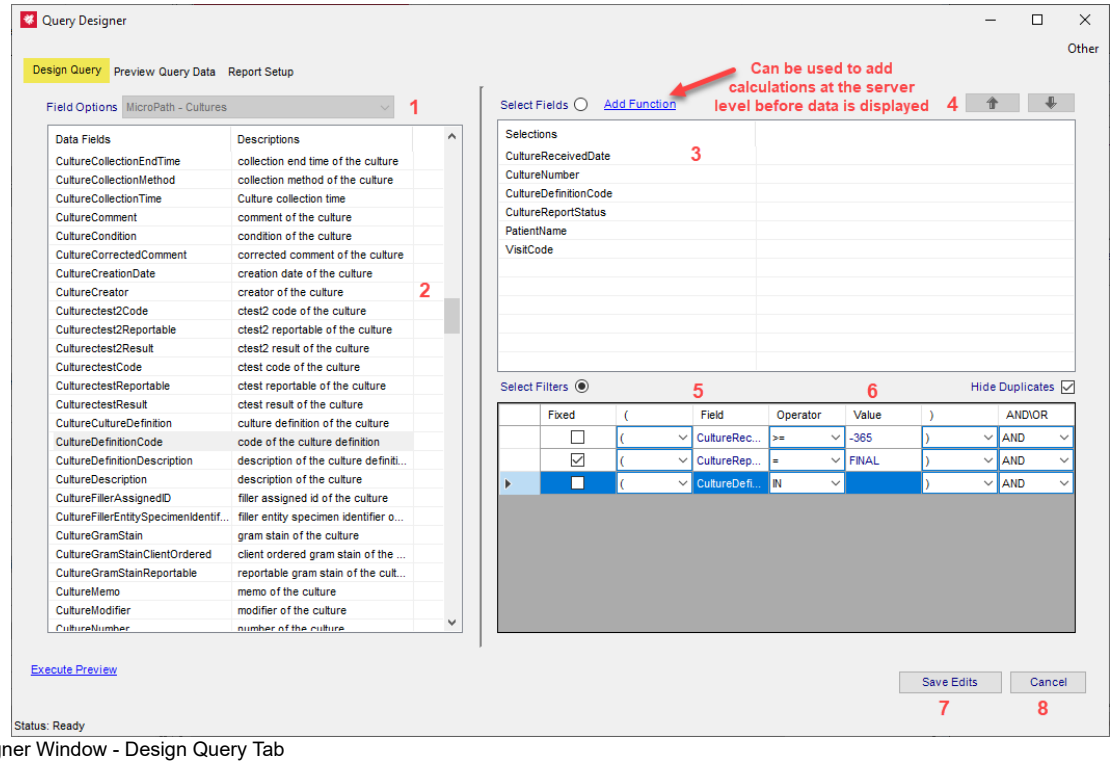


Figure 13-2 - Query Designer Window - Design Query Tab

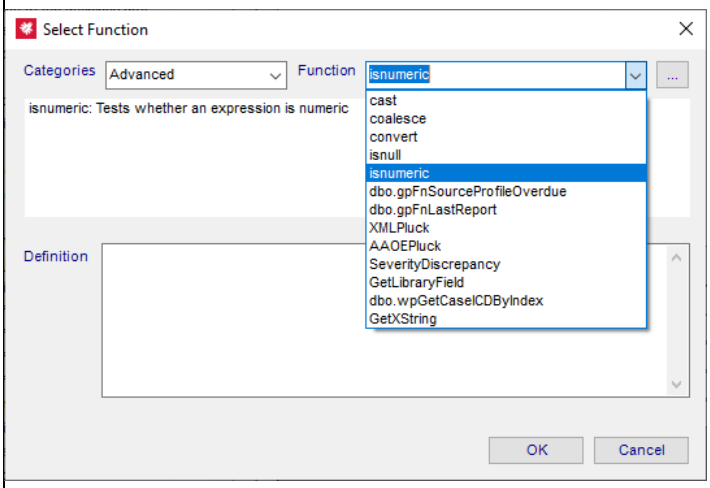
## Design Query Tab

The Design Query Tab shown above is split into available field choices on the left and on the right, the selected fields and filters chosen for the report. The first step in creating a new report is to select a database **View** from the Field Options pick list, which offers a subset of fields in the database to choose from to create your report. As of this writing, the following standard Views are available in MicroPath. Additional views may be created through the *e.Query Data Models* library.

- MicroPath Library - Physicians and Groups
- MicroPath - Cultures
- MicroPath - Tests

The Design Query Tab contains the following components:

| Window Component | Function |
|---|---|
| Field Options (1) | This drop-down list contains a list of *SQL Views* configured by Psyche based on the Psyche products you own. The options listed are named to reflect the collection of fields they contain. For example, select MicroPath - Cultures for culture related MicroPath reports, MicroPath - Tests when your MicroPath report requires tests data, or MicroPath - Physician and Groups for Physician and/or Group data. Select the one appropriate for the report you are creating.<br><br>If the view displayed in Field Options has had a full description stored for it, right-clicking the view name allows you to display the full description. |
| Data Fields List and Descriptions (2) | Once a *Field Option* has been selected, the *Data Fields* and Descriptions are filled in the left grid according to what is defined in the selected *Field Option*.<br><br>Descriptions are computer generated and can be modified by the user by right-clicking on the description and selecting **Set Column Description**. Enter a more user-friendly description in the next box. |
| Select Fields Building Box (3) | Here is where you add the fields you want to print on your report. To add fields, make sure the *Select Fields* button is highlighted and double-click the chosen fields from the *Data Fields* list. They will added to the *Field Selections* box, one per line in order of selection. |
| Arrows (4) | If you decide you want your fields in a different order after selecting them, select the field you want to move and use the *Up* and *Down* arrows to move it to the desired location. |
| Select Filters Building Box (5) | Here is where you add the filters you want to select data by when running the report. To add filters, make sure the *Select Filters* button is highlighted and double-click the chosen fields from the *Data Fields* list. They will added to the *Field Selections* box, one per line in order of selection.<br><br>At least one filter needs to be added in order to create a report and you may have up to 18 filters saved in a single report. |
| Hide Duplicates (6) | If checked (default), complete duplicate rows will only print once on the report. |
| Create Report / Save Edits (7) | When creating a new report, the *Create Report* button becomes available after adding at least one filter and a Report Name. The report is then saved and you are returned to the Management Report Designer window.<br><br>If updating a previously saved report, click *Save Edits* to save any modifications made in this session. |

| Window Component | Function |
|---|---|
| Add Function | Click **Add Function** to open the *Select Function* window where server side *Query Language* functions can be added to your query. Basic knowledge of Query Language is helpful when adding functions.<br><br>A categorized list of functions is available for selection. The text box below the drop-down lists displays a description of the function.<br><br>  <br><br><br>The list of functions are categorized as: *Date*, *String*, *Math* and *Advanced*. The fist 3 categories are using standard query language and would be described in an external Query Language reference.<br><br>The *Advanced Functions* may include specialized functions that were created by Psyche Systems to generate date specific for Psyche products, among other advanced functions. The Advanced Functions include:<br><br>• **cast:** Converts a value (of any type) into a specified datatype<br>• **coalesce:** Returns the first non-null value in a list<br>• **convert:** Converts a value (of any type) into a specified datatype<br>• **isnull:** Return a specified value if the expression is NULL, otherwise return the expression<br>• **isnumeric:** Tests whether an expression is numeric<br>• **dbo.gpFnSourceProfileOverdue:** *MicroPath* - Returns the overdue objective for the source\profile combination passed<br>• **dbo.gpFnLastReport:** MicroPath - Returns the selected field on the last result report generated on a case<br>• **XMLPluck:** *Psyche* - Extracts values from XML based data based on instructions. It helps to understand the XML structure you are pulling data from. *(See TM#163572)*<br>• **AAOEPluck:** *Psyche* - Extracts answers from XML based AskAtOrder question data<br>• **SeverityDiscrepancy:** *WindoPath* - Calculates severity discrepancy of two diagnosis codes<br>• **GetLibraryField:** Extracts a field value from a valid application library, physician, or user table<br>• **GetXString:** Converts data stored as XML to user friendly display. Currently only available for *CanSignProfiles*.<br>If the function requires arguments, the button next to the function drop-down list becomes an ellipsis. Clicking the ellipsis loads the Argument builder window, where parameters for the argument are selected and entered. |

| Window Component | Function |
|---|---|
| | If the function does not require arguments, the button next to the function drop-down list display a "+". Clicking the "+" adds the function.<br><br>Click **OK** to add the function to your list of selected fields.<br><br>**Note:** Previously built functions may be edited by right-clicking the function in the *Select Fields* building box. The *Add Function* window opens for edits. |
| Other Menu | If enabled *(SWR preference ManagementReports: AdHocEnabled)*, the **Other** menu in the upper right corner of the *Design Query* tab allows you to select previously created queries with **Select Query**. See *e.Query (Data Analysis)* section for more details. |
| Cancel (8) | Closes the Query Designer Window without saving the report. |

## Creating Filters

In the Select Filters Building Box, filter rows are added by clicking the Check Filters button and then double-clicking the Data Field you want the report to use to filter the selected data. Once a Data Field has been added, filters are edited by modifying the following criteria.

| Filter Criteria | Definition |
|---|---|
| First Column | To create a “pick list” for the user to select values when running the report, right-click on the left box for the filter for which you want to add choices. The Configure Filter window, shown below opens. |
| Fixed | Check the Fixed box if you want this filter to be applied each time the report is run and not give the user prompted options. |
| ( | Default; start of contained expression; select blank for more complicated queries |
| Field | This is the name of the field you selected by double-clicking one from the Data Fields List. |

| Filter Criteria | Definition |
|---|---|
| Operator | **equal (=)** - filters records where field contents is equal to filter value<br><br>**not equal (<>)** - filters records where field contents is not equal to filter value<br><br>**greater than (>)** - filters records where field contents is greater than filter value<br><br>**greater than or equal to (>=)** - filters records where field contents is greater than or equal to filter value<br><br>**less than (<)** - filters records where field contents is less than filter value<br><br>**less than or equal to (<=)** - filters records where field contents is less than or equal to filter value |
| Additional Operators | **BEGINS WITH** - filters records where field contents begin with the filter value<br><br>**ENDS WITH** - filters records where field contents end with the filter value<br><br>**CONTAINS** - filters records where field contents contain the filter value<br><br>**IN** - to build a comma separated list (ABC,DEF); IN is used when a pick list is created for the filter. See *Configure Filter Window* below<br><br>**IS NULL** - filters records where field contents is null or empty'<br><br>**NOT CONTAINS** - filters records where field contents do not contain the filter value<br><br>**NOT BEGINS WITH** - filters records where field contents do not begin with the filter value<br><br>**NOT ENDS WITH** - filters records where field contents do not end with the filter value |
| Value | Enter the actual field value on which you want the filter to match; MIN / MAX can be used for default date range using wide limits. Numeric values can be used for dates, such as -365 for one year back, 0 for today. |
| ) | Default; end of contained expression; select blank for more complicated queries |
| AND/OR | Use **AND** to apply this filter row *and* the next one in the query<br>Use **OR** to apply this filter row *or* the next one in the query |

## Configure Filter Window

To create a *"pick list"* for the user to select values when running the report, right-click on the left box for the filter for which you want to add choices. The Configure Filter window, shown below opens.

- **Set Argument Display:** the prompt the user sees for this argument when running the report. The report generator inserts spaces in logical places automatically. e.g. ProfileDefiniton will display as Profile Definition when run.
- **Set Pick List Item:** When creating a limited Pick List, Pick List items may be added to the Pick List by entering each in this field and clicking Add.
- **Pick List Options:** To display all possible options from which to select, click **Load**, then double-click each option to add them to the Pick List on the right.

- **Pick List:** Displays all added items added to the Pick List. Check the ones you want to be default selections.
- **Use Dynamic Pick List:** Check to create a Pick List of all possible values.
- **Allow Multi Select**: Check to allow the user to select multiple values when running the report.

Click **OK** to save pick list or **Cancel** to exit window without saving.

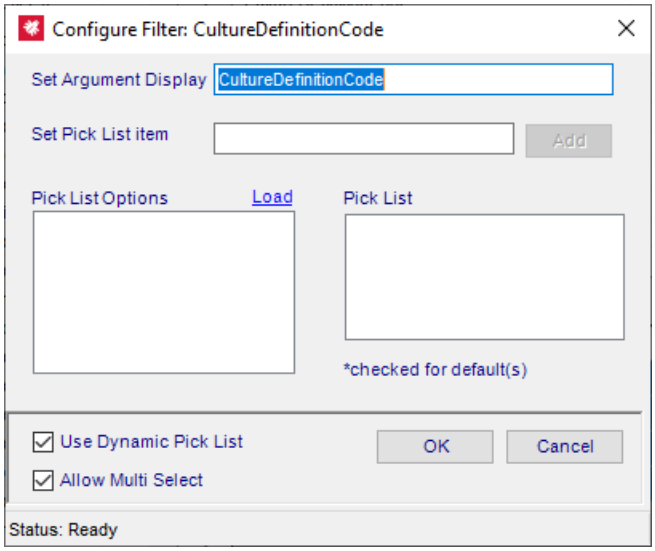



Figure 13-3 - Configure Filter Window for editing filter 'pick lists'.

## Execute Preview

Opens a *Query Filter* window displaying filter prompts that have been included in the report. Once filter prompts are entered or selected, the selected report data is displayed in the *Preview Query Data Tab*.

## Preview Query Data Tab

Once a report query has been created in the Design Query Tab, or any time you open the Query Designer for an enhanced report, Click the Execute Preview hyperlink to display a preview of the report's contents. This is useful to check that you created the report as you intended and may also be used as a quick online lookup.

After clicking Execute Preview, the Preview Query Tab is displayed showing the report's data, similar to the example below.

