

SYNGISTIX FOR AA AND ICP



Data Management Software Guide



Syngistix

Data Management Software

Release History

Part Number	Release	Publication Date	Software Version
09931146	A	April 2014	1.0

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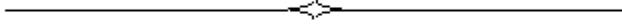
Table of Contents

Data Manager Basics.....	1
What is the Data Manager?.....	3
Event Log.....	3
File Change Log.....	4
Additional Tools.....	4
How is Data Produced and Where Is It Stored?	5
Working with Libraries and Data Sets	6
Default Library Locations.....	6
Text (Unicode) Files.....	7
Frequently Asked Questions About the Data Manager.....	8
What is a library?.....	8
What is a data set?	8
Why do Syngistix programs store data in libraries?	8
Can I use Windows Explorer to copy libraries?.....	9
How are new data sets created?.....	9
Can I put two libraries of the same category in the same directory?	9
Can I put two libraries of different categories in the same directory?	9
What about sample information? Is it also stored in libraries?.....	9
Data Manager Ribbon.....	10
Tips and Hints.....	11
Managing Data	13
What's Important about Managing Data?.....	14
Copying Data Sets: Steps	15
Deleting Data Sets: Steps	17
Renaming Data Sets: Steps.....	18
Archiving Data Sets: Steps.....	19
Archiving the Event Log: Steps.....	21
Archiving the File Change Log: Steps.....	22
Restoring Data Sets from an Archive: Steps	23
Restoring an Event Log.....	25
Creating A New Library: Steps.....	26
Verify Data Set Signatures: Steps.....	27
Checking A Library: Steps	28
Packing A Library: Steps	29
Enable/Disable Samples: Steps	30
Remove Locks: Steps	31
Reports.....	33
Data Manager's Reporting Feature	35
Before You Begin:.....	35
Basic Steps for Creating a Report of the Event Log.....	35
Basic Steps for Creating a Report of the File Change Log	36
Basic Steps for Creating a Report	37
Printing a Report.....	38
Data Reporting Wizard	39
Select Design	39
Select Samples to Report (or Export)	39
Select Analytes to Report (Export or Chart).....	41
Select Report Format.....	41
Enter Report Title and Page Header.....	46
Enter Page Footer and Report Appendix.....	47
Enter Limit Remarks	48
Saving a Report Design.....	49

View and Print Report	49
Using the Preview Report Window.....	50
Export Data	51
About Exporting Data.....	53
Before you Begin:	53
Basic Steps for Exporting the Event and File Change Log	53
Data Exporting Wizard	54
Select Export Design	54
Select Samples to Report (or Export).....	55
Select Analytes to Report (Export or Chart)	56
Select Sample Parameters	56
Select Mean-Related Parameters.....	58
Select Replicate-Related Parameters	61
Select Export Options	62
Export Data Set	63
Saving an Export Design.....	64
QC Charting Wizard.....	65
Overview of the QC Charting Wizard	67
Select QC Chart Design	68
Select Technique	68
Select Method	69
About Handling of Method Names	69
Select Sample Type and Date Range.....	70
Select Sample to Chart.....	70
Select Analytes to Chart	71
Chart Parameters.....	72
Select Results to Chart	74
Title and Footer	75
Save Design and Export Data	76
Storing Your Design	76
Export Data	76
QC Chart Preview	77
Data Table	79
Chart Drawing	80
Axis Scaling	80
Drawing Data	80
Menus, Toolbars and Dialogs	83
Menus and Toolbars	85
Tasks	85
Dialogs	87
Archive Data Dialog.....	87
Check Library Tables Dialog.....	87
Copy Data Sets Dialog.....	87
Create Library Dialog.....	88
Delete Data Sets Dialog.....	88
Enable/Disable Samples Dialog	89
Pack Library Dialog	89
Remove Locks Dialog	90
Rename Data Set Dialog.....	90
Restore from Archive Dialog	90
Select Library Category Dialog	91
Select Library Dialog	91
Verify Data Set Signatures Dialog.....	92
Explanation of Action	92
Windows	95
Event Log.....	97
What is major events auditing?	97

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . vii

Using this window	97
Performing Data Management functions on the Event Log	98
File Change Log	99
How does file versioning work?	99
Using this Window	99
Performing Data Management Functions on the File Change Log	100
Maintenance and Troubleshooting	101
Maintenance and Troubleshooting	103
Overview	103
Maintenance and Troubleshooting	104
Library Maintenance	104
Maintenance and Troubleshooting	105
Recommended Library Maintenance Procedures	105
Maintenance and Troubleshooting	106
Archive Programs	106
Index.....	107



Data Manager Basics



What is the Data Manager?

The Data Manager is a Syngistix utility that helps you maintain and use the data produced by the Syngistix instrument software.

It allows you to:

- Perform important maintenance procedures on your databases (which is where Syngistix stores all methods, results, and, for the Enhanced Security Version of Syngistix, audit trails), to keep them error-free and reasonably sized. **This is important for the operation of the Syngistix instrument software.** For more information, see What's Important about Managing Data?
- Multi-User install option lets you set up workspaces for multiple users
- Prepare your data for long term storage by **archiving** it
- **Rename** a data set and **restore** archived data to the database
- Make a **copy** of data
- **Delete** data no longer needed
- **Remove Locks** frees a locked dataset when the locking program terminates unexpectedly
- **Verify Data Set Signatures** ensures that data has not been modified
- Free up disk space used by your database by **checking** and **packing** the database
- **Data Set Display Windows** allows you to view methods and results from multiple libraries
- **Data Reporting Wizard** lets you create and customize reports on analysis data and Limit Remarks and Designs
- **Export Data Wizard** lets you **Export** analysis data to other applications such as Microsoft Access® or Excel®, Paradox for Windows®, Crystal Reports®, or LABWORKS™

In addition, if you are running **Syngistix Enhanced Security** the following features are included:

Features for Secure Electronic Records

The Enhanced Security Version of Syngistix has additional controls you can employ to ensure the security of your data in compliance with Title 21 (Food and Drug Administration) of the United States code of Federal Regulations (CFR), Chapter 1, Part 11.

Event Log

The Enhanced Security Syngistix software maintains a Master Event Log that records all significant actions performed by the user. Actions such as opening an application, performing an analysis, and generating data are recorded in an Event Log Library; and for each entry the following information is included: the date and time of the action, what was done, the name of the user, and in many cases, the reason the action was performed. This event log can be viewed, printed and archived using the Data Manager.

Note: *The **Event Log** in Enhanced Security will only display 2000 events regardless of whether you choose to display all events or specify a time period.*

For more information, see Event Log.

File Change Log

In addition to major events auditing, the software also maintains a File Change Log that records the revision history on all files and data objects in a File Change Log Library. The software automatically adds version numbers to all files and data sets, records the changes between versions, and automatically moves old versions to an archive directory. Moreover, the software restricts all users to choosing file names from a common pool. In this way files are uniquely identified across the system regardless of the analyst creating or using them. This File Change Log can be viewed, printed and archived using the Data Manager.

For more information, see File Change Log.

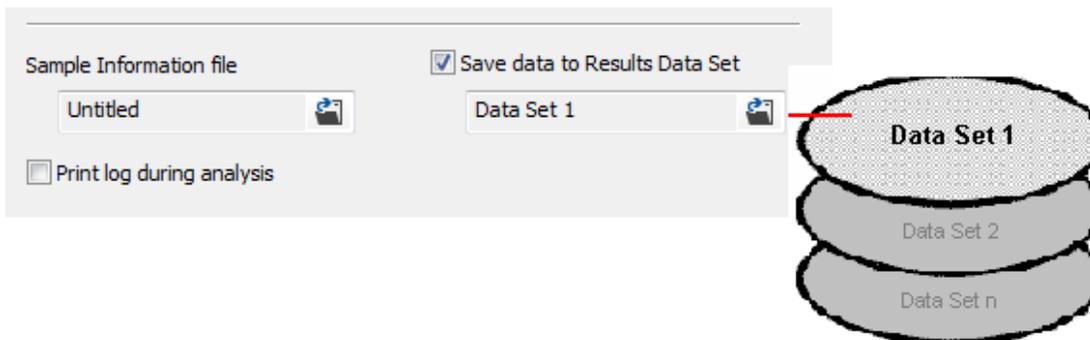
Additional Tools

Software includes options to prevent analyses from being performed without saving data and to allow analyses only with saved methods. These restrictions ensure that a proper audit trail is maintained for all activities.

For more information, see User Setup.

 *For an understanding of data basics, see [How is Data Produced and Where Is It Stored?](#)*

How is Data Produced and Where Is It Stored?



As you generate and save data sets in Syngistix, the data is stored in a database. For example, each time you perform an automated or manual analysis in Syngistix, you can store the results in a Results Data Set.

Each Results Data Set is added to the results database, referred to as the Results Library. The Results Library is a Microsoft Access® database file that can store a large amount of data (hundreds of megabytes). It is named RESULTS.MDB, as a default.

Moreover, the Enhanced Security Version of Syngistix allows for major events auditing and file versioning. Enhanced Security Syngistix records and stores the audit trails for major events performed with your software, as well as for the revision history on files and data objects in an Event Log Library and a File Change Log Library. The Event Log Library is named eventlogaudit.mdb, as a default. The File Change Log Library is named fileversionaudit.mdb, as a default.

When you install the Syngistix software, a folder is created for the storage of the Results Library, Methods Library, Event Log Library, as well as one for the File Change Log Library. By default, the Results Library is located in:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Results\Results.mdb

Methods (created in the Syngistix Methods Editor) are stored by default in:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Methods\Methods.mdb

The **Event Log Library** is located in:

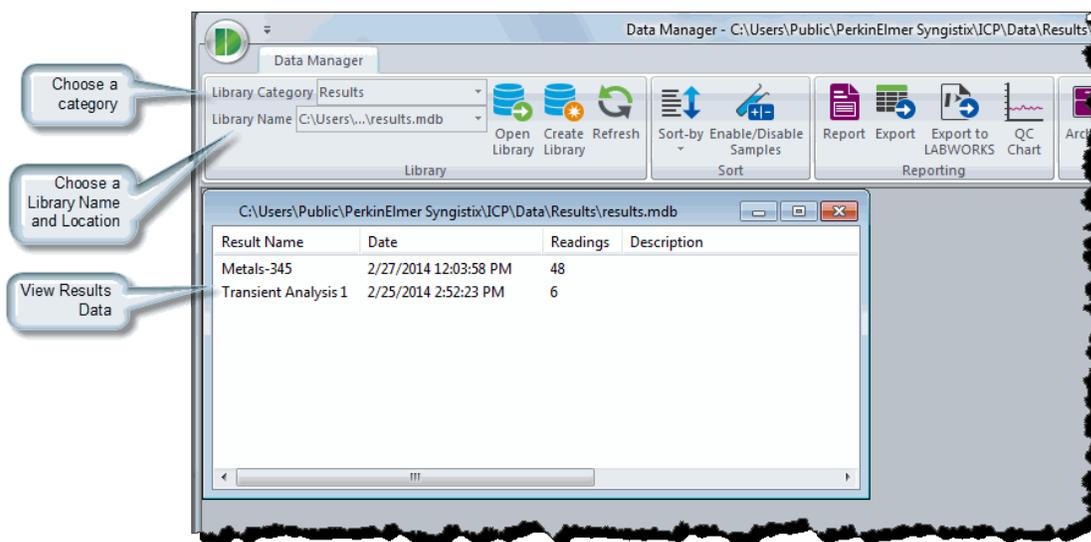
C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\SystemFiles\Log Files\Eventlogaudit.mdb

The **File Change Log Library** is located in:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\SystemFiles\Log Files\Fileversionaudit.mdb

 *"Default User" in the examples above refers to your Windows user login ID.*

Working with Libraries and Data Sets



In the Data Manager you work with Libraries and Data Sets. There are four categories of libraries: Results, Methods, Event Log, and File Change Log.

Note: *The Event and File Change Log Libraries only appear in the Enhanced Security Version of Syngistix*

- A **Results Library** contains **Results Data Sets**; that is, the data collected and saved each time you perform an automated or manual analysis in Syngistix.
- A **Methods Library** contains the methods you create and save in the Syngistix Method Editor.
- An **Event Log Library** contains an audit trail of all major events performed with your Syngistix software.
- A **File Change Log Library** contains the revision history on files and data objects such as methods.

You view Results Data Sets, Methods, the Event Log, or the File Change Log in a Data Set Display window. One window appears in Data Manager by default (but you can open multiple windows with the New Data Set Display Window command on the File menu).

The title bar of each Data window identifies the location of a selected library. The window lists the Results Data Sets contained in that library.

Default Library Locations

When Syngistix was installed, default locations were created for a Results Library, a Methods Library, an Event Log Library, and a File Change Log Library. These default locations are

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Results

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Methods

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\SystemFiles\Log Files

 *"Default User" in the locations above refers to your Windows user login ID.*

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In Syngistix, you can create different locations to store Results Data Sets when you perform analyses. This is a convenient way to organize data. However, a Results Library can quickly grow in size. To maintain it, it is important periodically to archive, copy, and delete data sets, and perform other maintenance functions in Data Manager. If you are using the Enhanced Security Version of Syngistix the Event Log Library can also quickly grow in size. To maintain this library, it is also important to periodically archive the eventlogaudit.mdb file.

Text (Unicode) Files

Not all Syngistix information is stored in database libraries. Sample information is stored in text (Unicode) files, so that you can easily create compatible sample information files using off-the-shelf software such as spreadsheet software. You use the Windows Explorer to copy, rename, move, or delete these files.

Frequently Asked Questions About the Data Manager

What is a library?

A library is a Microsoft Access® database file that can store a large amount of data (hundreds of megabytes). There are four types of libraries: Methods, Results, Event Log, and File Change Log.

Note: *The Event Log and File Change Log Libraries only appear in the Enhanced Security Version of Syngistix.*

A Results Library contains Results Data Sets. Each time Syngistix performs an analysis, and data is saved, a Results Data Set is created. Each Results Data Set is saved to the Results Library. The default library is:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Results\Results.mdb

It is important to periodically archive and delete data sets in the library.

Methods Data Sets are stored by default in:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\Data\Methods\Methods.mdb

An Event Log Library contains a record of all significant actions performed by a user, such as opening a method or reprocessing data. Each time a significant action is performed by a user, information about that action is saved to the Event Log Library. The default library is:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\SystemFiles\Log Files\Eventlogaudit.mdb

A File Change Log Library contains the revision history on files and data objects such as methods. When a file or data object has been changed and saved, Syngistix automatically adds version numbers to all files and data sets, records the changes between versions, and automatically moves old versions to the File Change Log Library. The revision history on files and data objects is stored by default in:

C:\Users\Public\PerkinElmer Syngistix\[AA or ICP]\SystemFiles\Log Files\Fileversionaudit.mdb

 *"Default User" in the examples above refers to your Windows user login ID.*

What is a data set?

A data set may contain methods or results.

- A Methods Data Set contains the parameters you enter and save in the Syngistix Method Editor.
- A Results Data Set consists of data that is collected during analysis as well as parameters (such as the method, QCs, and standards) that were entered to perform the analysis. For example, a data set might be named *EPA Cu water* to indicate a copper analysis that was performed for the Environmental Protection Agency.

Why do Syngistix programs store data in libraries?

Libraries use database technology to organize data in a structured format that is easy to manipulate. In this format, the data are also compatible with various commercial software programs that are compatible with Microsoft Access. Data in this format can be accessed using a large number of different database and report writing software programs.

Can I use Windows Explorer to copy libraries?

Yes, but only to copy the entire library (and not just a data set). Using the Data Manager to create new libraries and copy data sets ensures that you have all the required tables and allows you to select the data sets you want to copy.

How are new data sets created?

Method and results data sets are created by Syngistix.

Can I put two libraries of the same category in the same directory?

Yes. You can have two libraries of the same category in the same directory as long as the library names are different.

Can I put two libraries of different categories in the same directory?

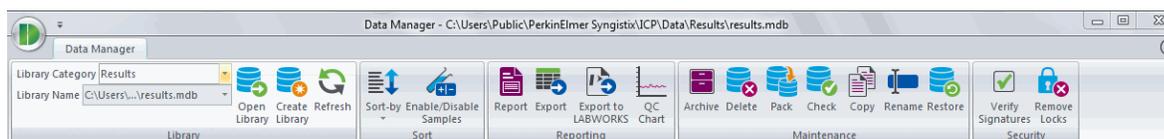
Yes. The libraries for each category have unique names so that there is no conflict when they are placed in the same directory. However, it is usually good practice to put each library in its own separate directory.

What about sample information? Is it also stored in libraries?

No. Sample information is stored in Unicode files that can be created by LIMS systems, spreadsheets, or many other software programs. The Sample Information Editor, which is included in the Syngistix instrument control software, also creates these Unicode files.

Data Manager Ribbon

The Ribbon helps you quickly find the functions you need to complete a task. It consists of an Application button and commands organized by tabs and groups within each tab. The Application button contains a drop-down menu of commands that involve doing something to or with a file that is not directly related to a specific command window. The Ribbon itself contains commands that affect the content a window. Major tasks are organized into tabs that contain groups of functions to help you perform a specific task.



Application Button: Contains Print Setup, Tooltips, and Help.

Library Group: Provides tools to work with libraries.

Sort Group: Once a library is opened you could Sort and Enable/Disable selected samples.

Reporting Group: Contains Different reporting functions; Report, Export, Export to LABWORKS, and QC Chart.

Maintenance Group: Contains different data management functions.

Security Group: Contains the functions of Verifying Signatures and Remove Locks.

Tips and Hints

- You should pack a library after deleting data sets to be sure you recover all the space that the deleted data sets occupied.
- The instrument "signs" the records for each sample when they are entered into the results library by adding an encrypted signature to important records. Use the Verify Data Set Signatures command in the Tasks menu to make sure that no changes have been made since the data were written by the instrument.
- You can export reports created with the Data Reporting Wizard using a number of popular data file formats in addition to printing them. Click on the envelope icon with the arrow going into it at the top of the Report Preview window to display the dialog where the format and destination are specified.
- You can save the settings used to create a report as a design and reuse them to write other reports with different data sets.
- See the Document Pack CD for application notes, technical papers, and documents that describe specialized features of the system such as a description of the file formats used by the software.
- You should maintain your results library on a regular basis. Use the commands in the Data Manager to archive old data sets, delete them from the library, check the library, and pack the library.
- You can save the options you selected to export data as a design and reuse them to export data from other data sets in the future.
- You can automatically export data at the end of an analysis. First create an export design within the Data Manager, and then select the design using the Automatic Export dialog in the Syngistix instrument control software.
- You can mark samples so that they are not included in reports or exported. To mark samples select a data set, then display the Enable/Disable Samples dialog using the Enable/Disable Samples... command in the Tasks menu or the Enable/Disable button in the Data Reporting or Data Export wizards and uncheck the samples you do not want to include.
- You can display or manage libraries located on other computers attached to the same network as your machine. Just use the Network Neighborhood destination in the open dialog to navigate to the machine containing the library you want to display.
- The Archive... command in the Ribbon allows you to move selected data sets or complete libraries into compressed archives before the data sets are deleted to make space for new data. The Restore... command is used to restore those data sets to a library if required.
- The Data Manager is used to manage libraries of results and methods. Other files should be deleted, copied, and deleted using the Windows Explorer.
- Data sets are locked and unlocked automatically by the Syngistix programs to prevent data sets from being damaged while they are in use. If a program ends unexpectedly, the locks may not be removed. Use the Remove Locks... command in the File menu to remove locks that were not removed automatically.
- In order to pack a library, the system needs enough disk space to write a new copy of the library. Be careful that your disk does not become so full or that your results libraries do not become too large to manipulate.

12 . Syngistix Data Management Software

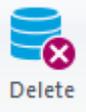
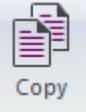
- Use the Data Export Wizard to select samples and analytes whose data you want to write to a delimited (comma, tab, semicolon, etc.) file that can be read by a large number of off-the-shelf programs such as spread sheet or database software.
- You can include custom headers and footers as well as remarks that replace data that are outside of defined limits in reports prepared with the Data Reporting wizard.
- The data fields available for export are defined in the ExportDBParams.ini file located in the Configuration directory. You can edit this file using Notepad to add, delete, or rename the entries that appear.

Managing Data

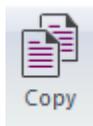
What's Important about Managing Data?

Your data represent a large investment of time and effort, and you want to prevent its loss. It is important to manage your data and to understand data storage. Syngistix data is stored in a data set. Data sets are stored in a library.

If your lab processes a large number of samples every day, your results library could quickly approach the maximum size allowed. It is important to perform the library and data set management functions listed in the table. Click on a function icon in the following table to display a "How to ..." topic.

Function	Why Use It?	How Often?
 Archive	Prevent library from becoming excessively large. Prepare results data sets and audit trails for long-term storage. Reduce disk space usage by compressing data.	Whenever the library (the*.mdb file) gets very large . This could be monthly or more often, if you are running a large quantity of samples frequently.
 Delete	Prevent library from exceeding maximum size by deleting unneeded data sets. (And then packing the library.) Deleting by itself does not reduce library size.	After each archive or copy successfully finishes.
 Pack	Reduce disk space used by library after data sets are deleted from it.	Whenever the library (the*.mdb file) gets very large. This could be weekly or more often.
 Check	Repair minor library data errors.	Monthly
 Copy	Back up data sets without compressing them Split-up a large library into two or more libraries.	Whenever the library (the*.mdb file) gets very large. This could be weekly or more often.
 Restore	Make archived data set(s) available for reports or export. Restore archived data.	As needed
 Rename	Change the name of results or method data sets, correct a naming error.	As needed
 Create Library	Create a new results or methods library Usually not needed since the Copy or Archive function lets you create a new library before copying data set(s), if desired.	As needed

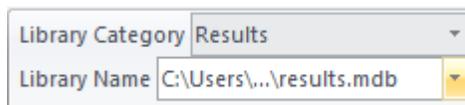
Copying Data Sets: Steps



The Copy command copies data sets from one library to another. The libraries must be from the same library category. Use this command to make a backup copy of your data or consolidate data sets from several libraries, (i.e., method or results).