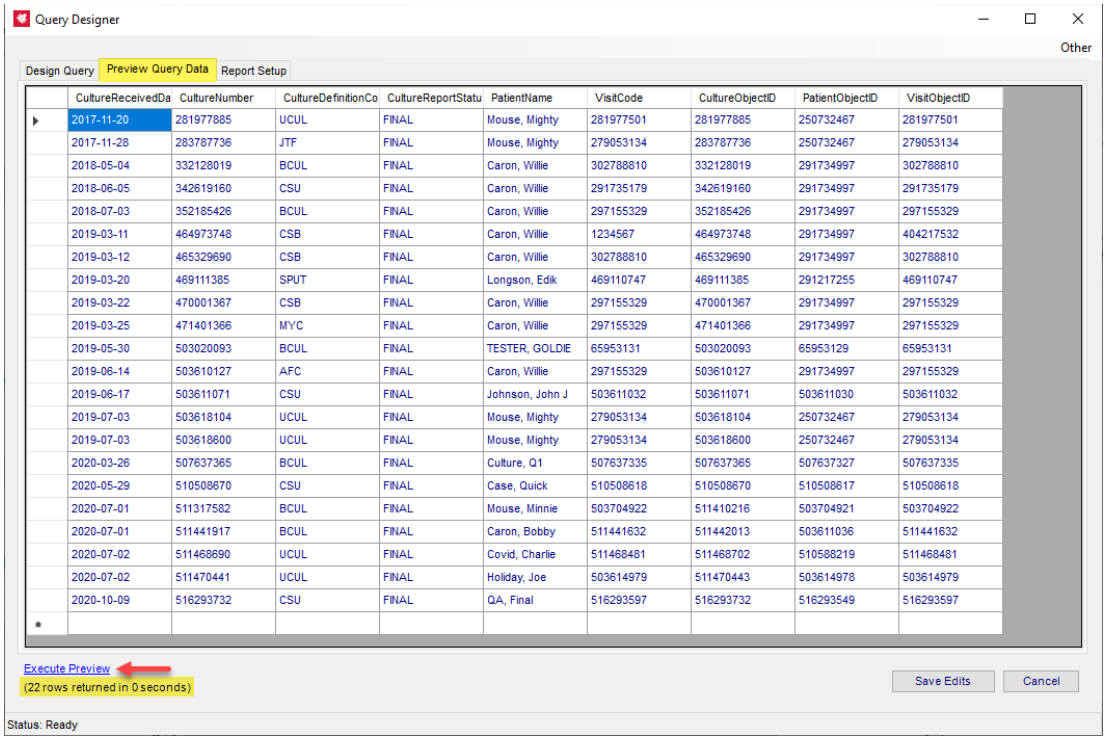



Figure 13-4 - Query Designer Window - Preview Query Tab

If you are satisfied with the report data extracted and displayed and this is an existing report, you can Save Edits in the Preview Query Tab, or if it's a new report, click the *Report Setup Tab* to enter the Report Name and other optional fields.

## Report Setup Tab

Most of the Report Setup Tab fields are display only or may be configured on the main Report Designer window. Refer to the Report Parameters section on Page 2 for descriptions on those fields.

**Name*:** Required field; you only need to enter the Name in order to create the report. Once a name has been entered, the Create Report button becomes available and the report can be saved with the current settings.

**Description:** Description that will be displayed on default template, if the REPORT_DESC field is present.

**Full Description:** optional; will print on Management Reports Report as a more complete description of what the report generates.

**Category*:** Required field; defaults to General; select other Category if desired; category allows users to sort by reports by management report category when selecting a Management Report to run.

When Name at least is entered, click Create Report to create and save the new report or Saved Edits to save modifications to an existing report.

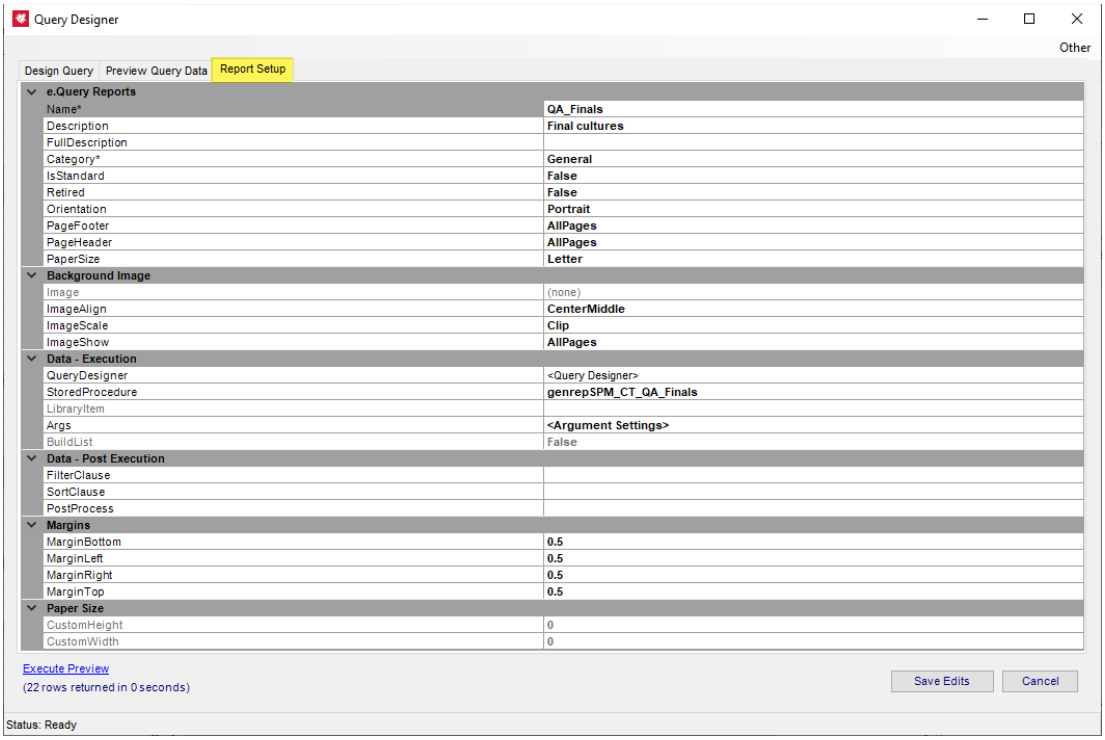



Figure 13-5 - Query Designer Window - Report Setup Tab

# e.Query Menus

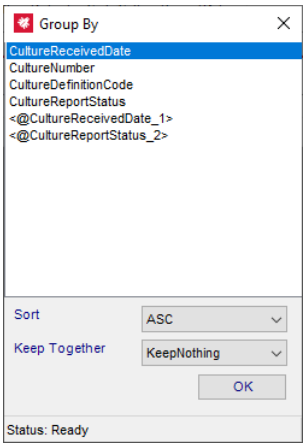
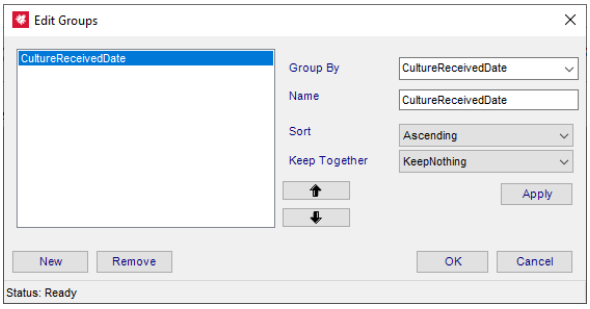
## Transfer\Other Menu

| Menu Option | Description |
|---|---|
| Import Format | Allows you to select and import a Component One report file format (XML) created from another area or installation. |
| Export Format | Allows you to export a Component One report file format (XML) of the current report so that it can be imported into another area or version. |
| Transfer | **Import Library Item:** Allows import of the library of Management Reports.<br><br>**Export Library Item:** Allows export of the library of Management Reports. |
| All Args Display | Prints all arguments used in the report format on the report for reference. |

## Commands Menu

The Report Designer Commands Menu offers many specialized options to help with formatting the report.

| Menu Option | Description |
|---|---|
| Date [long] | Inserts date in format: *Day, Month date, Year* (e.g. Tuesday, August 15, 2017) |
| Date [short] | Inserts date in format: *mm/dd/yyyy* (e.g. 8/15/2017) |
| Time [long] | Inserts time in format: *hh:mm:ss AM/PM* (e.g. 3:24:46 PM) |
| Time [short] | Inserts time in format: *hh:mm AM/PM* (e.g. 3:24 PM) |
| Page | Adds page number |
| Page w\Count | Adds page number of total. (e.g. Page 1 of 4) |
| Select All (Ctrl+Shift+A) | Selects every element that has already been placed on the report |
| Add Computed \ Inline | Opens a window where you can add calculations to the report. Optionally, your system may be configured to allow inline Rich Text Formatting configuration through this window as well. *See below for more details.* |
| Add Header | If not using templates for management reports, Add Header places these standard header type fields at the top of the report: REPORT_NAME, REPORT_DESC, SITE_LOGO, SITE_NAME, SITE_ADD1, SITE_ADD2. |
| Add Template | Templates can be used to create a series of fields that have the same properties. You add the template, format it to what you want...bold, larger font, etc. Then each time you add a template, it will look like the one you just formatted. |
| Add Page Break | Adds a page break at that point of the report, causing report to feed to next page when printing. |
| Add 2D Barcode | Opens a dialog box to select the Data Field you want to configure the barcode as. |
| Add Combo Field | Allows you to add a field that contains multiple data fields and optionally literal text. In the Combo Field dialog box, select the Data Fields and enter and add literal text. Use arrows to rearrange. Once added, Combo Fields can be opened by double-clicking them. |
| Add Background Image | Allows you to select an image file that will be used as a background for the report, such as a light colored watermark image. You will not be able to see the image until you print a test page. Only one image can be added to the master report. No sub-report or dynamic inserted report will display a background image. |
| Clear Background Image | Clears any background image that has been added. |
| Formatting > | Opens a submenu of formatting and alignment options when multiple fields are selected: Set Table Row, Align Left, Align Center, Align Right, Align Top, Align Middle, Align Bottom, Equal Height, Equal Width, Equal Size |

| Menu Option | Description |
|---|---|
| Add Group | Adding a Group inserts a sorting sub-section into the report using a Data Field selected in the *Group By* window. A sub-header and footer are created for the Group, if needed. Selecting **Add group** opens this Group By window where Sort order and Keep Together are also available.<br>  <br>**Sort:** ASC = Ascending; DESC = Descending.<br><br>**Keep Together:**<br>**KeepNothing:** Do not try to keep the group together.<br>**KeepWholeGroup:** Keep the group header, detail, and footer together on a page.<br>**KeepFirstDetail:** Keep the group header and first detail section together on a page. |
| Edit Groups *(replaces Add Group and Remove Group)* | In *Edit Groups* all defined groups are displayed in the list box on the hand side. Selecting a group from the list box displays it's properties on the right hand side.<br><br>The properties (such as Sort, KeepTogether) can be edited as desired. The Apply button confirms the edits and refreshes the display in the list box<br><br>**New:** Adds a new group. (initiates an "Apply" operation on the currently selected record first)<br>**Remove:** Removes the selected group<br>**OK:** Accepts the changes and passes them to the designer.<br>**Cancel:** Cancels the changes.<br>The **Name** entry field is informational (previously hidden).<br><br>**Note:** The Group By field can contain a computed item utilizing VBScript.<br>  |

| Menu Option | Description |
|---|---|
| Remove Group | Removes any Group that has been inserted into the report, allowing you to select the Data Field used in the group to remove. |
| Bring To Front | Brings the selected element to the top layer of the report placing it on top of other elements. |
| Send To Back | Moves the selected element to the bottom layer of the report placing it under other elements. |
| Toggled Retired | Allows end user to retire reports that can't be modified, such as Psyche standard report. |
| Show Retired | Displays any reports that may have been created and retired in the Select Format drop-down report list. |
| Snap To Grid On | Turns on invisible grid that elements will position to making alignment of elements easier |
| Snap To Grid Off | Turns off invisible grid for alignment of elements |
| Conditional Formatting | If enabled, opens a window where you can build formatting statements for data that appears on the report. *See below for more details.* |

## Add Computed \ Inline Window

The *Add Computed \ Inline Command* allows you to create calculations and data manipulations to fields that appear on the report. In this window you are building a query to perform these actions and the process can be simple or very complicated.

Query functions are made available along with choices for fields and specific formatting settings. MicroPath database structure is very helpful, but you may need to work with your application specialist to achieve your final result.

The Add Computed \ Inline window contains *2 tabs*: one for **computed functions** and one for **inline data changes and RTF formatting**. In the Add Computed tab you have the following fields:

- **Common Functions** and then a drop-down field to select the report field on which to apply the common function. If the Common Functions list does not contain what you need, use the Function Categories to select a specific function. The **Add** button adds the common function to the query building box at the bottom.
- **Function Categories** for more complicated functions and then a drop-down list to select the specific function within that category. Once a function is selected, click the **ellipsis** (...), if present, to open a second window where parameters (*or arguments*) are entered specific to that function. Usually a report field is selected here. The **Add** button adds the advanced function to the query building box at the bottom.
- The bottom of the Add Computed \ Inline window shows available *fields* from the report, a list of *query syntax commands* that *advanced* users may click to create complicated computations, and a *building box* showing the actual query being built.