To copy data from one library to another:

1. Make sure the **Library Category** that is displayed on the ribbon matches the category of data that you want to copy: Results or Methods.

A screenshot of two dropdown menus. The first is labeled 'Library Category' and has 'Results' selected. The second is labeled 'Library Name' and has 'C:\Users\...\results.mdb' selected.

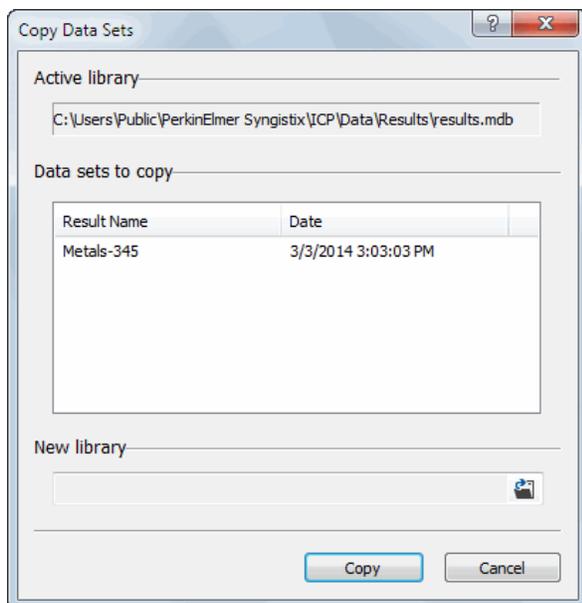
2. If the names of the data set(s) do not appear automatically in the Data window, click **Library Name** on the ribbon.
3. In the **Select Library** dialog, select the location for the library that contains the data sets you wish to copy. Click **OK**.

The data sets appear in the Data window. The title bar of this window identifies the library location.

4. Select the data sets to be copied.
5. Click **Copy** in the **Maintenance** group on the ribbon.

If you are copying results data sets, copying may be slow, as you are informed. Click **OK** to continue or **Cancel** to stop.

6. In the **Copy Data Sets** dialog that appears select the Active Library.

A screenshot of the 'Copy Data Sets' dialog box. It has a title bar with a question mark and a close button. The dialog contains three main sections: 'Active library' with a text box containing 'C:\Users\Public\PerkinElmer Syngistix\ICP\Data\Results\results.mdb'; 'Data sets to copy' with a table showing one row: 'Metals-345' under 'Result Name' and '3/3/2014 3:03:03 PM' under 'Date'; and 'New library' with an empty text box and a folder icon button. At the bottom are 'Copy' and 'Cancel' buttons.

Result Name	Date
Metals-345	3/3/2014 3:03:03 PM

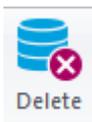
16 . Syngistix Data Management Software

7. Type the location of the **Active Library** or click **Browse...** to use the Select Library dialog to find the destination library. After selecting a library location, you can append an additional directory name to the end, if you wish.
8. Select from the lists the **Data sets to copy**.
9. Type the location of the New Library where you want the data sets to be copied or click **Browse...** to use the Select Library dialog to find the destination library. After selecting a library location, you can append an additional directory name to the end, if you wish.
10. In the **Copy Data Sets** dialog, click **Copy**.

A dialog appears that shows the progress of the copy operation. When the dialog is removed from the screen, the data sets have been copied.

 *During the copy operation, if you receive a message that begins, "Couldn't update; currently locked by user [user name]....", you may be unable to complete the copy operation. This is because the library you are copying from/to is in use by another user, and is temporarily locked.*

Deleting Data Sets: Steps

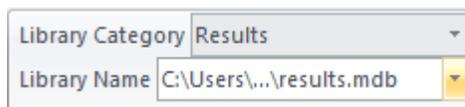


The Delete command deletes all information for one or more data sets stored in the active library. When you no longer need a data set, you should erase it so that more disk space will be available to store other data sets.

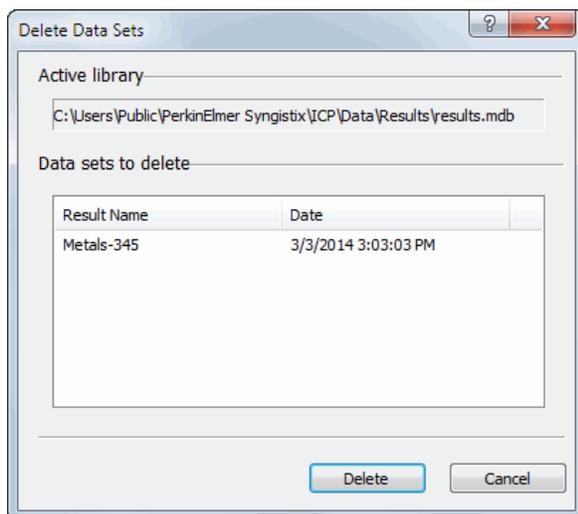
 *To reduce library size, be sure to Pack the library after you delete data sets. Deleting by itself does not reduce library size.*

To delete a data set:

1. Make sure the **Library Category** that is displayed on the toolbar matches the category of data that you want to delete: Results or Methods.



2. If the names of the data set(s) do not appear automatically in the Data window, click **Library Name** on the ribbon.
3. Click **Delete** in the **Maintenance** group on the ribbon. The **Delete Data Sets** dialog appears:



4. The **Active Library**, displays the directory path for the library that contains the data sets you wish to delete.

The data sets appear in the Data window. The title bar of this window identifies the library location.

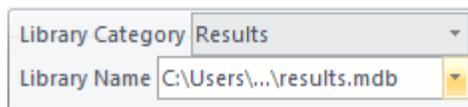
5. Select the data sets to be deleted.
6. In the Delete Data Sets dialog, click **Delete**.

Renaming Data Sets: Steps

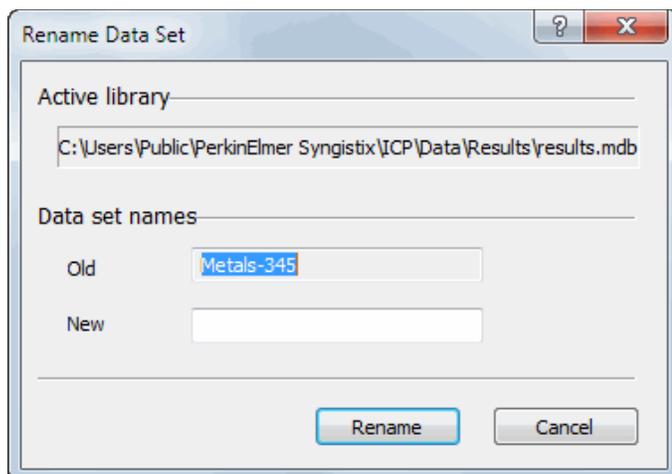
The Rename command changes the name of a data set in the active library window. You may want to rename a data set to correct errors made in the name or to better describe the contents of a data set.

To rename a data set:

1. Make sure the **Library Category** that is displayed on the toolbar matches the category of data that you want to rename: Results or Methods.



2. If the names of the data set(s) do not automatically appear in the Data window, click **Library Name** on the ribbon.
3. In the **Select Library** dialog, select the directory path for the library that contains the data sets you wish to rename.
4. Click **OK**.
5. The data sets appear in the Data window. The title bar of this window identifies the library location.
6. Click on the data set to be renamed.
7. In the **Maintenance** group, click **Rename**. The **Rename Data Set** dialog appears.



8. In the **New** field, type in a new name.
9. Click **Rename**.

Archiving Data Sets: Steps



Archive

The Archive command copies individual data sets or complete libraries to compressed (zipped) archive files. Use this command to make backup copies of your valuable methods libraries, prepare results data for long term storage and to maintain data storage space.

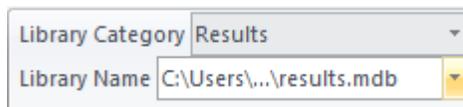
Note: *If you are using the Enhanced Security Version of Syngistix you can also archive the event log and archive the file change log.*

It is recommended that you archive results data sets when the results library (the .mdb file) gets very large. This could be monthly or more often.

Note: *If you are archiving to floppy disks, the disks must be pre-formatted before you begin.*

To archive data:

1. Make sure the **Library Category** that is displayed on the ribbon matches the category of data that you want to copy: Results or Methods.



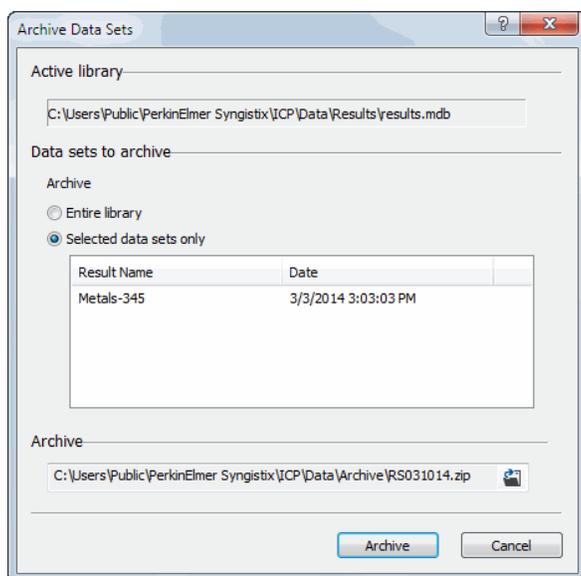
2. If the names of the data set(s) do not appear automatically in the Data window, click **Library Name** on the ribbon.
3. In the **Select Library** dialog, select the directory path for the library that contains the data sets you wish to archive. Click **OK**.

The data sets appear in the Data window. The title bar of this window identifies the library location.

4. Select the data sets to be archived:

 *If you want to archive the entire library, you do not need to select any data sets.*

5. Click **Archive** on the ribbon. The **Archive Data Sets** dialog appears.



- If you are archiving large results data sets, the process may be slow. Click **OK** to continue or **Cancel** to stop.
 - In the Data Sets to Archive section of the dialog, decide if you want to archive the entire library or only the data sets you selected.
 - If you want to archive the entire library, click **Entire Library**.
 - or
 - Click **Selected Data Sets Only** to archive the data sets shown in the list box. Note that you can select individual data sets (to archive fewer data sets than you originally selected).
6. In the Archive Description section of the dialog, note that the directory path and name for the archive file is suggested in the **File Name** field. The file name consists of two letters that designate the library category ("RS" for results or "MS" for methods), today's date in mmddyy format, and the compressed-file format "zip" that the archive process uses. (e.g., RS092098.ZIP).
- If desired, type a new location and name of the archive file where you want the data sets to be archived. The ZIP extension is automatically added.
 - or
 - Click **Browse** to select the destination directory from the Open dialog. In the Open dialog, note that you can replace the suggested file name with one of your own, if desired. Once you have selected a directory and file name, click **Open**.
7. If you are saving the archive on floppy disks, you have an additional parameter to set.
8. In the Archive Data dialog, click **Archive**.

A dialog with a progress bar appears as the dataset(s) are added to the library.

 *The data sets that you archived are still displayed in the Data window. You must delete them to remove them from the library. See [Deleting a Data Set](#) for more information.*

Archiving the Event Log: Steps



Archive

If you are using the Enhanced Security Version of Syngistix, it is recommended that you archive the event log and create a new one when the library (the .mdb file) gets to be 1 GB. This could be monthly or more often.