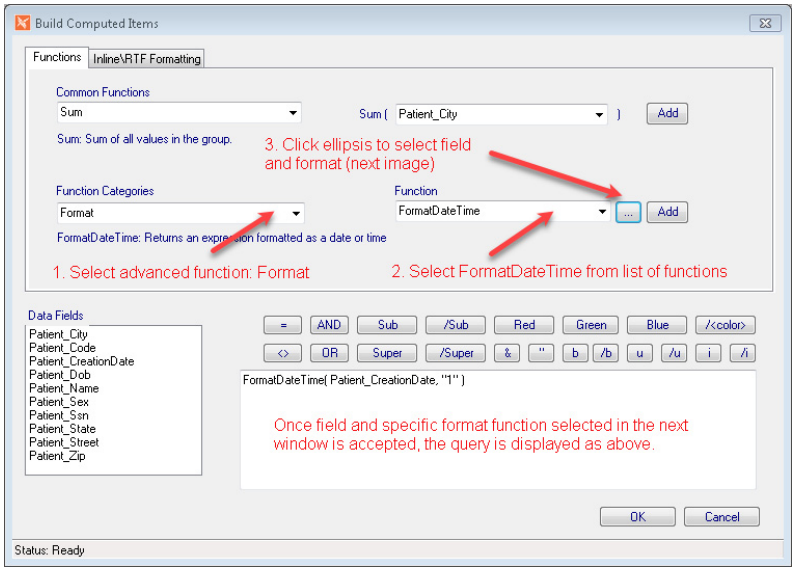


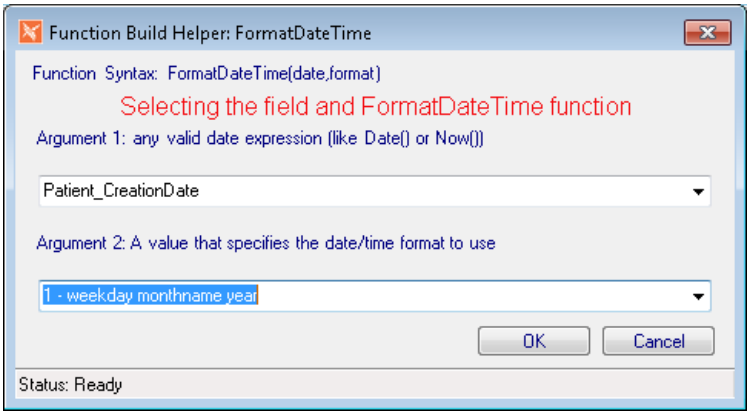

Figure 13-6 - Build Computed Items - Functions Tab

## Computed Example

In the example above, we are formatting a date field to use a particular date format. Select the date field you want to format and select Add Computed \ Inline from the Commands menu. If you don't select a field beforehand, one will be added after the query is built.

### Following the steps shown in Figure 13-6:

1. **Select Format from the Function Categories.**
2. **Select FormatDateTime from the list of functions.**
3. **Click the ellipsis to open the following window:**




4. **Select the Patient_CreationDate field for Argument 1.**

   **NOTE:** *Make sure the data you are applying the function to is compatible with the function. e.g using the FormatDateTime will not work on a field that contains only a date.*

5. **For Argument 2, select a date format. 1- weekday monthname year was chosen. Friday, May 01, 2020, which displays dates in the format: *Friday, June 12, 2020*.**
6. **Click OK from both windows to exit Function Builder, then save the report.**

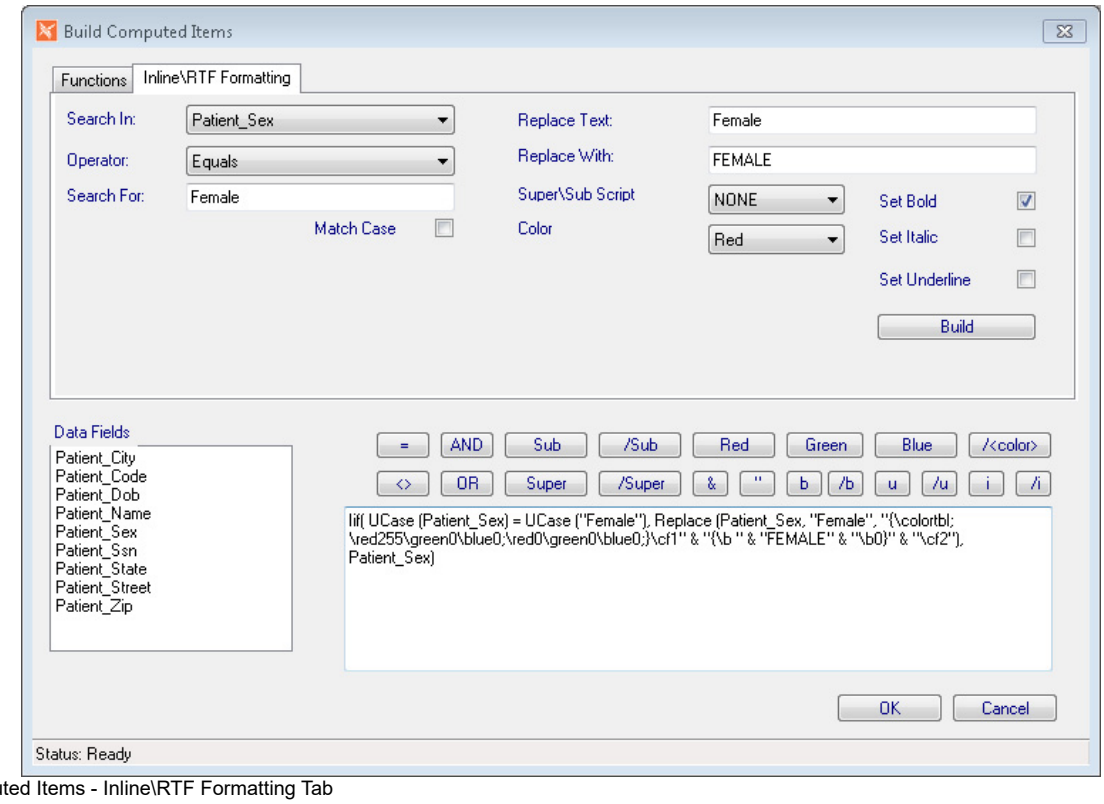



Figure 13-7 - Build Computed Items - Inline\RTF Formatting Tab

## Inline \ RTF Formatting Example

In the example shown in Figure 13-7 we are searching in the *Patient_Sex* field for the text of "Female" and replacing "Female" with upper-case "FEMALE", while bolding and making the text red.

With these formatting changes the report displays any patient sex not in the database as "Female" as the field parameters dictate, but "Female" will display as **FEMALE**.

The formatting parameters you may set using the Inline\RTF Formatting tab include:

- Super\Subscript
- Color of text
- Bolding text
- Italic text
- Underlined text

### To create an Inline\RTF Format modification:

1. **In the Inline\RTF Formatting tab, select the field that contains the text you want to modify.**
2. **Enter the text to match and what to replace it with.**
3. **Select the formatting parameters you want to set.**
4. **Once all are specified, click Build. The query displays in the building box.**
5. **Click OK and save the report.**

**NOTE:** *When setting Inline\RTF formatting to a field, the RTF Text Display field must be set to* ***True****. See Page 6.*

## Conditional Formatting Window

The Conditional Formatting window allows you to add a considerable amount of Structured Query Language (SQL) to your report to modify any of the report fields. The window offers you a list of fields available on the report, a list of valid arguments that may be used, and buttons to help you enter proper syntax. As fields, functions and arguments are selected, the SQL function is built in the building box. A good understanding of SQL is recommended, but basic formatting can be easily achieved.

The example in Figure 13-8 shows a formatting function that is set to COUNT the number of values in the ConstituentResult column that equal “DETECTED”. If that count is zero (0), then in the field named “NOPATH”, display the text *“No Pathogens Identified”* and give NOPATH a height of 225. If that statement is not true, such as the count is greater than zero, display nothing in NOPATH field and drop the field height to zero.

The ConstituentObjectID is included with the ConstituentResult since the object ID would always be unique and therefore the tally of DETECTED is for unique profile constituents.

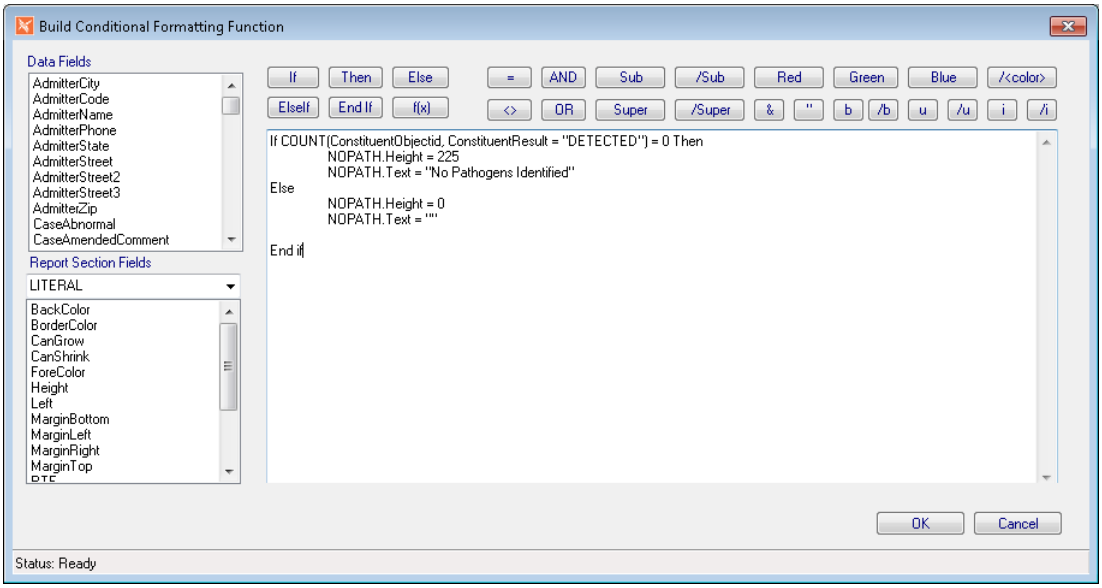



Figure 13-8 - Conditional Formatting Functions Example

**NOTE:** *You must first select a data field before the Conditional Formatting menu option is enabled on the Commands Menu.*

## Audit Menu

| Menu Option | Description |
|---|---|
| Show Audit | Opens a window of all changes that have been made to the current report |

# Operational Buttons

| Button | Operation |
|---|---|
| Add Field | Adds a generic text field that can be changed to any text |
| Print Test | Opens windows print dialog box so you can print a test of the report |
| Copy | Makes a copy of the currently selected field |
| Add Image | Opens a search window to locate and find an image to add to the report |
| Run | Previews the current report design to the screen |
| New | Clears all fields to create a new report |
| Save | Saves the currently displayed report format |
| Save As | Prompts for a filename to save the displayed report with a new name |
| Delete | Deletes the currently displayed report |
| Close | Closes the report designer |

# Standard e.Query Views in MicroPath

| Code | Description |
|---|---|
| exVwPhysicianAndGroups | MicroPath Library - Physicians and Groups |
| mpVWMasterCultures | MicroPath - Cultures |
| mpVWMasterTests | MicroPath - Tests |

## e.Query (Data Analysis)

An optional tool is available on the MicroPath Operations Menu that allows you to query the database *on-the-fly* for quick statistics gathering. If enabled, selecting **e.Query (Data Analysis)** opens a window that is very similar to the window you see when you create a query in e.Query. See Figure 13-9 below.

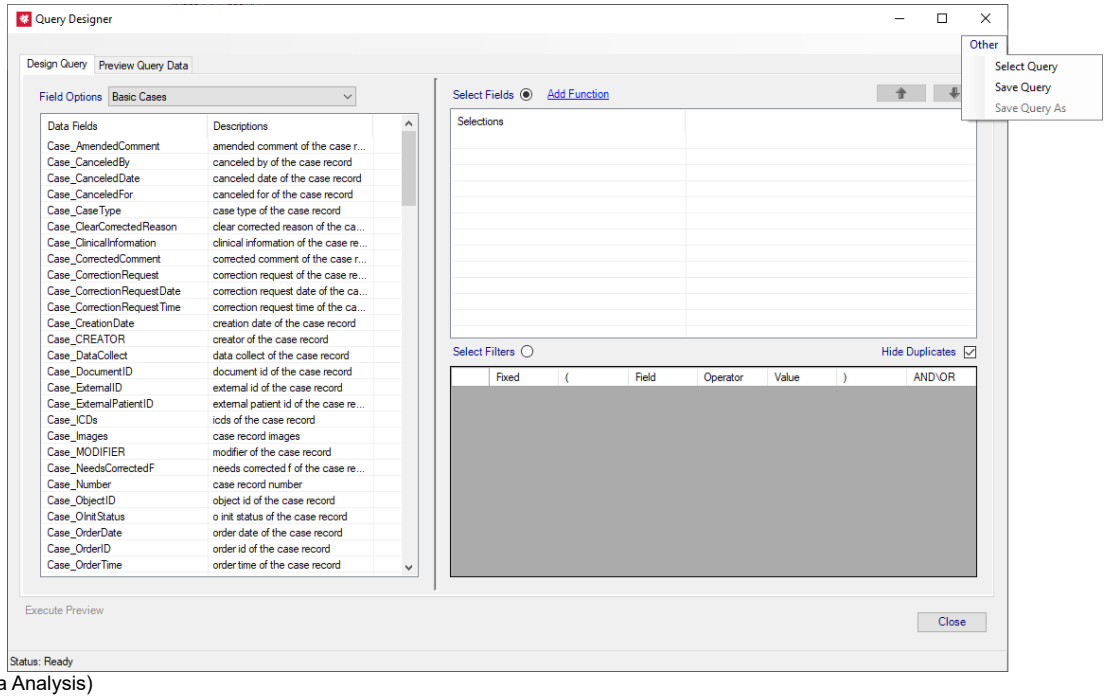



Figure 13-9 - e.Query (Data Analysis)

The *e.Query (Data Analysis)* window includes the *Design Query* and *Review Query Data* tabs, described earlier in this chapter. It does not contain the *Report Setup* tab. If you wish to create a report, use *e.Query (Design Management Reports)*.

## Other Menu

In the upper-right corner of the e.Query (Data Analysis) window is the **Other** popup menu that allows you to open existing queries or save new ones.

- **Select Query:** Selecting the Select Query menu option opens the Select Saved Query window, shown below.

**NOTE:** *Only the Select Query option is available when running e.Query Designer.*

- **Save Query:** Saves any changes made to the opened query.
- **Save Query As:** Opens a library type window where you can name and save the query. You can also right-click a listed query to open the query's library window and retire it.

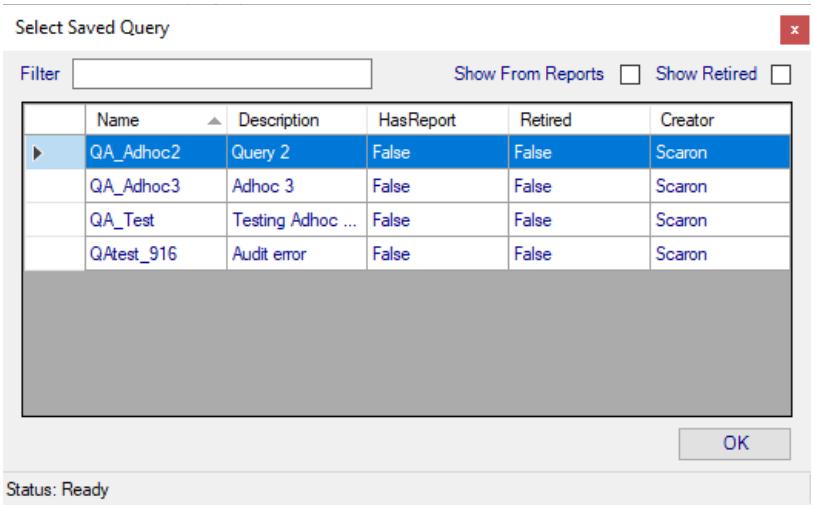



Figure 13-10 - Select Saved Query Window

### The following are the types of queries you may access:

- Any queries that have been previously saved are listed when you open the window.
- Click the Show From Reports checkbox to view queries that have been built into reports.
- Click the Show Retired checkbox to view queries that have been retired.

You may also use the filter field to find a query by name, if there are many queries saved. Any user who has the privileges to run *e.Query (Design Management Reports)* can run *e.Query (Data Analysis)*.

# e.Query Quick Start Guides

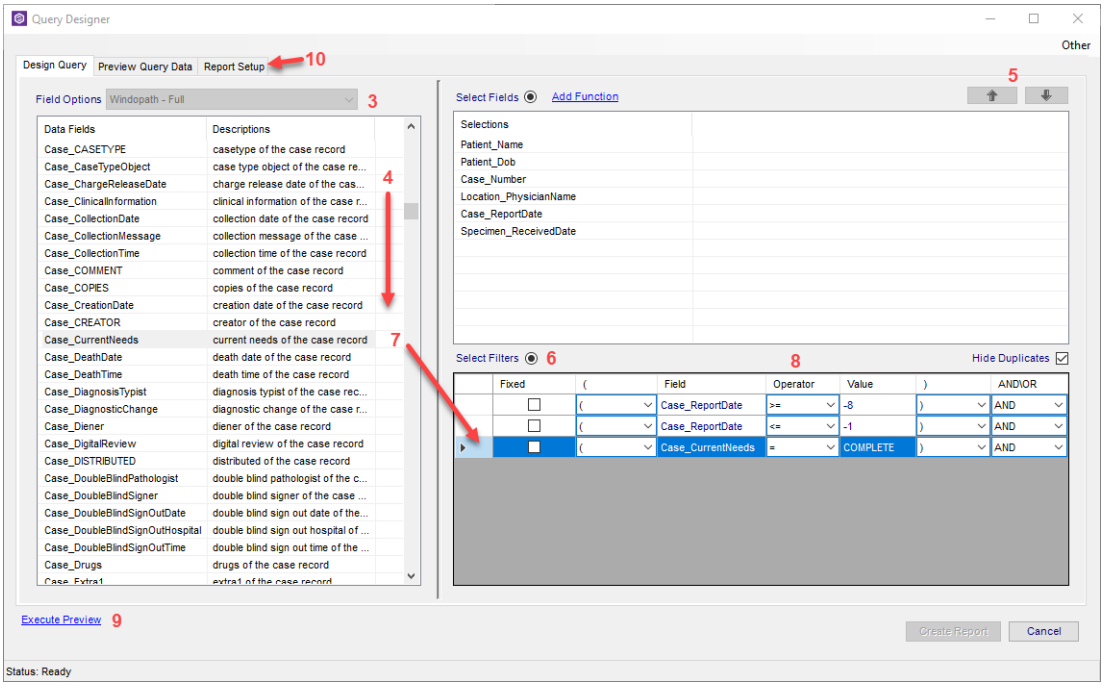
This section includes a series of procedures that can be used as a quick reference to some of the more used features in e.Query. As additional Quick Start Guides are created, they will be added to this section.

Although these examples were created in *e.Boost* using *WindoPath* data and reports, the principles demonstrated apply to all Psyche applications.

## QS - Creating a Report

### To create a new report, follow these steps:

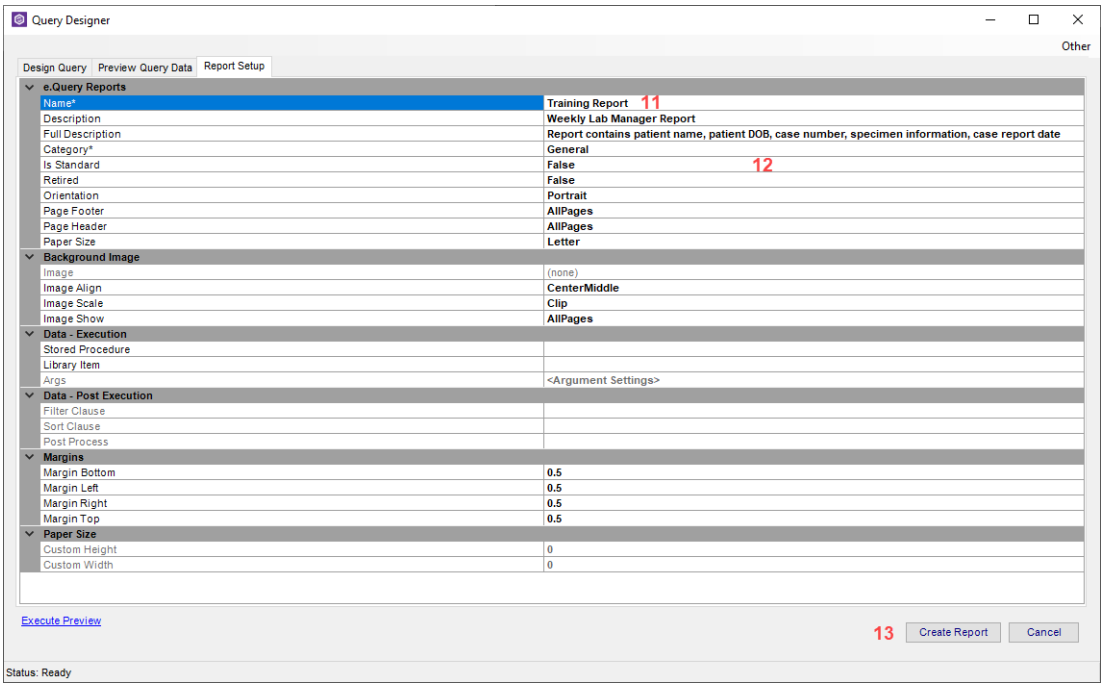
1. **Open e.Query by either clicking the e.Query icon or selecting e.Query (Management Report Designer) from the Operations menu.**
2. **Click the New button in the lower right corner.**
3. **Select a view in the drop-down list labeled "Field Options".**
4. **Double-click any Data Fields on the left to add as a field on the report (Fields contain information that displays on the report). As items are selected, they appear on the right.**
5. **Use the arrow keys to determine the order you want the information to appear on the report.**
6. **Click the Select Filters radio button.**
7. **Double-click Data Fields to use as filters. Every report needs at least one filter (so the report will not display every patient in the database).**
8. **Adjust the Operator and Value as needed. In the example below, these filters are looking for (1) case was reported greater than or equal to (on or before) 8 days ago, (2) case was reported less than or equal to (on or before) one day ago, and (3) case current needs status is complete.**
9. **Click the Execute Preview link to ensure you are getting the data you are expecting.**
10. **Click the Report Setup tab in the upper left corner of the Query Designer Window.**




**11** **Add a Name for the report.**

**12** **Add/edit any additional options here, including report descriptions, paper orientation, header/footer information, margins, etc.**

**13** **Click Create Report button.**



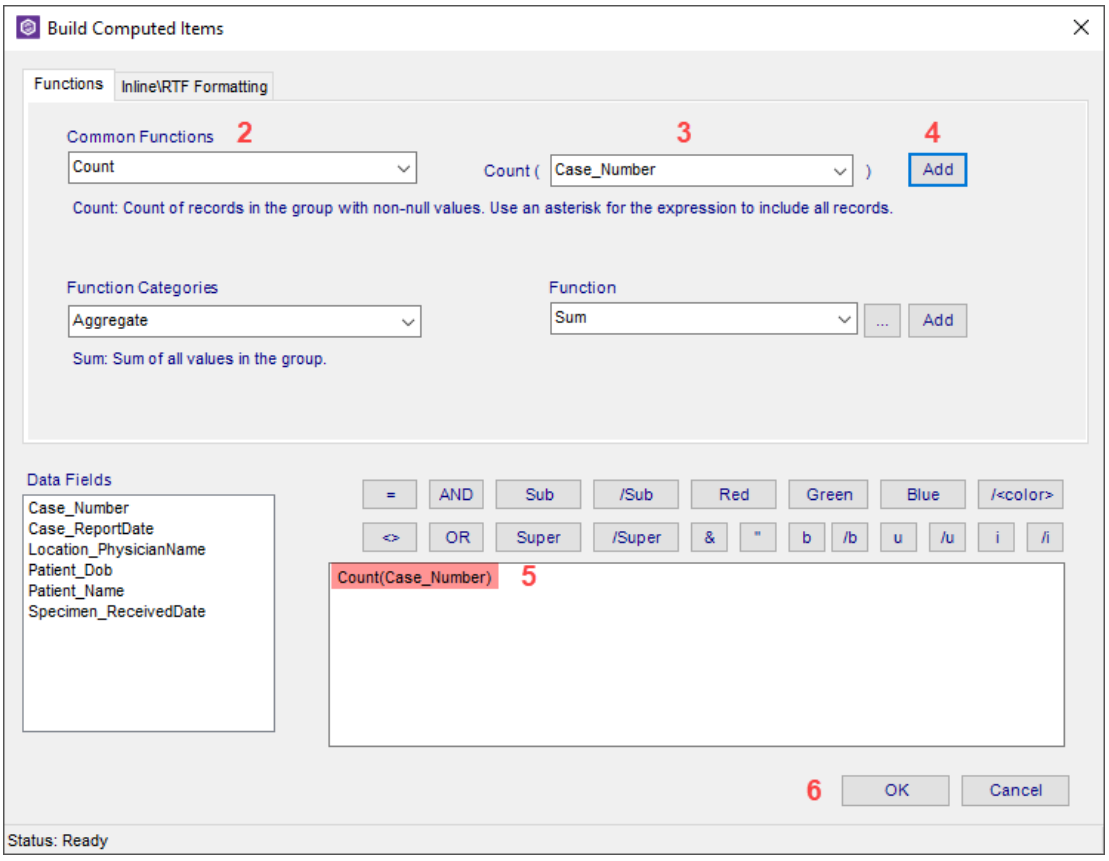
## QS - Totals and Counts

e.Query allows users to count and sum fields. In order to use the sum function, your data fields must contain a number.

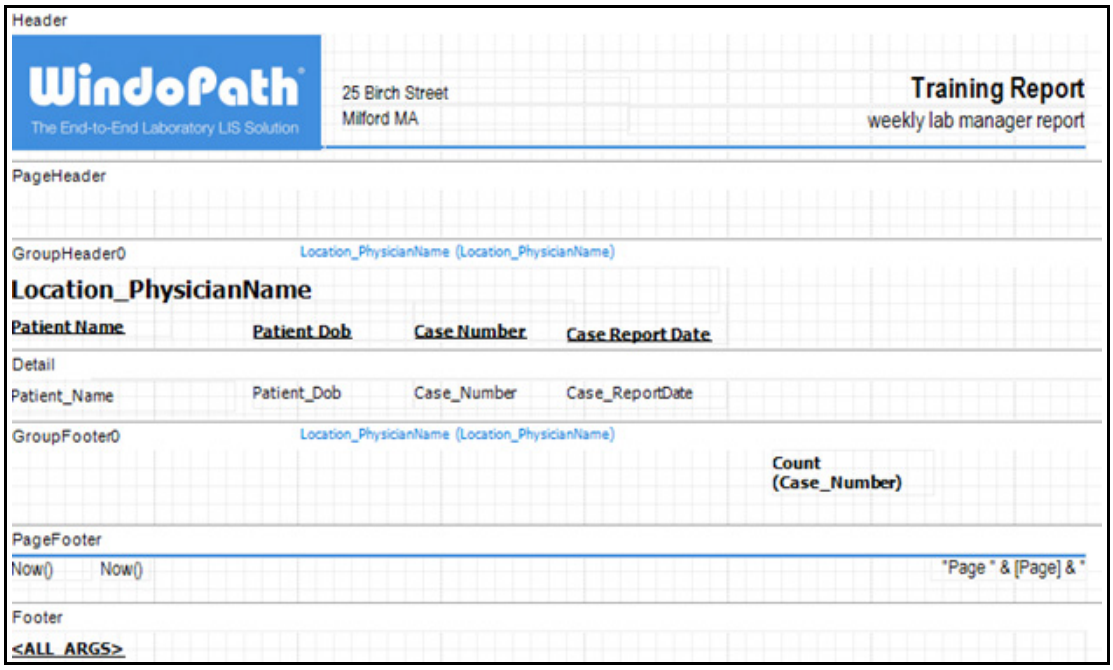
If you are looking for a total number of cases, use the count function. The count function will add up the number of instances in a data field (in this case, the number of cases). Trying to sum the cases numbers won't work, as it would be trying to add non-numeric values. For example, you cannot add S2021-0001 + P2021-0003, but you can count S2021-0001 as one case, and P2021-0003 as the second case, etc).