Archiving the event log consists of moving the current database to a new location, which you specify. Once the old database is moved, a new database with the version number incremented by one is created with an entry stating that the previous contents were archived and the location of this archive.

To archive the event log:

1. Make sure the Library Category that is displayed on the ribbon reads **Event Log**. The Event Log database appears in the Data window. The title bar of this window identifies the library location.
2. Click **Archive** on the ribbon. The Archive Event Log dialog appears. If you are archiving a large Event Log database, the process may be slow. Click **OK** to continue or **Cancel** to stop.
3. Specify the Archive Location by clicking **Browse** and selecting the location you wish to archive the Event Log. This will frequently be the system history directory.
4. Click on the check box next to desired archival option.
5. Click **Archive**. The current database is archived and moved to a new location; and a new database is created with the version incremented by one, and an entry in the new database is created stating that the previous database has been archived and the location of that archive.

Archiving the File Change Log: Steps



Archive The Archive command is only used for backing up the file change log, and the file log database is never replaced with a new copy except when the software is installed on a clean system.

To archive the File Change Log:

1. Make sure the Library Category that is displayed on the ribbon reads **File Change Log**.
The File Change Log database appears in the Data window. The title bar of this window identifies the library location.
2. Click **Archive** on the toolbar. The Archive File Change Log dialog appears. If you are archiving a large File Change Log database the process may be slow. Click **OK** to continue or **Cancel** to stop.
3. Specify the archive name and select a location where it will be saved.

Note: *The .mdb file within the zip archive should be given the same name as the archive, which must be different from the File Log database on the system.*

4. Select whether or not you wish the archive to be compressed or not.
5. Click **OK**. The file change log database is archived to the specified location.

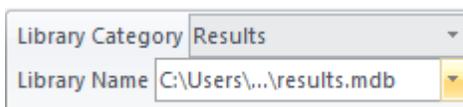
Restoring Data Sets from an Archive: Steps



The Restore command restores data sets from a compressed archive to an existing or new library. Use this command to make a data set available that was previously archived or replace a damaged library with a backup copy contained in an archive.

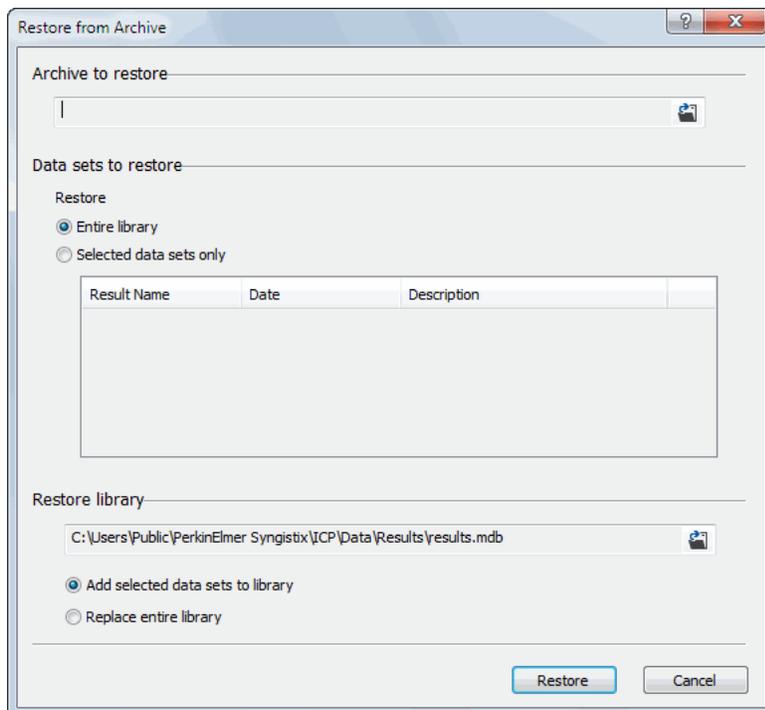
To restore data sets from an archive:

1. Make sure the **Library Category** that is displayed on the toolbar matches the category of data that you want to restore: **Results** or **Methods**.



2. Click on the **Restore** button in the **Maintenance** group on the ribbon. A dialog appears warning that the restore data set task may be slow.
3. Click on **OK** to proceed (or **Cancel** to stop.)

When you click on OK, the **Restore from Archive** dialog appears.



4. In the Archive to Restore section, click on the **Browse...** button to display the Open dialog. Select the file that contains the archive you plan to restore. The name of the archive appears in the entry field.
5. Decide if you want to restore all the data sets in the archive or only selected data sets.
 - To restore all data sets, click on **Entire Library**.

or

- You may restore selected data sets.
6. In the Restore Library section, click on the (Browse)... button to display Open dialog. Select a directory that contains an existing library or a directory where you want a new library to be located. After selecting a directory, you can append the name of a new subdirectory to be created following the path inserted by the Create Library dialog.
 7. Decide if you want to replace the library in the selected location or if you want to add the restored data sets to the existing library.
 - To completely replace the library, select the **Replace Entire Library** option. Usually, you will not select this option unless your existing library is damaged and you are replacing it with a backup copy from the archive.
 - To add the data sets to the library, select the **Add Selected Data Sets to Library** option. When you select this option, the software will make a library that contains all the data sets in a temporary location and then copy the selected data sets to the library you have designated.

If the location does not contain a library, then this option is ignored and a new library is created in the selected location and the data sets are copied to it.

8. Click on **Restore** to restore the existing archive or **Cancel** if you do not want to restore it.

A dialog appears that shows the progress of the restore operation. When the restore operation is finished, the data sets are displayed in a Data window.

Restoring an Event Log

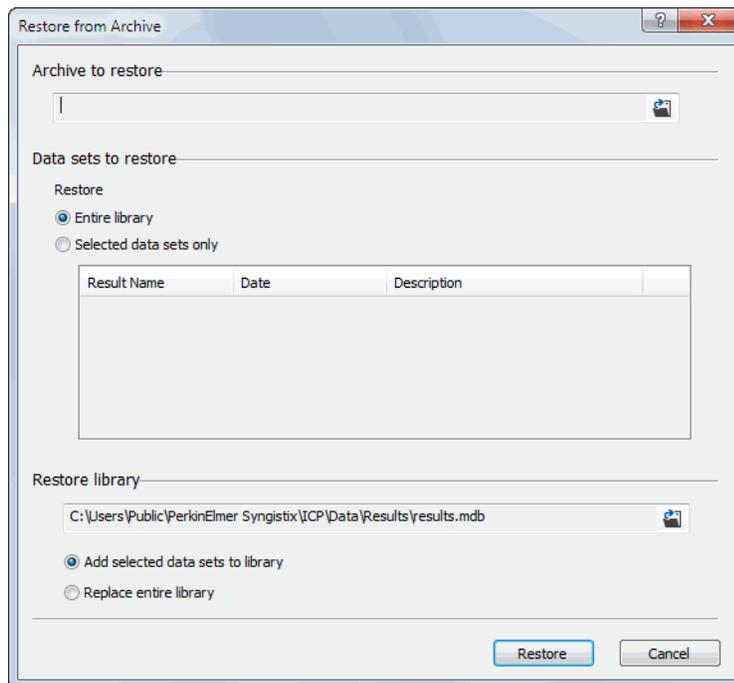


The Restore command unzips an archived event log.

To unzip an archived event log:

1. Make sure the **Library Category** that is displayed on the toolbar reads **Event Log**.
2. Click the **Restore** button in the **Maintenance** group on the ribbon.

The **Restore from Archive** dialog appears warning that the restore data set task may be slow.



3. Click **OK** to proceed (or **Cancel** to stop.)
When you click OK, the Restore from Archive dialog appears.
4. Select the compressed archive you wish to restore by clicking **Browse**.
5. Select the location where you wish to unzip a compressed archive by clicking **Browse**.
6. Click **Restore**.
Compressed Event Log is unzipped for viewing.

Creating A New Library: Steps

The Create Library command creates a new library and opens a new window to display the library's data sets. Use this command to create a new library to separate the results from different analyses, to consolidate data sets from several libraries, or to segregate data and methods for different users.

To create a new library:

1. Make sure the **Library Category** that is displayed on the ribbon matches the new library you want to create: **Results** or **Methods**.
To select a different category, click on **Library Category**.
2. In the Library group, click **Create Library**.
3. If necessary, select a directory path for the new library:
 - In the **File name** field, type in a name for the new library. The software appends the .mdb extension.
For example, type RESULTS2

 *If an information message appears as you add the new library, click on **OK**.*

Verify Data Set Signatures: Steps



The Verify Data Set Signatures option checks the digital signatures stored with a data set and determines if the data for any samples have been changed since collection and processing.

To verify the data:

1. Select the data set you want to verify in the Data window.
2. In the **Security** group click **Verify Signatures**.

The Verify in Progress dialog appears while the data is being checked.

When the verify process is complete, the system displays a list of the data sets that were checked, with a message indicating that the signatures all match or a list of samples where differences were detected.

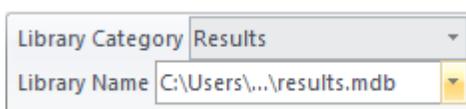
Checking A Library: Steps



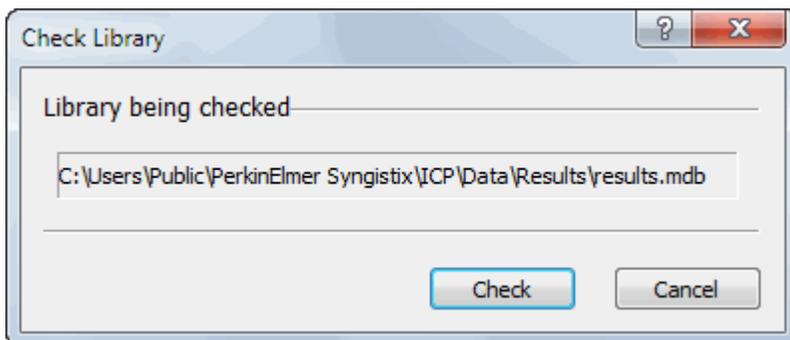
The Check command checks libraries for a variety of problems and makes repairs to the library tables whenever possible. If you are having problems using your Syngistix software, it is possible that the cause is a damaged library. This command allows you to check your libraries and make minor repairs. If major problems are detected, you will be advised to replace the damaged library with a backup copy from an archive. Perform the Check command before you archive or copy data sets so as not to replicate an error.

To check a library:

1. Make sure the Library Category that is displayed on the ribbon matches the new library you want to check: **Results** or **Methods**.



2. Make sure the Data window displays the library that you want to check. If it doesn't, click on **Library Name** on the toolbar to locate and display another directory where your library is stored.
3. In the Maintenance group click **Check**.
The Check Library dialog appears with the path of the library to be checked.



4. Click the **Check** button on this dialog, a **Check in Progress** dialog appears.
5. When the check is finished, a message displays in the status bar at the bottom of the screen.
If the software finds a problem that makes the library unusable, an information message appears.
6. If you see this message, your options are:
Restore the library from a backup copy in an archive using the **Restore** button on the ribbon.
or
Create a new library using the **Create Library** button in the **Library** group on the ribbon.
7. When library checking is finished, click on **Exit**.

Packing A Library: Steps

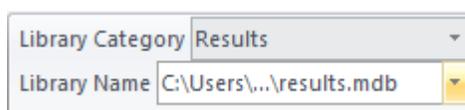


The Pack command packs the active library by rearranging the data sets to free unused disk space. After you delete data sets from a library, you should pack the library to reduce its size and thus reduce the space it occupies on your hard drive. Library size is not reduced automatically when you delete data sets. The unused space is reserved for more data sets you may wish to add.

It is recommended that you pack a results library when the library (the .mdb file) gets very large and you have deleted data sets from it. This could be weekly (for high volume users) or monthly.

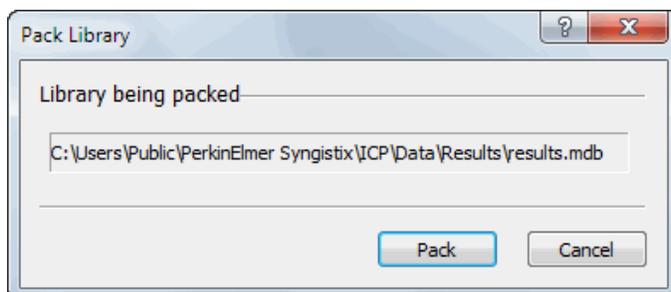
To pack a library:

1. Make sure the Library Category that is displayed on the toolbar matches the new library you want to pack: Results or Methods.



2. Make sure the Data window lists the data sets in the library that you want to pack. If it does not, click on Library Name to locate another directory where your library is stored.
3. In the **Maintenance** group, click on **Pack**.

The **Pack Library** dialog appears confirming the file name and location.



4. Click the Pack button to pack the library.

When the operation is finished, the **Pack In Progress** dialog is removed from the screen.

Enable/Disable Samples: Steps

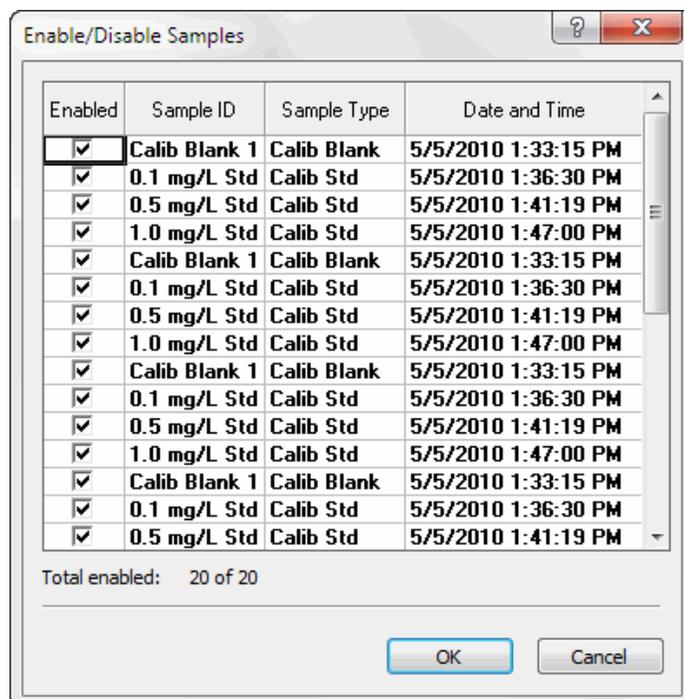
From the Enable Samples dialog, you can select the samples you want to include or exclude from a report or exported file.

To select samples:

1. In the active data window, select the data set you want to use by clicking on the data set name.

In the Sort group click **Enable/Disable Samples**.

The **Enable/Disable Samples** dialog appears.



2. Click in the **Enable** column of each sample you want to include, or double-click **Enable column header** to select all the samples in the data set. To exclude a sample, remove the check mark by clicking on it.
3. Click **OK** to record your selections and close the dialog.

Remove Locks: Steps

Data sets are locked while in use to prevent other Syngistix programs from making changes that could cause damage to the database. Locks are normally removed when the program is finished using the data set. If a program has terminated abnormally, you may need to manually remove the lock on a data set.

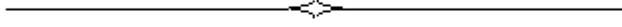
To remove a lock on a data set:

1. Click the **Security** button and select **Remove Locks**.

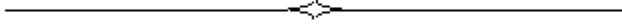
The Remove Locks dialog appears.

Note: *If there are no locked data sets, Data Manager displays a message.*

2. In the Remove Locks dialog, click on data set(s) you want to unlock.
3. Click on **Remove Locks**, or click on **Cancel** to leave the lock in place.



Reports



Data Manager's Reporting Feature

The Data Manager lets you view and print reports of the data from the samples you analyze. You can also export data for use in a spreadsheet or database. For more information on exporting data, see About Exporting Data.

The **Report** button in the **Reporting** group on the **Data Manager** ribbon opens an interview-style series of Wizard dialogs to help you quickly choose the data and format for one of several data reports.

For some tips on how to create a report, you can view samples in Samples of Data Reports.

In the Enhanced Security Version of Syngistix, you can also use the **Report** button to print the contents of the **Event Logs** and **File Change Logs**.

Note: *The **Event Log** in Enhanced Security will only display 2000 events regardless of whether you choose to display all events or specify a time period.*

Before You Begin:

- Create a Report of the Event Log
- Create a Report of the File Change Log
- Create a Report of Results Data Sets

Basic Steps for Creating a Report of the Event Log

To print a report of the event log:

1. In the Library group on the ribbon, click **Library Category**.
2. In the Select Library Category dialog, click **Event Log**. Data Manager opens a dialog displaying the default directory that contains the Event Log.
3. Make sure your printer is set up to handle the correct paper size (e.g., 8.5" X 11" or A4).
4. Click the **Report** button. The Event Log Report dialog appears.
5. Select **Short report** - To print the date, time, application, and command for each event.
or
Select **Extended report** - To print all the information for each entry in the event log.
6. Click **OK**.

Basic Steps for Creating a Report of the File Change Log

To print a report of the File Change Log:

1. In Data Manager, from the toolbar, click **Library Category**.
2. In the Select Library Category dialog, click **File Change Log**.
The File Change Log viewer appears.
3. Click on the desired file or files displayed in the viewer.

Note: *If you only wish to print a report for a single file version, then select the desired version from the list.*

4. Make sure your printer is set up to handle the correct paper size (e.g., 8.5" X 11" or A4).
5. Click on the **Report** button. The File Change Log Report dialog appears giving you two sets of two options.
The first set of options allows you to choose which file/s and version/s you wish to print. The second set of options allows you to choose the format of your report, either short or long.
6. From the first set of options displayed, click on the button next to one of the following options:
 - Selected file, only selected version to print only a selected entry.

Or

 - All Selected Files, all versions to print all entries.
7. From the second set of options, click on the button next to one of the following options:

Long format, detailed information - To print all the information for each entry in the file change log.

Or

Short format, one line per version - To print the date, time, application, and command for each event.
8. Click **OK**.

Basic Steps for Creating a Report



You can print a Data Report. Before printing a report, you must ensure that a results data set is available.

To create a Data Report:

1. Analyze your samples using Syngistix and be sure to save the data in a results data set. For more information, see Opening and Saving Methods and Results .
2. In **Library** group click **Library Category**.
3. In the Select Library Category dialog, click **Results**. Data Manager opens a dialog displaying the default directory that contains results data sets. Select a different location by clicking **Library Name** from the toolbar.
4. Select the desired results data sets from the list.
5. Make sure your printer is set up to handle the correct paper size (e.g., 8.5" x 11" or A4).
6. Click on the Report button to use the Data Reporting Wizard to create the report.

Printing a Report

To print a report, you must use an existing report design or create a new one in the Data Reporting Wizard. To learn how to do this, see Basic Steps for Creating a Report.

To print a report:

1. From the **Application** button  select **Print Setup** to display a list of printers.
2. In the **Reporting** group click **Report**.
3. In the first dialog of the Report Wizard, select an existing design or create a design.
4. On any page in the Report Wizard you can click **Preview** to display the Preview window.
5. View the report and make sure you are satisfied with it. When you are ready to print, click on the **Printer** button  at the top of the preview window.
6. In the print options dialog that appears, you do any of the following:
 - Make sure that the name of the printer shown is correct.
 - Make sure your printer is set up to handle the correct paper size (e.g., 8.5" x 11" or A4).
 - To print all of the pages of the report, click **All**.
 - To print a range of pages, click **Pages** and at the From entry field, type the page number of the first page to be printed. Click on the To entry field and type the page number of the last page to be printed.
 - If you want more than one copy, click on the **Copies** entry field and type the number of copies you wish to print.
 - If you want to collate the copies, click on the check box next to **Collate** copies so that a check mark appears.
7. Click **OK** to begin printing.

Data Reporting Wizard

The Report button on the Data Manager toolbar provides access to the Data Reporting Wizard. This wizard lets you produce a report from the results data set(s) currently selected in the Data Manager. You can control the design of and the information included in the report every step of the way.

Before you begin, see Basic Steps for Creating a Report.

The Data Reporting Wizard has nine steps:

1. Select Report Design.

A report design is a template that specifies the type of data, formatting, and limit remarks to be included in a printed report. You must create a new design or use an existing one for each report.

The Data Manager does not store reports--only report designs, which you can print repeatedly with the current date and time.

2. Select Samples to Report.
3. Select Analytes to Report.
4. Select Report Format.
5. Enter Report Title and Page Header.
6. Enter Page Footer and Report Appendix.
7. Enter Limit Remarks.

The wizard not only lets you bring concentration data into your report design, but also lets you add to the intrinsic meaning of that data by substituting comments or remarks for values falling outside of a range you prescribe.

8. Save Report Design.
9. View and Print Report.

Before you print the report, you can preview it and change printer setup requirements. If you made changes to an existing design, you can save the changes or save a new design. You can also export data from the report.

The Data Manager does not store reports--only report designs, which you can print repeatedly with the current date and time. However, if you want to preserve a report (with the report's original date and time, etc.), you can save it by printing it to disk. This procedure is explained in View and Print Report topic.

 *If you select an existing report design in Step 1, you can skip to Step 9 to print the report.*

Select Design

- Select Report Design
- Select Export Design
- Select QC Chart Design

Select Samples to Report (or Export)

All samples are shown in the **Available Samples** list. You can sort the Available Samples list in three different ways to help you see which samples are affected by your sample choices.

Note: To change the samples that are currently selected, click the **Enable/Disable** button. For information on selecting samples, see *Enable/Disable Samples*.

Tip: If you want a report (or export file) that includes all samples in the results data set, be sure to mark the checkboxes for *All Unknowns*, *All Blanks and Standards*, and *All QC Samples*.