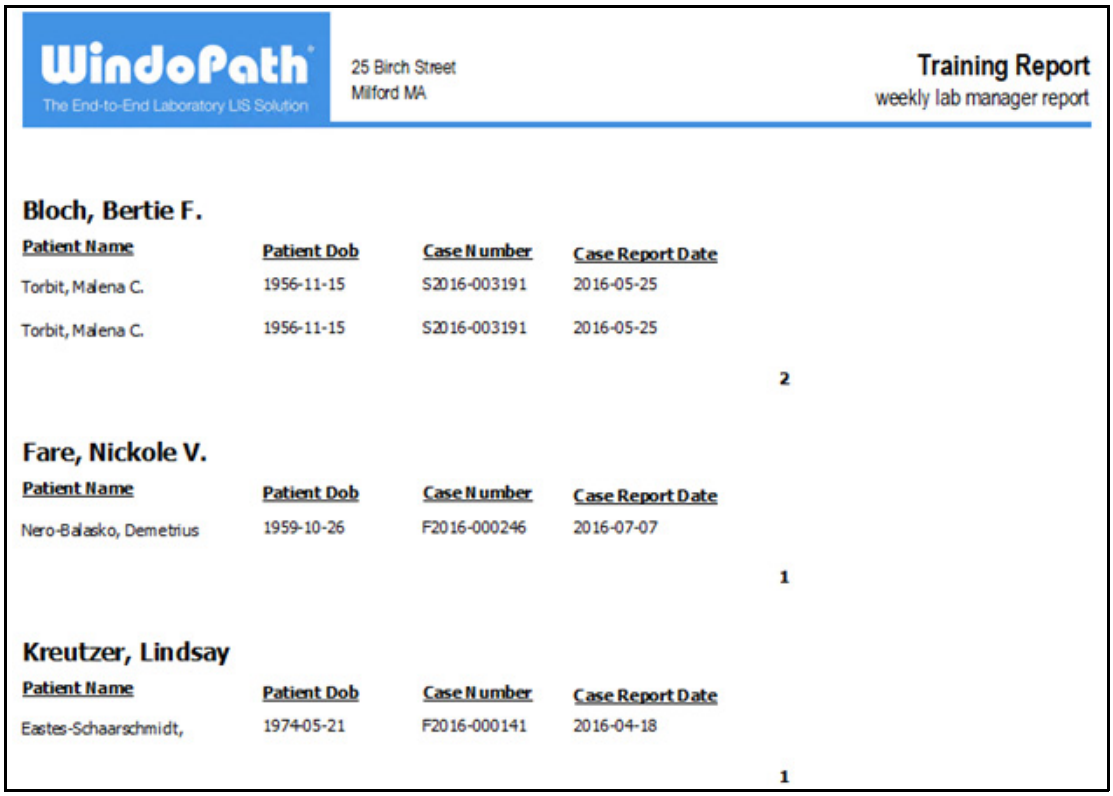
### To add a count total:

1. **From the Commands menu, select Add Computed/Inline.**
2. **In the Common Functions drop-down list, select Count.**
3. **In the Count drop-down list, select the field you want to count (in the example below, it is Case_Number, which will count the number of cases).**
4. **Click the Add button.**
5. **Note the SQL statement that was populated in the box at the bottom. There should not be a need to change it.**
6. **Click OK.**




7. **The Count will be added as a data element. In the example below, the Count was moved to the Group Footer, so the count of the cases will appear in the footer of each group**

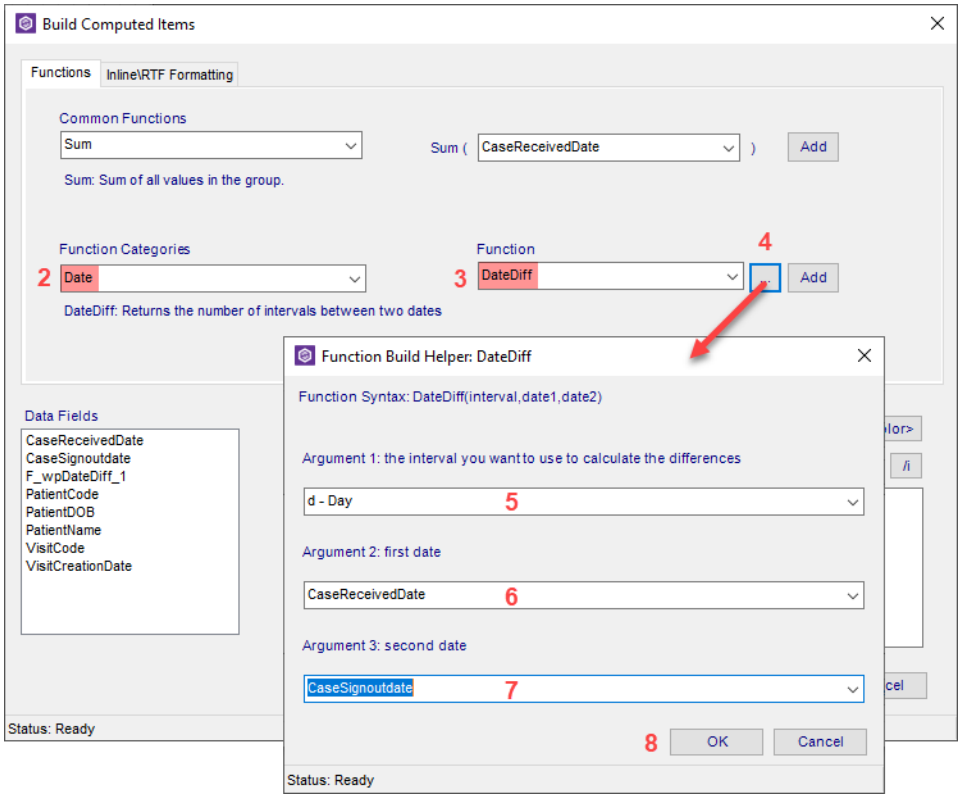

Header
WindoPath
The End-to-End Laboratory LIS Solution
25 Birch Street
Milford MA
Training Report
weekly lab manager report
PageHeader
GroupHeader0
Location_PhysicianName (Location_PhysicianName)
Location_PhysicianName
Patient Name
Patient Dob
Case Number
Case Report Date
Detail
Patient_Name
Patient_Dob
Case_Number
Case_ReportDate
GroupFooter0
Location_PhysicianName (Location_PhysicianName)
Count
(Case_Number)
PageFooter
Now()
Now()
"Page " & [Page] & "
Footer
<ALL_ARGS>


WindoPath
The End-to-End Laboratory LIS Solution
25 Birch Street
Milford MA
Training Report
weekly lab manager report
Bloch, Bertie F.
Patient Name
Patient Dob
Case Number
Case Report Date
Torbit, Malena C.
1956-11-15
S2016-003191
2016-05-25
Torbit, Malena C.
1956-11-15
S2016-003191
2016-05-25
2
Fare, Nickole V.
Patient Name
Patient Dob
Case Number
Case Report Date
Nero-Balasko, Demetrius
1959-10-26
F2016-000246
2016-07-07
1
Kreutzer, Lindsay
Patient Name
Patient Dob
Case Number
Case Report Date
Eastes-Schaarschmidt,
1974-05-21
F2016-000141
2016-04-18
1

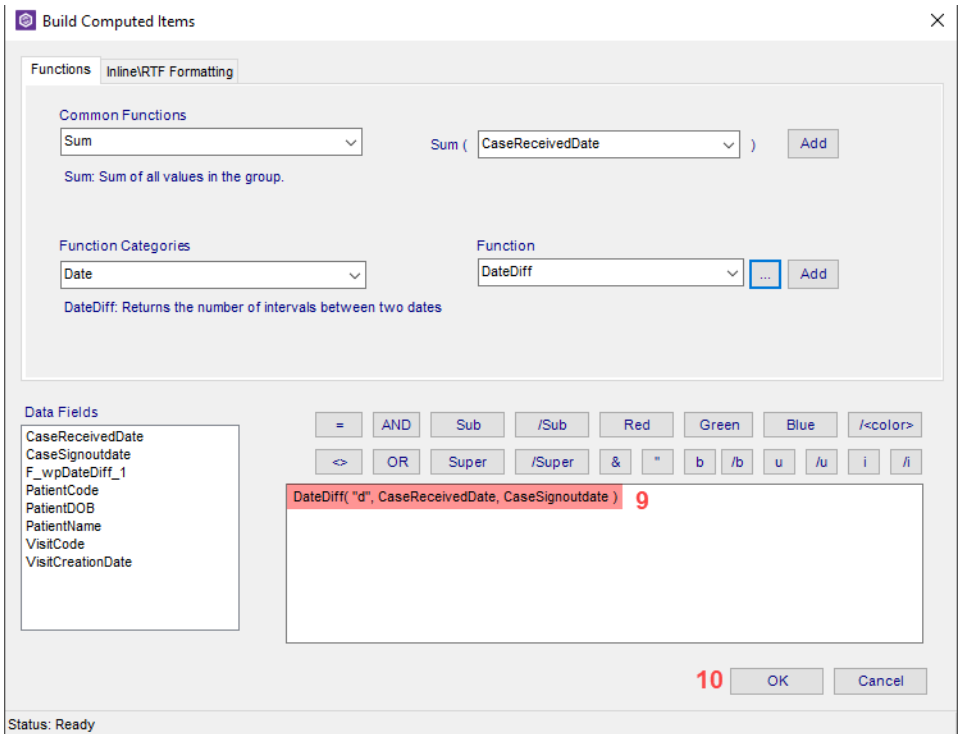
# QS - Calculating Time Between Two Dates

**To calculate the amount of time between two dates, use the Date Differential function.**

1. **From the Commands menu, select Add Computed/Inline.**
2. **In the Function Categories drop-down list, select Date.**
3. **In the Function drop-down list, select DateDiff.**
4. **Click the ellipsis button.**
5. **For Argument 1, select the interval you want to see for the amount of time between the two dates (how many years, days, hours, etc between the two dates).**
6. **Select the starting date field in the drop-down list for Argument 2.**
7. **Select the second/end date field in the drop-down list for Argument 3.**
8. **Click OK.**

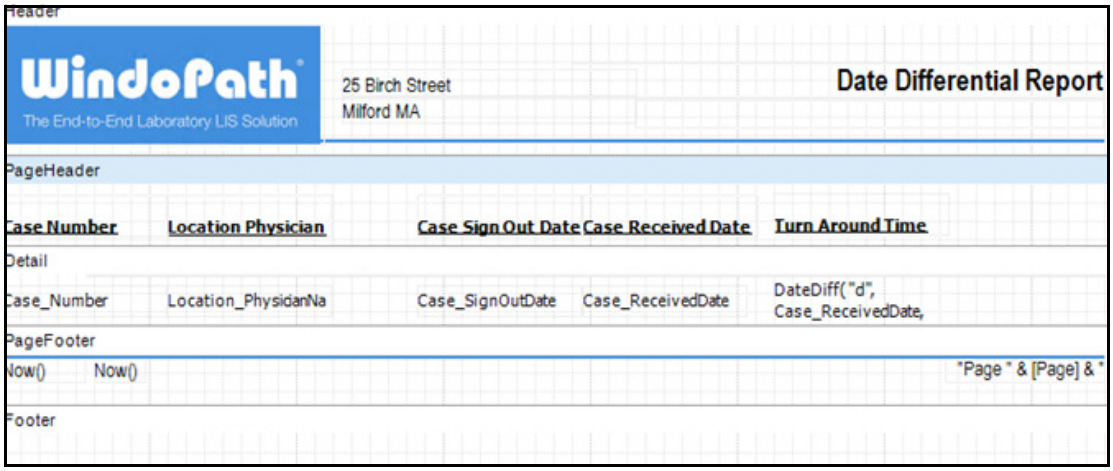



9. **Note the SQL statement is created based on your selections.**
10. **Click OK.**




**11** **The data element of DateDiff appears in your workspace. Move it to where you want it to display on the report.**

**12** **Add a header or label as desired by using the Add Field button in the lower left corner of the window.**



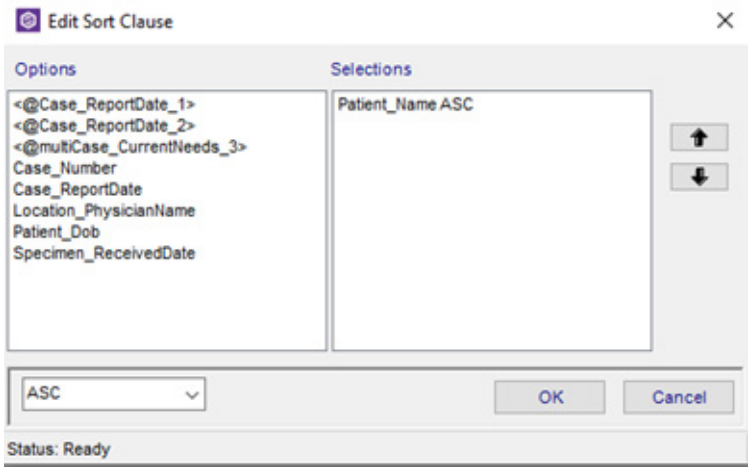
# QS - Sorting and Grouping Data

## Sorting Data

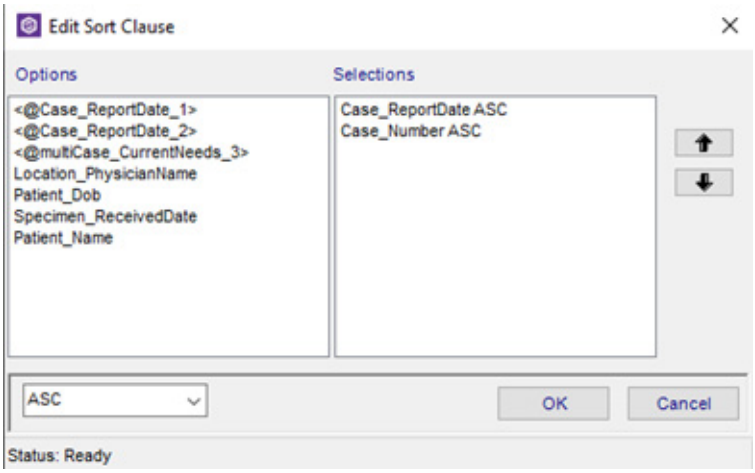
Once a report is created, you can sort the data to appear in the order you want. Sorting will re-order the existing data in whichever way you choose.

### To sort data on your report:

1. **From the e.Query Designer window, click in the empty gray space to see the e.Query Reports options panel.**
2. **Find the *Data – Post Execution* section and click in the *Sort Clause* field.**
3. **Click the ellipsis button to open the Edit Sort Clause window.**
4. **The left will display all data currently selected on your report. Double-click any data points you want to sort by. For example, if you want to sort all data alphabetically by patient name, see example A below. If you want to sort by Case Report Date, and then sort secondarily by Case Number, see example B below.**




Example A




Example B

5. **Use the arrow buttons to indicate the order you want the information to be sorted.**

6 **Use the ASC or DESC drop-down to determine if it will be sorted ascending (smallest to largest or alphabetically) or descending (largest to smallest, or reverse alphabetical order).**

7 **Click OK.**

## Grouping Data

Data on your report can also be grouped. Unlike sorting, which simply re-orders the data, grouping will separate data according to how a group is set up. Sorting will still apply within groups. In order words, if you group by Submitter, but sort by Report Date and Case Number, each time you have a new Submitter listed, the data will be sorted by Report Date, and then Case number.

### To create a group:

1 **From the Commands menu, select Add Group.**

2 **A Group By window appears. Select the Data Field by which you want to group the data.**

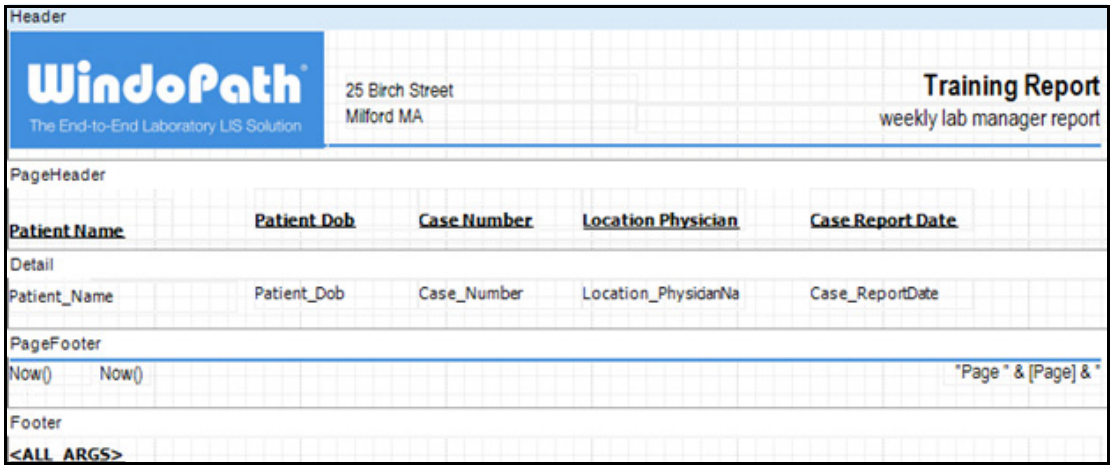
3 **Select ASC or DESC to determine if you want the information to appear in ascending or descending order.**

4 **Select appropriate Keep Together option, as desired.**

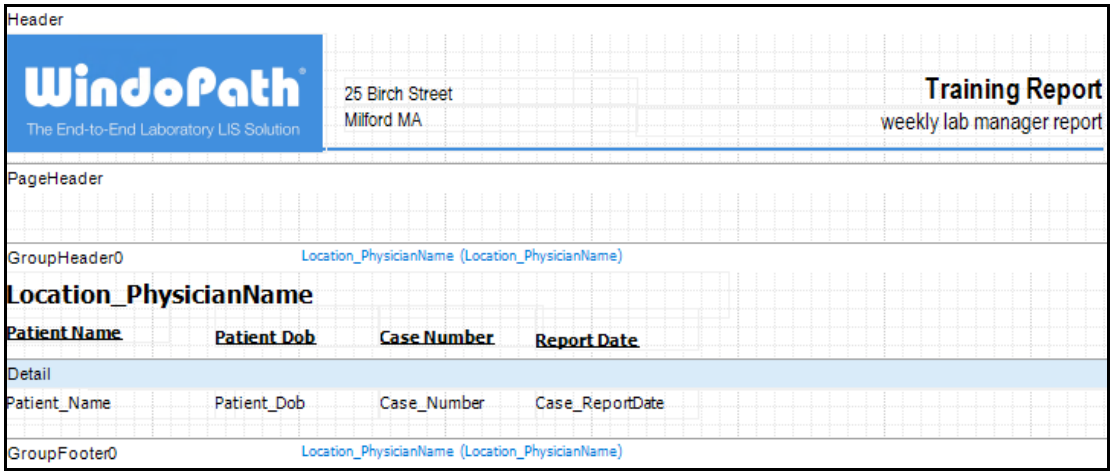
5 **Click OK.**

In the example below, the report was grouped by submitter (in this view, it is labeled as Location_PhysicianName)

## Before Group

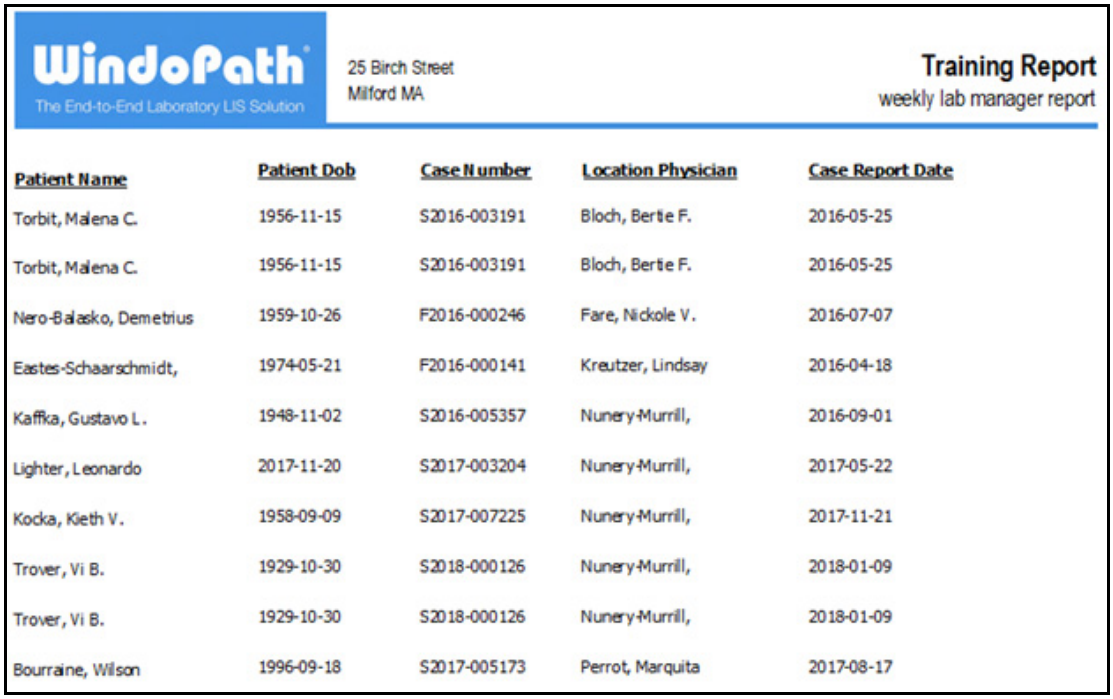


## After Group



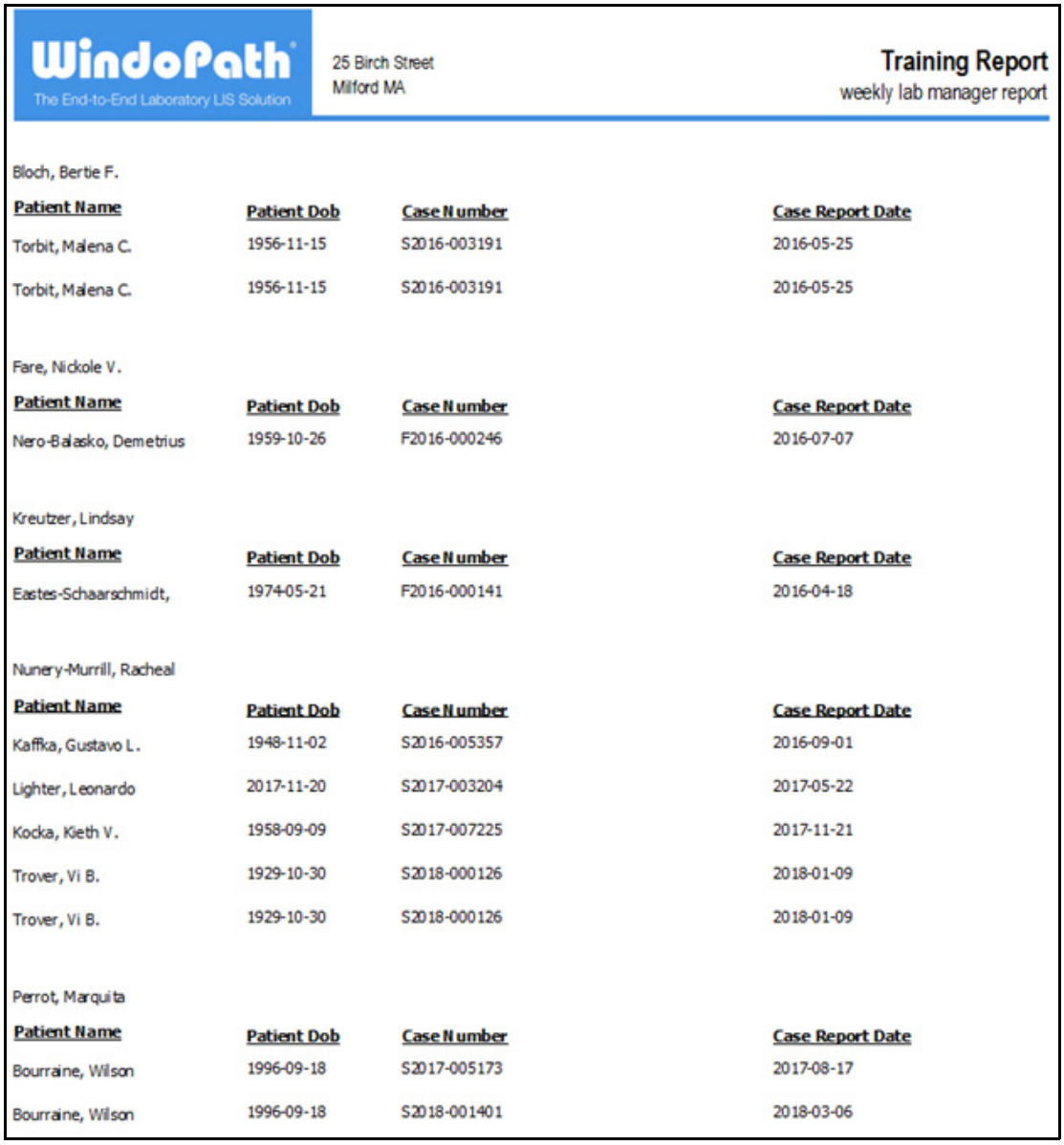

Use the Group Header and Group Footer to place data that will only appear once per group. In the example below, the submitter data field *(Location_PhysicianName)* was moved into the Group Header. That way, instead of appearing once per line of data, it will appear once per *group* of data.

## Before Group




| Patient Name | Patient Dob | Case Number | Location Physician | Case Report Date |
|---|---|---|---|---|
| Torbit, Malena C. | 1956-11-15 | S2016-003191 | Bloch, Bertie F. | 2016-05-25 |
| Torbit, Malena C. | 1956-11-15 | S2016-003191 | Bloch, Bertie F. | 2016-05-25 |
| Nero-Balasko, Demetrius | 1959-10-26 | F2016-000246 | Fare, Nickole V. | 2016-07-07 |
| Eastes-Schaarschmidt, | 1974-05-21 | F2016-000141 | Kreutzer, Lindsay | 2016-04-18 |
| Kaffka, Gustavo L. | 1948-11-02 | S2016-005357 | Nunery-Murrill, | 2016-09-01 |
| Lighter, Leonardo | 2017-11-20 | S2017-003204 | Nunery-Murrill, | 2017-05-22 |
| Kocka, Kieth V. | 1958-09-09 | S2017-007225 | Nunery-Murrill, | 2017-11-21 |
| Trover, Vi B. | 1929-10-30 | S2018-000126 | Nunery-Murrill, | 2018-01-09 |
| Trover, Vi B. | 1929-10-30 | S2018-000126 | Nunery-Murrill, | 2018-01-09 |
| Bourraine, Wilson | 1996-09-18 | S2017-005173 | Perrot, Marquita | 2017-08-17 |

## After Group



WindoPath
The End-to-End Laboratory LIS Solution

25 Birch Street
Milford MA

**Training Report**
weekly lab manager report

Bloch, Bertie F.

| Patient Name | Patient Dob | Case Number | Case Report Date |
|---|---|---|---|
| Torbit, Malena C. | 1956-11-15 | S2016-003191 | 2016-05-25 |
| Torbit, Malena C. | 1956-11-15 | S2016-003191 | 2016-05-25 |

Fare, Nickole V.

| Patient Name | Patient Dob | Case Number | Case Report Date |
|---|---|---|---|
| Nero-Balasko, Demetrius | 1959-10-26 | F2016-000246 | 2016-07-07 |

Kreutzer, Lindsay

| Patient Name | Patient Dob | Case Number | Case Report Date |
|---|---|---|---|
| Eastes-Schaarschmidt, | 1974-05-21 | F2016-000141 | 2016-04-18 |

Nunery-Murrill, Racheal

| Patient Name | Patient Dob | Case Number | Case Report Date |
|---|---|---|---|
| Kaffka, Gustavo L. | 1948-11-02 | S2016-005357 | 2016-09-01 |
| Lighter, Leonardo | 2017-11-20 | S2017-003204 | 2017-05-22 |
| Kocka, Kieth V. | 1958-09-09 | S2017-007225 | 2017-11-21 |
| Trover, Vi B. | 1929-10-30 | S2018-000126 | 2018-01-09 |
| Trover, Vi B. | 1929-10-30 | S2018-000126 | 2018-01-09 |

Perrot, Marquita

| Patient Name | Patient Dob | Case Number | Case Report Date |
|---|---|---|---|
| Bourraine, Wilson | 1996-09-18 | S2017-005173 | 2017-08-17 |
| Bourraine, Wilson | 1996-09-18 | S2018-001401 | 2018-03-06 |

## Notes

# Chapter 14
# Run e.Query (Run Management Reports)

MicroPath is delivered with several management reports that can be used to help you manage your lab workflow. These reports are grouped into the following categories: *Active*, *Audit*, *General*, *Library*, *Summary*, and *To Inlab*. You may limit which reports a user can or cannot run based on the User Role set for that user. See the Library section of this manual for more information on User Roles.

## Management Report Window

You access management reports by clicking the Run e.Query (Run Management Reports) icon from the operations tool bar or menu. These reports will help to give the information needed for daily work flow and cumulative summaries.