The controls and entries in this dialog are:

Control/Entry	Description
Available Samples	A view-only list of the all the samples in the selected results data set.
Sort Display:	
Alphabetically by ID	This is the ID that you entered in the Syngistix Method Editor or Sample Information Editor.
By Sample Type	Sample types include unknowns, QC, blanks and standards.
Chronologically	Arrange samples according to date and time of analysis.
Selected Samples	Indicates the number of samples that match your selection criteria.
Samples to Include in Report:	
Enable/Disable	Modify the list of selected samples in the Enable/Disable Samples dialog
All Unknowns	The unknowns or samples in the analysis.
All Blanks and Standards	Calibration blanks and standards.
All QC Samples	Quality Control samples.
All Auto Recoveries	Include automatic recovery samples.
With IDs Selected by Wildcards	Wild cards represent a range of characters: An asterisk (*) stands for one or more characters. For example, s* means all samples whose ID's begin with an "s." A question mark (?) stands for any single character. For example, AB? means all samples beginning with "AB" followed by any one character. Multiple wildcards, separated by commas, are allowed.
Analysis Dates to Include	Select all, today only, or click on the calendar button to select a particular day or date range. 

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Select Analytes to Report (Export or Chart)

After you select samples, you can select analytes (elements) to include. By selecting only certain analytes when you are creating a report, you can shorten the report. Initially all analytes are selected. To remove or add analytes from the Selected Analytes list, follow the procedure below.

To remove or add analytes from Selected Analytes:

1. Uncheck the **All Analytes** check box located under the Selected Analytes list.
2. Click on an analyte in the **Selected Analytes** list.
3. Click **Remove**. The analyte appears in the Available Analytes list.
4. If you change your mind, click on the selected analyte and click **Add**.
 - Click **Add All** to select all analytes.
 - Click **Remove All** to remove all analytes from the Selected Analytes list.
 - Select this checkbox to report (or export) only the analytes that were displayed or printed as a result of Multiline Calibration settings.
 - You can sort this list alphabetically by name or by wavelength.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Select Report Format

For examples of all report formats, see Samples of Data Reports .

The templates and other options are described below. Scroll through this topic to read about each, or click the Dialog Details button above to select a template.

 *Be sure your printer is set up for the correct paper size. The report template directories are organized according to paper size (e.g., A4 or letter).*

The report types let you choose the amount of data to include and the arrangement (vertical or horizontal) of the data on the report. Choose **Summary** or **Detailed** and then click **Browse**.

Summary Templates: (Simple report of analytes and their means)

- **HorizontalMeans.rpt** (Elements Across, Means Only)
Elements are listed horizontally in one or more lines and the mean concentration value is printed in landscape mode. Data is included for samples (unknowns) only. This format prints using the Landscape option under Paper Format.

SampleID	Horizontal Means Summary	
	Analyte	Mean
Mid Hg QC	Ag 328.068	0.000 mg/L
	As 188.979	0.810 mg/L
	Ba 493.408	0.015 mg/L
	Cd 214.440	0.000 mg/L
	Cr 283.563	0.001 mg/L
	Hg 194.168	0.269 mg/L

➤ **VerticalMeans.rpt** (Elements Down, Means Only)

Elements are listed vertically in one column. A second column lists the mean concentration values for each element. This format prints using the Portrait option under Paper Format.

SampleID	Vertical Means Summary	
	Analyte	Mean
Mid QC	Ag 328.068	1.255 mg/L
	As 188.979	0.942 mg/L
	Ba 493.408	25.42 mg/L
	Cd 214.440	0.125 mg/L
	Cr 283.563	1.255 mg/L
	Hg 194.168	0.027 mg/L
	Pb 220.353	1.223 mg/L

➤ **VerticalMeanStatistics.rpt** (Elements Down, Means and Statistics)

Elements are listed vertically in one column. Additional columns include the mean concentration values, the standard deviation (Std. Dev.), and the relative standard deviation expressed as a percentage (% RSD). Data is included for samples (unknowns) and standards.

SampleID	Vert Mean Statistics Summary			
	Analyte	Mean	StdDev	%RSD
Calib Std 1	Ag 328.068	[2.500] mg/L	40.42	0.33
	Ba 493.408	[50.000] mg/L	936.26	0.77
	Cr 283.563	[2.500] mg/L	5.16	0.05
	Pb 220.353	[2.500] mg/L	0.51	0.39
Mid QC	Ag 328.068	1.255 mg/L	0.0001	0.01

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CrossTabShortPortrait.rpt (Elements Across, Samples Down, Means Only)

Elements are listed horizontally in one to six columns, the samples listed down the page in rows, and in each cell is the mean concentration value. This template is printed in portrait mode. Data is included for samples (unknowns) only.

	Cr 267.716	Cu 327.393	Ge 209.426	Li 670.784	Mn 257.610	Na 589.592
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Calib Blank 1						
S1						
Sample010	16.06	16.06	16.06	16.05	16.06	16.05
Sample011	32.23	32.23	32.23	32.18	32.23	32.18
Sample012	32.57	32.57	32.57	32.52	32.57	32.52
Sample013	32.90	32.90	32.90	32.86	32.90	32.86
Sample014	33.24	33.24	33.24	33.19	33.24	33.19
Sample015	33.58	33.58	33.58	33.53	33.58	33.53
Sample016	10.00	10.00	10.00	10.00	10.00	10.00
Sample017	10.00	10.00	10.00	10.00	10.00	10.00
Sample018	10.00	10.00	10.00	10.00	10.00	10.00
Sample019	10.00	10.00	10.00	10.00	10.00	10.00
Sample020	10.00	10.00	10.00	10.00	10.00	10.00

Note: This format is only available with Syngistix for ICP.

➤ **CrossTabShortLandscape.rpt** (Elements Across, Samples Down, Means Only)

Elements are listed horizontally in one to nine columns, the samples listed down the page in rows, and in each cell is the mean concentration value. This template is printed in landscape mode. Data is included for samples (unknowns) only.

Note: This format is only available with Syngistix for ICP.

➤ **CrossTabExpandedPortrait.rpt** (Elements Across, Samples Down, Means Only)

Elements are listed horizontally in one to five columns, the samples listed down the page in rows, and in each cell are the concentration units and the mean concentration value. This template is printed in portrait mode. Data is included for samples (unknowns) only.

Note: This format is only available with Syngistix for ICP.

➤ **CrossTabExpandedLandscape.rpt** (Elements Across, Samples Down, Means Only)

Elements are listed horizontally in one to seven columns, the samples listed down the page in rows, and in each cell are the concentration units and the mean concentration value. This template is printed in portrait mode. Data is included for samples (unknowns) only.

Notes: This format is only available with Syngistix for ICP.

Crosstab reports are not presently available in the ES version.

Detailed Templates: (Detailed report of a complete analytical log or samples)

➤ AnalyticalLogFormat.rpt (Analytical Log Format)

This is similar to the printed log that is generated during the analysis. For a replication of the analytical log, make sure that you selected "All Samples" and "All Analytes" in the previous two dialogs.

Analytical Log

Seq. No.	2	AS Loc:	2	Date:	1999/01/15 14:34:06		
Sample ID:	Calib Std 1	Conc (Calib)	Conc (Sample)	Net Intensity	Corr. Intensity	Time	
Ag 328.068		[2.500] mg/L		12,064.6	12,195.7	1999/01/15 14:33:30	
		[2.500] mg/L		11,968.0	12,252.8	1999/01/15 14:34:06	
	Mean:	[2.500] mg/L			12,224.3		
	SD:	40.42 mg/L					
	%RSD:	0.33					
Ba 493.408		[50.000] mg/L		120,511.3	121,217.2	1999/01	
		[50.000] mg/L		120,285.3	122,541.3	1999/01	
	Mean:	[50.000] mg/L			121,879.2		
	SD:	936.26 mg/L					
	%RSD:	0.77					

➤ VerticalRepMeanStatistics.rpt (Samples Down, Replicates, Means and Statistics)

Mean values are included for all solutions (calibration standards, QC standards, and samples) and are listed vertically in one column. The concentration for each replicate is listed vertically. In the next column, the mean value for all replicates, the standard deviation (SD), and the relative standard deviation expressed as a percentage (% RSD) are printed.

Vertical Means Details

Mean Data		Seq. No		A/S Pos				
ID:	Site720Z		8					
Sample Q	g	Prep. Vo	Dilutor	Date:	1999/01/15 14:51:38			
Analyte	Corr. Intensi	Conc (Calib)	Std. Dev	Calib Unit	Conc (Sample)	Std. Dev	Sample Uni	RSD
Ba 493.408	104,774.6	42.98	0.160	mg/L	42.98	0.160	mg/L	0.37 %
Cd 214.440	214.4	0.202	0.0002	mg/L	0.202	0.0002	mg/L	0.08 %
Cr 283.563	8,512.8	2.056	0.0006	mg/L	2.056	0.0006	mg/L	0.03 %

➤ MeanStatisticsByAnalyte.rpt (Samples Across, Means and Statistics)

Replicates are listed horizontally in one or more lines including the mean, standard deviation (Std. Dev.), and the relative standard deviation expressed as a percentage (%RSD) are printed. The data is reported by Analyte name.

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 45

Mean Statistics By Analyte							
Mean Data							
Analyte	As 193.7			Date:	2001/05/15		
ID:	Corr. Abs.	Conc (Calib)	Std. Dev.	Conc (Sample)	Std. Dev.	% RSD	Time
Sample004	0.1339		µg/L		µg/L		20:35:22.00
Mean Data							
Analyte	Cr 357.9			Date:	2001/05/15		
Sample003	0.2801		µg/L		µg/L		21:40:05.00
	0.1797		µg/L		µg/L		19:25:15.00
Mean Data							
Analyte	Cu 324.8			Date:	2001/05/15		
Sample002	0.1998		µg/L		µg/L		22:44:39.00
	0.1843		µg/L		µg/L		18:20:31.00

Note: This report template is available for Syngistix for AA.

➤ **MeanStatisticsBySampleID.rpt** (Samples Across, Means and Statistics)

Replicates are listed horizontally in one or more lines including the mean, standard deviation (Std. Dev.), and the relative standard deviation expressed as a percentage (%RSD) are printed. The data is reported by Sample ID.

Mean Statistics By Sample ID							
Mean Data							
ID:	Sample002						
Analyte	Corr. Abs.	Conc (Calib)	Std. Dev.	Conc (Sample)	Std. Dev.	% RSD	Date:
Cu 324.8	0.1998		µg/L		µg/L		2001/05/15 22:44:39
Mean Data							
ID:	Sample003						
Cr 357.9	0.2801		µg/L		µg/L		2001/05/15 21:40:05
Mean Data							
ID:	Sample004						
As 193.7	0.1339		µg/L		µg/L		2001/05/15 20:35:22

Note: This report template is available for Syngistix for AA.

Sorting:

You can sort by the following methods for Summary reports.

➤ **Chronological**

This option displays data in the same sequence that it was gathered in the analysis. If the sample was analyzed more than once, then the sample name appears in the report more than once.

➤ **Alphabetical by Sample ID**

This option displays data according to the ID name that was entered for the sample element in the Syngistix Method Editor or Sample Information Editor.

➤ **Alphabetical by Analyte Name**

This option displays data according to the elements that were chosen for analysis.

Options:

➤ **Include Messages**

This option prints messages that were generated during the analytical run. Messages are linked to individual mean or replicate values.