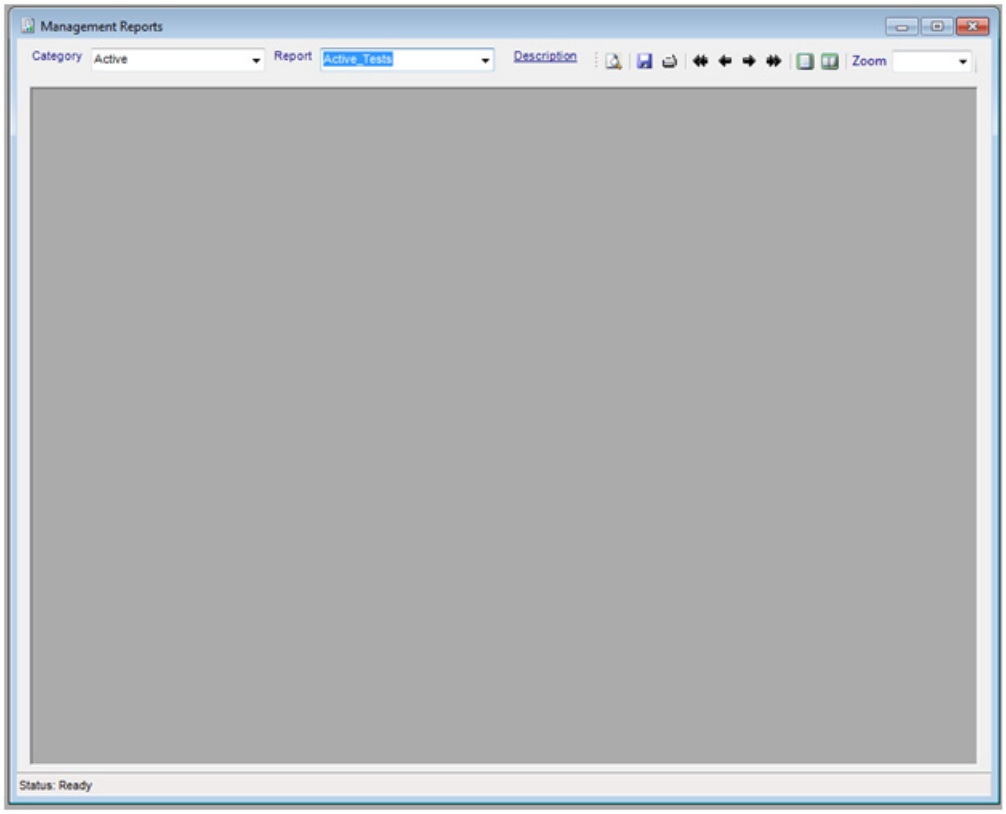



Figure 14-1 - Management Reports Window

## How to Execute a Management Report

1. **Select a report in which to execute. (Reports are grouped by various categories in accordance with the reports objective: Active, Audit, General, Library, Summary, To Inlab. Other categories may be defined.)**
2. **Click the execute report menu item.**
**You may be prompted to enter parameters (such as date ranges) that serve to limit the reports data. The report displays in the window.**

### Other Operations

1. **Click the Save icon to save the report.**
**PDF, HTML, and XLS are supported.**
2. **Click the Print icon to print the report.**
3. **Use the arrows to navigate the pages of the report.**
4. **Select single or multiple page layout.**
5. **Apply a Zoom factor to increase or decrease the display size of the report.**

### To Import/Export a Management Report:

1. **Save existing report in .XML format.**
2. **Export existing report and save to desktop.**
3. **Import using the Transfer tab in Outreach Manager under Design Management Reports, find the file and save it.**
4. **Or click on the Export button in the Management Report window to Export.**
**Files will be exported in .csv format**

## The 'Management Reports' report

MicroPath is installed with a standard report that lists *all* the standard reports provided with your system, along with the report descriptions. This is very useful when learning what each report includes and deciding which you want to use.

To generate the Management Reports report, select the Library Category and the Report name of Management Report. The Management Report will list the following for each report in the system, if available.

**Report Name**

**Report Category**

**Report Description**

**Report Full Description**

Figure 14-2 and 14-3 shows a current example of the Management Reports report.

Psyche Systems
25 Birch Street
Milford, MA 01757

**Management Reports**

Tuesday, March 14, 2017

PSYCHE
Medical Laboratory Software

| Report Name | Report Category | Report Description | Report Full Description |
|---|---|---|---|
| Active_Cultures | Active | Active Cultures | Displays a listing of all cultures that currently exist in the active pool. This includes cultures that have been flagged as received that are in any report status (Pending, Preliminary, FInal, and Corrected). Final and Corrected cultures remain in the active pool in accordance with DaysToMaintainFinal preference setting. |
| Active_Cultures_Corrected | Active | Active Cultures Corrected | Displays a listing of all cultures that currently exist in the active pool that are in a Corrected status. Corrected cultures remain in the active pool in accordance with DaysToMaintainFinal preference setting. |
| Active_Cultures_Overdue | Active | Overdue Cultures | Displays a listing of all cultures that currently exist in the active pool that have a report status of either Pending or Preliminary that are considered overdue. The overdue setting is defined in the culture library based on culture code. |
| Active_Cultures_Pending | Active | Active Cultures Pending | Displays a listing of all cultures that currently exist in the active pool that have a report status of either Pending or Preliminary. |
| Active_Instrument_Review | Active | Instrument Review | Displays a list of all cultures that current are in a Pending or Preliminary status that have sensitivities that have been resulted. |
| Active_Summary | Active | Active Summary | Displays a summary of a count of all cultures and tests that currently exist in the active pool based on report status. |
| Active_Tests | Active | Active Tests | Displays a listing of all tests that currently exist in the active pool. This includes cultures that have been flagged as received that are in any report status (Pending, Preliminary, FInal, and Corrected). Final and Corrected tests remain in the active pool until all tests on the specimen have been completed and in accordance with DaysToMaintainFinal preference setting. |
| Active_Tests_Corrected | Active | Active Tests Corrected | Displays a listing of all tests that currently exist in the active pool that are in a Corrected status. Corrected tests remain in the active pool until all tests on the specimen have been completed and in accordance with DaysToMaintainFinal preference setting. |
| Active_Tests_Overdue | Active | Active Tests Overdue | Displays a listing of all tests that currently exist in the active pool that have a report status of either Pending or Preliminary that are considered overdue. The overdue setting is defined in the test library based on test library code. |
| Active_Tests_Pending | Active | Active Tests Pending | Displays a listing of all tests that currently exist in the active pool that have a report status of either Pending or Preliminary. |



Figure 14-2 - Management Reports report (page 1)

| Report Name | Report Category | Report Description | Report Full Description |
|---|---|---|---|
| Audit_Collection_Verificati | Audit | Collection Date Verification | Compares collection dates to received dates |
| Audit_Culture | Audit | Culture Audit | Displays a detailed audit record for a single culture |
| Audit_FlagReviewed | Audit | Flag Reviewed | This report contains a summary all cultures flagged for quality review. |
| Audit_Test | Audit | Audit Test | Displays a detailed audit record for a single test |
| Build List | Build List | Build List | Executes as a print job from a Build List generated in the Culture Manager window. |
| ALL_Organisms | General | Organisms | This reports displays all organisms found in the date range passed. |
| ALL_Organisms_Critical | General | Critical Organisms | This reports displays all critical organisms found in the date range passed. |
| Billing_Summary | General | Billing Log | List of charges applied to cases within a specified date range. |
| Culture_TAT | General | Culture Turnaround Time | Returns the turnaround time (in hours) for each culture based on a range of received dates passed and culture type. |
| Library_Antibiotic | Library | Antibiotic Library | Display a listing of the Antibiotic library. |
| Library_Antiobiotic_Panels | Library | Antibiotic Panels | Display a listing of the Antibiotic panel library. |
| Library_BioChemical | Library | Bio Chemical Library | Display a listing of the Bio Chemical test library. |
| Library_BioChemical_Pan | Library | Bio Chemical Panels | Display a listing of the Bio Chemical test panel library. |
| Library_Comments | Library | Comment Library | Display a listing of the coded comment library. |
| Library_Cultures | Library | Culture Library | Display a listing of the culture library. |
| Library_MicroTests | Library | Micro Test Library | Display a listing of the test library. |
| Library_Organism | Library | Organism Library | Display a listing of the organism library. |
| Library_Plate_Panels | Library | Plate Panels | Display a listing of the plate panel library. |
| Management Reports | Library | Management Reports | Displays a listing of management reports sorted by category ascending. |
| Culture_Summary | Summary | Culture Summary | Displays a total of cultures for each culture type for the range of received dates provided. |
| Pending_Receipt | To Inlab | Pending Receipt | Displays a listing of all cultures and tests that have been ordered that have not yet been flagged received. |



Figure 14-3 - Management Reports report (Page 2)

# Chapter 15
# Antibiogram Reports

The Antibiogram Report displays percentages of susceptibility for each antibiotic\organism combination, selected based on physician group or submitter. A an antibiotic result is considered *Susceptible* if the value is **S** or **Sensitive**.

## Antibiogram Report window

The report is executed and printed by selecting the Antibiogram Report option from the Operations menu.

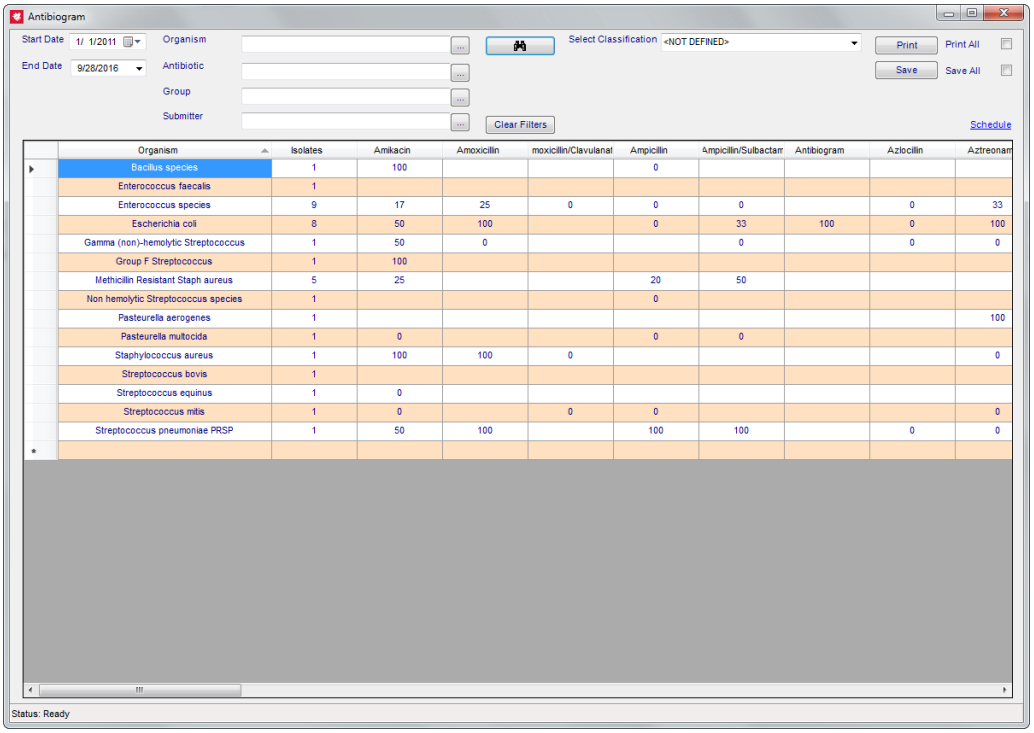



Figure 15-1 - Antibiogram Report Window

## How to execute and print an Antibiogram report:

1. **Enter or select the date range (received dates) which you wish to use to execute your report.**
2. **Select the antibiotic(s) you want to report on using the pick list or leave blank for all.**
3. **Select the physician group(s) by name you want to use to filter the report using the pick list or leave blank for all.**

**OR select the submitter(s) by name you want to use to filter the report using the pick list or leave blank for all.**

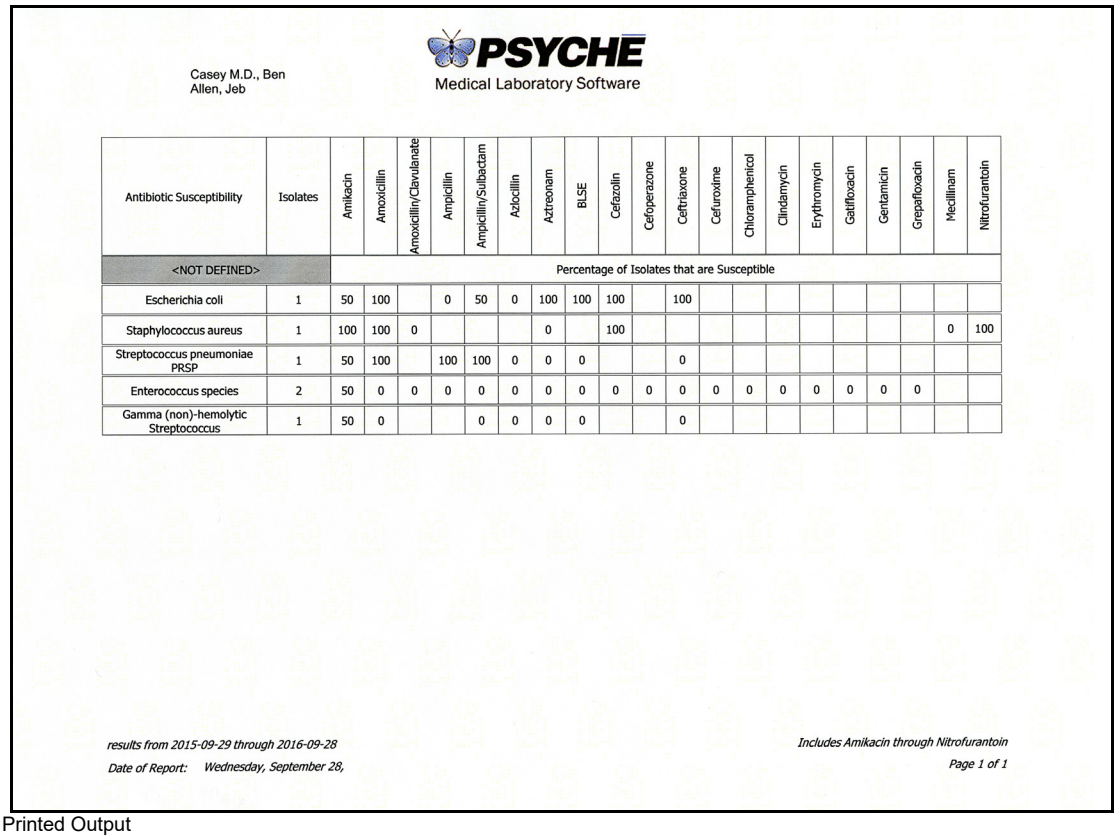
4 **Click the binoculars to execute the calculations, and populate the grid.**