➤ **Skip Spikes and Dupes**

Check this option if you do not want spike and duplicate samples included in the report. This option does not display the concentration spikes or duplicates of the sample.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see (and print) the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Enter Report Title and Page Header

You can create a title and header in your design. The title will be printed in the top center of the first page of the report. The header can be printed at the top left, right or center of the page, depending on your preference. You can insert the date and time that the report is printed, the names of the results data sets for the concentration data used, and page numbers. As an option, you can include or omit the header on the front page.

Tip: *You may want to put some information in the Report Footer, which you can do on the next dialog of the Report Wizard.*

To create a title or header:

1. To create a Title, type the desired text in the **Report Title** entry field. You can also include Field Codes, as described in Step 3 below.

 *You can type five lines of 50 characters. To move to the next line, press **Shift plus Enter**.*

2. To create a **Header**, type the desired text in the **left**, **center** or **right** entry field. You can type 28 characters per entry field.
3. If desired, click on the left, center, or right entry field, and then click on one or more of the buttons under **Click to Insert Field Codes** to include the associated information in your report. The buttons are:
 - **Date:** Inserts the code [\$D] into the field, which prints today's date on the report. The date is in the MM/DD/YYYY format.
 - **Time:** Inserts the code [\$T], which prints the time the report is generated.
 - **Result Name:** Insert the code [\$N], which prints the name(s) of the results data sets selected.
 - **Page Number:** Inserts the code [\$P], which prints a sequential page number. The first page is "1."
 - **Total Number of Pages:** Inserts the code [\$L], which prints the total number of pages in the report.

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 47

4. If you wish to delete a field code, highlight the entire code, including the brackets, and press the **Delete** key.
5. To include the header on the first page, click on the check box labeled **Include on First Page** so that a check mark appears. (To omit the first-page header, click on the checkbox to remove the check mark.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Enter Page Footer and Report Appendix

To create a footer:

1. Type the desired text in the **left**, **center** or **right** entry field. You can type 28 characters per entry field.
2. Click on the left, center, or right entry field, and then click on one or more of the buttons under **Click to Insert Field Codes** to include the associated information in your report. The buttons are:
 - **Date:** Inserts the code [\$D] into the field, which prints today's date on the report. The date is in the MM/DD/YYYY format.
 - **Time:** Inserts the code [\$T], which prints the time the report is generated.
 - **Result Name:** Insert the code [\$N], which prints the name(s) of the results data sets selected.
 - **Page Number:** Inserts the code [\$P], which prints a sequential page number. The first page is "1."
 - **Total Number of Pages:** Inserts the code [\$L], which prints the total number of pages in the report.
3. If you wish to delete a field code, highlight the entire code, including the brackets, and press the **Delete** key.
4. You can include an **Appendix** for the report. Type up to 49 characters per line, two lines maximum for the appendix. (To move to the next line, press **Shift** plus **Enter**.) You can also copy text from another application and paste it into this edit box from the Windows Clipboard using the shortcut key combination CTRL+V.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see (and print) the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Enter Limit Remarks

You can create Limit Remarks that will appear in the report in addition to concentration values that fall outside of certain limits. Limit Remarks are available only for Summary reports.

7. Limit Remarks

Analyte Name	Units	Lower Limit	Lower Remark	Upper Limit	Upper Remark
P 213.618	mg/L	10.000000	Below stand	10.000000	Above stand

Create Analyte List Units to Use: Calibration Sample

Set all negative values to zero? No Yes

Show actual value along with Limit Remark? No Yes

To create Limit Remarks:

1. To select the elements for which you want to define limits, click **Create Analyte List**. This automatically copies and displays the analytes from the data sets selected.
2. Select the **Units to Use** for the Analyte List, either Calibration or Sample units.
3. Click on the first entry in the **Lower Limit** column and type the lower limit. Enter the value below which you are not interested. For example, if you want to see values greater than 10, enter 10 in the Lower Limit column.
4. Click on the **Lower Remark** column and type the comment you wish to print in the report for values falling below the lower limit (or click on the column header to fill the whole column with the same remark). For example, enter "Below Standard" or "below limit."
5. Click on the first entry in the **Upper Limit** column and type the upper limit. Enter the value above which you are not interested. For example, if you want to see values less than 10, enter 10 in the Upper Limit range.
6. Click on the first entry in the **Upper Remark** column and type the comment you wish to print in the report for values reaching above the upper limit. For example, type "Above Standard" or "above limit."
7. You may wish to **set all negative values to zero** for the report. Negative values appear in results data sets when samples that do not contain the element being determined are analyzed. This may be due to noise in the measured signal.
8. You may wish to include the **actual value** along with the Limit Remark. That is, for values lower than the lower limit (and higher than the upper limit) you can print the actual value along with the Limit Remark.

To edit limit remarks:

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 49

- Double-click on the Upper or Lower Limit Remark column, then click again so that the I-beam cursor appears.

To open an existing set of limit remarks:

You can save the limit remarks you have entered for a report in a report design. Then you can recall these limit remarks by opening the report design. The list of analytes will match the ones in your previous data set.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Saving a Report Design

You can save a report design and reuse it later with a new group of results data sets.

Use this window to:

- Assign a name to an untitled design and save it

OR

- Rename and save an existing design. This is useful if you want to make changes to a design and save it, but you don't want to overwrite the original version of the design.

To save the design:

1. On the final dialog (Save Report) of the Data Reporting Wizard, click **Save Design**.
2. In the Save As dialog that appears, type a name in the File name entry field. For example, name the design EPA_RESULTS. Notice that the filename has a .REP extension.
3. Save the design in the Designs folder, or select another folder to store the design file.
4. Click **OK**.

When you are done with this dialog:

- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see (and print) the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.
- Click **Finish** to bring up a reminder window to save the design.

View and Print Report

At any point in the Report creation process, you can click on the Preview button to see the report as you have defined it so far. You can then make changes to the report before you save the report design or print a copy of the report.

Tip: *The Data Manager does not store reports--only report designs, which you can print repeatedly with the current date and time. We recommend that you save the Report Design, as described below.*

1. To preserve a report (with the report's original date and time, etc.), you can click on the envelope icon to export report data to print in another application
2. Click the **Preview** button on any screen in the Report Wizard to display the Preview Report window. Click the print button in the Preview Report window to print a copy of the report. The Preview Report window, presents a view of the active report as it will appear when printed. It contains a scroll bar and buttons that let you view all of the pages, view a reduced image of each page, and choose printing and export options.

Using the Preview Report Window

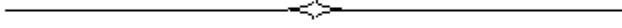
Once you have a design and data for your report, you can take a look at the report as it will appear when you print it.

 *If you do not want to lose the design, you must save it before you exit the Report Wizard.*

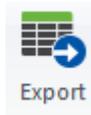
To preview the report:

1. From any of the **Report Wizard** dialogs, click **Preview**.
2. In the Report Preview window that appears, do one or more of the following:
 - Read the report. Notice that you can see only part of the page. This close-up view automatically appears so that you can read the report easily. To see more of the page, use the scroll bar.
 - Look at the layout of the page. Click on the **arrow next to the percent number** to display a drop-down list of viewing options. You can display the report at 25 to 400 percent its actual size, view the Page Width or the view the Whole Page
 - Look at all of the pages. If your report is several pages long, click on any of the **four arrow buttons** on the top left of the preview window to view the other pages.
 - To **export** data from the report, click on the  button. (This button allows you to export report data, but does not launch the **Export Wizard**.)
 - To **print** the report, click on the  button.
3. Click on the **Close** button in the upper right corner when you are through previewing the report.

Export Data



About Exporting Data



Data Manager's Export feature allows you to select a subset of the data contained in a results data set, or an entire database, and write it into a file that can be read by many other programs, including spreadsheet and database management programs. The export file contains Unicode data records. The individual items in these records are separated by a delimiter of your choice, usually a comma.

In the Reporting group, the Export button opens an interview-style series of dialogs to help you quickly choose data from the results library to be exported.

In the Enhanced Security Version of Syngistix, you can also use the Export button to export the contents of the event and file change logs.

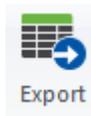
After you create an export file, you can open it in a spreadsheet.

Before you Begin:

See the topic Basic Steps for Exporting the Event and File Change Logs.

See the topic Basic Steps for Exporting Results Data Sets.

Basic Steps for Exporting the Event and File Change Log



In the Enhanced Security Version of Syngistix, when you wish to export the contents of the Event or File Change Log Libraries, you can click on the Export button on the Data Manager toolbar to export all the information in the database for the items displayed in the Data Window.

To export data:

1. In the **Library group** click **Library Category**.
2. In the **Select Library Category** dialog, click either **Event Log** or **File Change Log**.
Data Manager displays the contents of the specified library in a Data window found in the default location.
3. Click the **Export** button to create the data export file.
The **Save As** dialog appears.
4. Select the required destination and enter a file name.
5. Click **OK**.

The Event Log or File Change Log is exported as a *.csv file and can be opened, for example, in Microsoft Excel.

Data Exporting Wizard

The Export button on the Data Manager toolbar provides access to the Data Export Wizard. This wizard lets you produce an export file from the results data set currently selected in the Data Manager. You can control the design of, and the information included in, the export file every step of the way.

The Data Export Wizard has eight steps:

1. Select Export Design.
An export design defines a subset of data items from a selected results data set. These are the items that you would like to include in the export file. You can select data items of sample information, mean values and replicates.
2. Select Samples to Export.
3. Select Analytes to Export.
4. Select Export Options.
5. Select Sample Parameters.
6. Select Mean-Related Parameters.
7. Select Replicate-Related Parameters.
8. Export Data Set.

	A	B	C	D	E	F
1	Sample ID	Sample Ty	Analyte	Conc(Sam	Samp Unit	SD (Samp
2	Calib Std 1	1	Cu 324.752		mg/kg	0
3	Calib Std 1	1	Fe 238.204		ppm	0
4	Calib Std 1	1	Ni 232.003		Oz/Ton	0
5	Calib Std 1	1	Zn 213.856		wt%	0
6	Calib Blank	101	Cu 324.752		mg/kg	0
7	Calib Blank	101	Fe 238.204		ppm	0
8	Calib Blank	101	Ni 232.003		Oz/Ton	0
9	Calib Blank	101	Zn 213.856		wt%	0
10	Calib Std 1	1	Cu 324.752		mg/kg	0
11	Calib Std 1	1	Fe 238.204		ppm	0
12	Calib Std 1	1	Ni 232.003		Oz/Ton	0
13	Calib Std 1	1	Zn 213.856		wt%	0

 If you select an existing design in Step 1, you can skip to Step 8 to export the data.

Select Export Design

In the first dialog of the Data Export Wizard, you can:

- Create a new Export design. If you select this option, the next several dialogs of the Data Export Wizard present default selections (for exporting samples, mean-related parameters, etc.) that you can change.
- or
- Use an existing design to export data, such as the LABWORKS.xpt file. An existing design is one that you or another user has created previously. If you choose an existing design, you can export the data immediately by selecting Finish. Or you can make changes to the design, such as specifying new data to be included.

To open an existing design:

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 55

1. Click the button next to **Use Existing Design**.
2. Click **Browse**.
3. In the Open dialog, select a design. Each export design has an .XPT extension.
4. Click **Open**.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Finish** to export the data file.
- Click **Cancel** to close the wizard without creating a report.