5 **The Select Classifications drop down list enables toggling the view of data to that of the selected organism classification if organism classification is being used, or choose None Defined to include those that have no classification.**

**NOTE:** *Once a classification has been defined on an organism, that organism will only appear on an Antibiogram report if that classification is selected.*

6 **Click the Print button to print the report associated with the selected classification.**

7 **Check the Print All check box, then click Print to print reports associated with all classifications.**



Casey M.D., Ben
Allen, Jeb

PSYCHE
Medical Laboratory Software

| Antibiotic Susceptibility | Isolates | Amikacin | Amoxicillin | Amoxicillin/Clavulanate | Ampicillin | Ampicillin/Sulbactam | Azlocillin | Aztreonam | BLSE | Cefazolin | Cefoperazone | Ceftriaxone | Cefuroxime | Chloramphenicol | Clindamycin | Erythromycin | Gatifloxacin | Gentamicin | Grepafloxacin | Mecillinam | Nitrofurantoin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <NOT DEFINED> | Percentage of Isolates that are Susceptible | | | | | | | | | | | | | | | | | | | | |
| Escherichia coli | 1 | 50 | 100 | | 0 | 50 | 0 | 100 | 100 | 100 | | 100 | | | | | | | | | |
| Staphylococcus aureus | 1 | 100 | 100 | 0 | | | | 0 | | 100 | | | | | | | | | | 0 | 100 |
| Streptococcus pneumoniae PRSP | 1 | 50 | 100 | | 100 | 100 | 0 | 0 | 0 | | | 0 | | | | | | | | | |
| Enterococcus species | 2 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Gamma (non)-hemolytic Streptococcus | 1 | 50 | 0 | | | 0 | 0 | 0 | 0 | | | 0 | | | | | | | | | |

*results from 2015-09-29 through 2016-09-28*
*Date of Report: Wednesday, September 28,*

*Includes Amikacin through Nitrofurantoin*
*Page 1 of 1*

Figure 15-2 - Antibiogram Printed Output

**NOTE:** *If printed reports are selected by Group or submitter, the full name of the group/submitter is included on the report.*

# Chapter 16
# Design Result Reports

MicroPath has a powerful Result Report Designer built in that you can use to design the look of your result reports. The body of the report where the results print is designed by Psyche Systems, but using the Design Result Reports designer, you can customize your report **headers and footers**.

Result reports are used to deliver patient results to your clients who utilize your lab and should reflect your laboratory in design and content. You access the Report Designer Window by clicking the Design Result Reports icon from the tool bar or from the Operations menu.

## Report Designer Window

Design Result Reports opens the Report Designer window, shown in Figure 16-1.

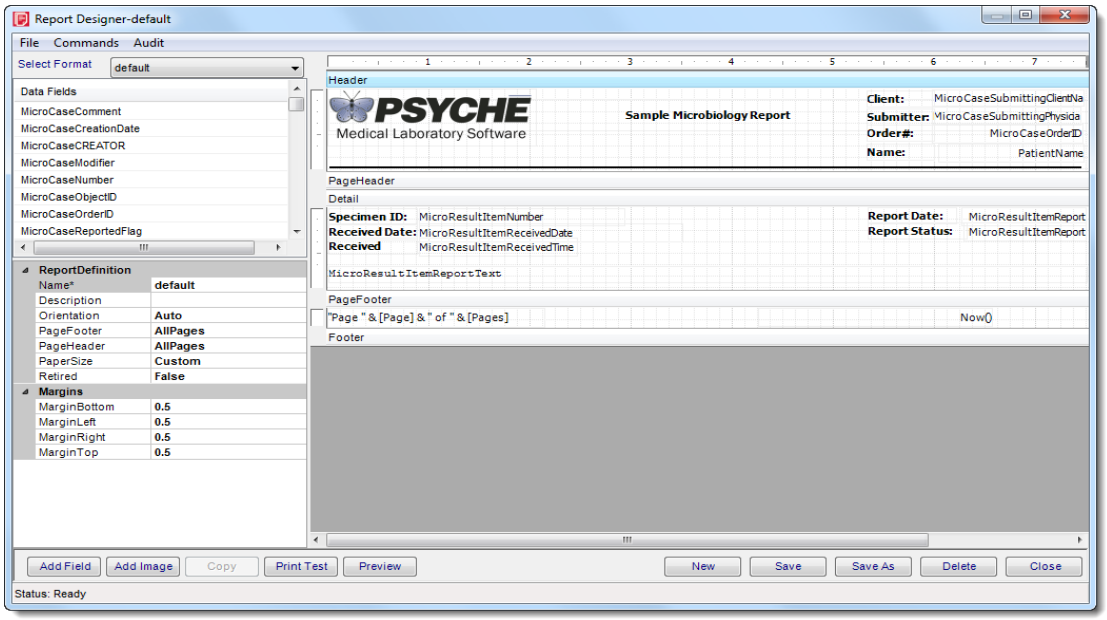



Figure 16-1 - Report Designer Window

The Report Designer window is divided into multiple sections:

- **Select Format**: a drop-down list where you select previously saved reports
- **Data Fields:** specific data fields you can add to the report sections. e.g. double-click the PatientName field to add the patient name to the report.

- **Report Parameter:** List of parameters that can be used to format the selected item in the report, such as field font size, color, position, borders, alignment, etc. These parameters change to reflect the item or section you have selected in the right side of the window.
- **Report Sections:** the right half of the window displays the complete report and includes the following report sections that you can design:

- Header - appears at the beginning of a report
- PageHeader - appears at top of every page
- Detail - defined by Psyche only
- PageFooter - appears at bottom of every page
- Footer - appears at end of report

## Report parameters

These parameters are available when the body of the report (gray background) is selected or when you first open a report.

| Parameter | Description |
|---|---|
| **Report Definition** | |
| Name | Name of the report; will be seen in Select Format drop-down list |
| Description | Long description of the report |
| Orientation | Select portrait or landscape, which will override the printer setting; Auto sets report to portrait. |
| PageFooter | Select AllPages to print footer on every page or one of the other options |
| PageHeader | Select AllPages to print header on every page or one of the other options |
| PaperSize | Select from the drop down list one of the standard paper sizes for your printer. |
| Retired | True/False; whether report is retired (unaccessible) or not |
| **Margins** | |
| MarginBottom | The amount of space to leave at bottom of report, in inches |
| MarginLeft | The amount of space to leave at left of report, in inches |
| MarginRight | The amount of space to leave at right of report, in inches |
| MarginTop | The amount of space to leave at top of report, in inches |

## Section parameters

These parameters are available when one of the header or footer sections are selected.

| Parameters | Description |
|---|---|
| Section Display | |
| KeepTogether | True/False; keeps the section contents from splitting across pages |
| BackColor | Allows you to set the background color for the section |
| CanGrow | Allows section to increase vertically, if needed, to accommodate data. |
| CanShrink | Allows section to decrease vertically, if needed, to accommodate data. |
| ForcePageBreak | Executes a page break at that position |
| Repeat | True/False; repeats section |
| Visible | True/False; can temporarily remove section from report |

## Field Parameters

These parameters are available when one of the fields in the header or footer are selected.

| | |
|---|---|
| **Identity** | |
| Name | Name of the field either the Data Field name or LITERAL for labels |
| **Border** | |
| Border | Sets a border for the field; select style from drop-down list |
| BorderColor | Sets a color for the border; select from drop-down list |
| BorderWidth | Sets the thickness of the border |
| **Picture** | |
| Picture | Shows the path of the placed image or “Picture” if Add Image button was used |
| PictureAlign | Sets the position of the image within the image field; select from drop-down list |
| PictureScale | Sets the scaling of the image; select from drop-down list; Scale will maintain image appearance |
| **Position** | |
| Anchor | Sets the position of the data within the field; select from drop-down list; useful to keep Anchor consistent for all fields |

| | |
|---|---|
| Left | Field position from left edge of report; measurement is in twips. *(Twips are screen-independent units to ensure that the proportion of screen elements are the same on all display systems. A twip is defined as being 1/1440 of an inch.)* |
| Top | Field position from top edge of report; measurement is in twips |
| **Size** | |
| CanGrow | True/False; allows data to expand as needed, if data exceeds field width |
| CanShrink | True/False; allows field size to shrink as needed |
| Height | Field height; measurement is in twips |
| Width | Field width; measurement is in twips |
| **TextDisplay** | |
| BackColor | Sets the background color of the field; select from drop-down list |
| BarCode | For data elements that specify a barcode, select barcode format from drop-down list |
| Font | Opens a font dialog box where the appearance of the field data can be modified, such as bolding, underline, font type and size |
| ForeColor | Sets the foreground color or text of the field; select from drop-down list |
| HideDuplicates | True/False; hides successive fields, if duplicate data |
| KeepTogether | True/False; keeps field with next field |
| MarginLeft | The distance the contents will print from left edge of field; measured in twips |
| MarginRight | The distance the contents will print from right edge of field; measured in twips |
| RTF | When using *Rich Text Format* sequences in Library elements, True will print the RTF format appropriately for field |
| Text | Either the field name if a Data Field or the actual text that will print if a label |
| TextAlignment | Position of text within the field; useful to keep consistent |
| TextDirection | Usually Normal to print text left to right; Up or Down will print vertically in respective direction |
| WordWrap | Allows data to expand vertically within field width as needed wrapping at a space, if data exceeds field width |

# How to Create and Design a Report

**NOTE:** *SiteWideReserved preference AdvancedResultReports must be set to True.*

1. **Select New to create a new report. All sections will be empty.**
2. **Click Save and enter a Description to name and differentiate the type of Report.**
3. **Design and save often. (see below for steps)**
   - Use **Data Fields** to customize data needed to fulfill the required report request
   - Use **Add Field** to add a new field for free text, such as facility header and address, or labels to identify what is contained in the Data Fields.
   - Use **Add Image** to import an image, such as a logo. This image may import very small, but then you can drag the image box to increase the size to what you need.
   - Use **Copy** on a highlighted field, which makes a copy that can be placed elsewhere
4. **The report will display in the window.**

## Operational Buttons

| Description | Action |
|---|---|
| Add Field | Adds a new field for free text or field labels |
| Add Image | Allows you to add an image, such as a logo |
| Copy | Highlighted field can be copied and placed elsewhere |
| Print Test | Allows you to print a test copy of report as it is |
| Preview | Allows you to preview the current report |
| New | Starts creating a new blank report |
| Save | Saved the current report with the current name |
| Save As | Allows you to save the displayed report and give it a new name |
| Delete | Deletes the entire report that is opened |
| Close | Closes the Report Designer Window |

## File Menu

| Menu Option | Action |
|---|---|
| Import | Opens a window to select an exported report XML file; will replace any current report |
| Export | Exports the current report to an XML file to export to another system; opens a window so you can name the file |
| Export (Full) | Used mainly by Psyche to export the complete report and other parameters. |

## Commands Menu

| Menu Option | Action |
|---|---|
| Date [long] | Inserts a field for the current date in the format: Day of week, Month Date, Year. e.g. Monday, March 20, 2017. |
| Date [short] | Inserts a field for the current date in the format: mm/dd/yyyy. e.g. 11/13/2017 |
| Time [long] | Inserts a field for the current time in the format: hh:mm:ss A/PM e.g. 2:42:59 PM |
| Time [short] | Inserts a field for the current time in the format: hh:mm A/PM e.g. 2:42 PM |
| Page | Adds a page number field |
| Page w\Count | Adds a page number and count; e.g. Page 1 of 3 |
| Select All (Ctrl+Shift+A) | Selects all fields on the report |
| Add Computed \ Inline | Opens a window where you can add calculations to the report. Optionally, your system may be configured to allow inline Rich Text Formatting configuration through this window as well. |
| Add Template | If a field is designed and saved with TEMPLATE_FIELD as the name, Add Template will add a field with the same characteristics as the template. Delete Template Field when done. This works within the current report. |
| Add Page Break | Performs a page break on long reports; best used in the footer |
| Add Combo Field | Opens a picklist dialog box where you can select a combination of data fields to be added as a field |
| Formatting | When multiple fields are selected, the following formatting commands become available:<br>**Set Table Row:** lines up all selected fields in a single row<br>**Align Left:** aligns all selected fields by the fields' left edges<br>**Align Center:** aligns all selected fields vertically by the fields' centers<br>**Align Right:** aligns all selected fields by the fields' right edges<br>**Align Top:** aligns all selected fields by the fields' top edges<br>**Align Middle:** aligns all selected fields horizontally by the fields' centers<br>**Align Bottom:** aligns all selected fields by the fields' bottom edges<br>**Equal Height:** sets all selected fields to be the same height<br>**Equal Width:** sets all selected fields to be the same width<br>**Equal Size:** sets all selected fields to be the same height and width |
| Add Group | Allows you to pick a field to be used as a subhead and subfoot of the report, such as grouping a patient's results within a submitter's complete report. |
| Remove Group | Allows you to pick and remove any groups that may have been added |

| Menu Option | Action |
|---|---|
| Bring To Front | When there are overlapping elements, this command brings the selected field to the front |
| Send To Back | When there are overlapping elements, this command brings the selected field to the back; useful for background images |
| Show Retired | Toggles the view of Result Reports that have been retired on and off |
| Snap To Grid On | Uses the grid to assist lining up fields; fields will snap to the grid lines when positioning |
| Snap To Grid Off | Disables the fields from snapping to grid lines when positioning |
| Conditional Formatting | If enabled, opens a window where you can build formatting statements that data that appears on the report. |

## Audit Menu

| Menu Option | Action |
|---|---|
| Show Audit | Displays an audit trail of modifications that have been made to the current report |