Select Samples to Report (or Export)

All samples are shown in the **Available Samples** list. You can sort the Available Samples list in three different ways to help you see which samples are affected by your sample choices.

Note: *To change the samples that are currently selected, click the **Enable/Disable** button. For information on selecting samples, see *Enable/Disable Samples* .*

Tip: *If you want a report (or export file) that includes all samples in the results data set, be sure to mark the checkboxes for *All Unknowns, All Blanks and Standards, and All QC Samples*.*

The controls and entries in this dialog are:

Control/Entry	Description
Available Samples	A view-only list of the all the samples in the selected results data set.
Sort Display:	
Alphabetically by ID	This is the ID that you entered in the Syngistix Method Editor or Sample Information Editor.
By Sample Type	Sample types include unknowns, QC, blanks and standards.
Chronologically	Arrange samples according to date and time of analysis.
Selected Samples	Indicates the number of samples that match your selection criteria.
Samples to Include in Report:	The samples you want in the report.
Enable/Disable	Modify the list of selected samples in the Enable/Disable Samples dialog .
All Unknowns	The unknowns or samples in the analysis.
All Blanks and Standards	Calibration blanks and standards.
All QC Samples	Quality Control samples.
All Auto Recoveries	Include automatic recovery samples.
With IDs Selected by Wildcards	Wild cards represent a range of characters: An asterisk (*) stands for one or more characters. For example, s* means all samples whose ID's begin with an "s."

A question mark (?) stands for any single character. For example, AB? means all samples beginning with "AB" followed by any one character.

Multiple wildcards, separated by commas, are allowed.

Analysis Dates to Include

Select all, today only, or click on the calendar button to select a particular day or date range. 

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Select Analytes to Report (Export or Chart)

After you select samples, you can select analytes (elements) to include. By selecting only certain analytes when you are creating a report, you can shorten the report. Initially all analytes are selected. To remove or add analytes from the Selected Analytes list, follow the procedure below.

To remove or add analytes from Selected Analytes:

1. Uncheck the **All Analytes** check box located under the Selected Analytes list.
2. Click on an analyte in the **Selected Analytes** list.
3. Click **Remove**. The analyte appears in the Available Analytes list.
4. If you change your mind, click on the selected analyte and click **Add**.
 - Click **Add All** to select all analytes.
 - Click **Remove All** to remove all analytes from the Selected Analytes list.
 - Select this checkbox to report (or export) only the analytes that were displayed or printed as a result of Multiline Calibration settings.
 - You can sort this list alphabetically by name or by wavelength.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Preview** to see and print the report as you have thus far specified it.
- Click **Cancel** to close the wizard without creating a report.

Select Sample Parameters

In this dialog and the next two Export Wizard dialogs, you can select the parameters you want to include for each data record. That is, for each analyte you chose (in the Select Analytes to Export dialog), you can now select which data items you want to export.

In this dialog, you can select parameters from the Sample Information File. (In the next two dialogs you select means and replicates parameters.) Over 20 parameters exist. A typical selection would include Sample ID, Batch ID, Remarks, Autosampler Location, Initial Sample Weight, and Initial Volume.

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 57

Select an available parameter, then click **Add**. (Or double-click on an available parameter.)

 *The order of the parameters in the Selected Parameter list is the same order they will be arranged in the export file.*

Available Sample Parameters:

Sample ID	The number that Syngistix assigned to each solution (calibration standard, blank, QC, matrix check, or sample) when it was stored in the results data set.
Date and Time	The date & time the reading of a sample started
Batch ID (name)	An identification for a batch of samples that you entered into the Sample Information Editor window in Syngistix.
Sample Type Code	The type of sample analyzed. This will be one of the following: 0 Unknown Sample 1-30 Calibration Standard 1-30 51 Reslope Standard 101-5 Calibration Blank 1-5 201-5 Reagent Blank 1-5 301 Internal Standard Blank 401-20 QC Sample 1-20 451-6 Recovery Sample 1-6 502 Dilution Sample 503 Duplicate Sample 505 Automatic Recovery Spike
Auto Sampler Location	The location of each sample in the autosampler. You entered this information into the Sample Information Editor window in Syngistix.
Sample Number	Corresponds to the row in the sample information file.
Initial Sample Volume	Volume of the sample you started with, before dilution. You entered this value in the Sample Information Editor.
Initial Sample Weight	Weight of sample you started with, before dilution. You entered this value in the Sample Information Editor.
Volume Units	The units in which the initial sample volume is expressed, typically mL or L.
Weight Units	The units in which the initial sample weight is expressed, typically mg or g.
Aliquot Volume	(Aliquot: a measured amount of solution) The volume of solution that was diluted to a final volume. (see Diluted to Volume). You entered this information into the Sample Information Editor window in Syngistix.
Diluted To Volume	The final volume of solution obtained by diluting an aliquot of the sample solution. You entered this information into the Sample Information Editor window in Syngistix.
Solids Ratio	This is the ratio of the wet and dry weights for the sample. This ratio is used to correct the sample concentration.

Analyst Name	The name of the person who set up or performed the analysis for the selected sample. You entered this information into the Sample Information Editor window in Syngistix.
Sample Prep Volume	After a solid sample has been dissolved or a liquid sample has been acidified (or otherwise treated), the resulting solution is prepared to a specific volume. This is the Sample Prep Volume. You entered this information into the Sample Information Editor window in Syngistix.
Nominal Weight	The weight of each sample. This value is required when the final sample concentrations are being reported in weight/weight units or if a weight correction is being applied. You entered this information into the Sample Information Editor window in Syngistix.
Sample Units	The sample units defined in the Sample Information File.
Remarks	Comments about a sample or batch of samples entered in the Sample Information Editor window in Syngistix.
User Value 1--5	User-defined parameters. For example, a parameter indicating an account name for the batch of samples. Five sample information parameters can be defined in the Sample Information Editor window in Syngistix.
User Field Name 1--5	User-defined field name, defined in the Sample Information Editor window in Syngistix.
Result Name	Name of the Results Data Set..

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Finish** to export the data file.
- Click **Cancel** to close the wizard without creating a report.

Select Mean-Related Parameters

In this dialog, as in the previous and next Export Wizard dialogs, you can select the parameters you want to include for each data record . That is, for each analyte you chose (in the Select Analytes to Export dialog), you can now select which data items you want to export.

In this dialog, you can select parameters for the mean analytical values of the sample that were generated when the sample was analyzed.

- Select an available parameter, then click **Add**. (Or double-click on an available parameter.)

 *The order of the parameters in the Selected Parameter list is the order they will appear in the export file. To rearrange the order, select a parameter and drag it with your mouse to a new location.*

Available Parameters:

% RSD (Concentration) The Relative Standard Deviation of the concentration. (The standard deviation of the mean concentration value

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	expressed as a percentage of it.)
Analyte Name	Name of the element analyzed.
Calib Corr Coref	The correlation coefficient indicates how well the data fit the generated calibration curve. A value of 1.0000 would indicate a perfect fit.
Special Sample Category	The category type of the matrix check sample that was analyzed. A number symbolizing the category appears. The categories are: 1 % recovery performed automatically by the system. (AA furnace only) 2 % Matrix recovery 3 Matrix duplicate 4 Dilution sample
Special Calculated Value	Calculated parameter for the Special Sample Category.
Concentration (Calib Units)	The concentration for the sample calculated using the mean intensity value. This concentration is expressed in the same units used to express the concentrations of the calibration standards. This value has not been corrected for weight, dilution, or the specified sample units.
Concentration (Sample Units)	The mean concentration value expressed in sample units.
Date & Time	The date and time when the instrument determined the mean concentration.
Element Symbol	Designation from the periodic table of elements.
Element Wavelength	Wavelength in nm that you chose for Syngistix to measure the associated element.
Intensity (Corrected)	The mean corrected intensity or absorbance after the blank has been subtracted. The system will derive this value from Signal Area, Signal Height, or Signal Average depending on the Measurement Mode specified in the method.
Original Data Code	Indicated whether the data is original or reprocessed.
Read Delay	The time that the system waits after it receives an analyze command and before it starts to measure the signal.
QC Recovery	A percentage showing how well the measured concentration compared with the expected concentration, for QC samples defined in the method.
Read Time	The total length of the read step in seconds.
SD (Conc in Calib Units)	The standard deviation of the mean concentration value expressed in calibration units.
SD (Conc in Samp Units)	The mean sample concentration expressed in sample units. It is calculated from the Concentration in Calibration Units by applying all corrections for unit conversion, weight, and dilution.

SD (Corr intensity)	The Standard Deviation of the Corrected Intensity or Absorbance.
Technique	Identifies the analytical technique used to perform the determination: 0 AA Flame 1 AA Furnace 2 AA MHS 3 AA FIAS-Flame 4 AA FIAS-Furnace 5 AA FIAS-MHS
Units (Calibration)	A unit of measure in which the concentration of each standard is expressed. The calibration units are specified in the Method Editor on Calib's Calib Units & Concentration Page.
Units (Sample)	A unit of measure in which the sample concentration is expressed. The sample units are specified in the Method Editor on Calib's Equations & Sample Units Page.
Reported Concentration (Calibration units)	The reported concentration value expressed in calibration units.
Reported Concentration (Sample units)	The reported concentration value expressed in sample units.
Absorbance (Corrected)	The mean corrected absorbance after the blank has been subtracted. The system will derive this value from Signal Area, Signal Height, or Signal Average depending on the Measurement Mode specified in the method.
Sampling Frequency	Frequency at which samples are analyzed.
Lamp Energy	Lamp energy.
Transient Peak Area	Peak area.
Transient Peak Height	Peak height.
Background Peak Area	The result of integrating the background signal over the read time selected in the Method Editor. This feature is not available for flame technique.
Background Peak Height	The maximum background signal during the read time selected in the Method Editor. This feature is not available for flame technique.
System Dilution Factor	The system estimates the amount of dilution required to bring the concentration to the middle of the calibration curve . The diluter dilutes the sample by the estimated amount and the system reanalyzes the solution. The system repeats this process until the concentration is below the Overcal Limit.
% RSD (Corr Intensity)	The Relative Standard Deviation of the Corrected Intensity or Absorbance, expressed as a percent.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 61

- Click **Back** to return to the previous dialog of the wizard.
- Click **Finish** to export the data file.
- Click **Cancel** to close the wizard without creating a report.

Select Replicate-Related Parameters

In this dialog, as in the previous two Export Wizard dialogs, you can select the parameters you want to include for each data record. That is, for each analyte you chose (in the Select Analytes to Export dialog), you can now select which replicate related data items you want to export.

- Select an available parameter, then click **Add**. (Or double-click on an available parameter.)

 *The order of the parameters in the Selected Parameter list is the same order they will be arranged in the export file. To rearrange the order, select a parameter and drag it with your mouse to a new location.*

Available Parameters:

Replicate Number	If replicates occurred in the analysis, this will list the replicate # with data taken for that replicate.
Date & Time	The date and time that the replicate reading was completed.
Absorbance (Net)	The absorbance value that was used to calculate the mean concentration values. It represents the net signal -- after any processing techniques selected in the method such as blank correction, background correction, or peak processing have been applied.
Intensity (Net)	The absorbance or intensity value that was used to calculate the mean concentration values. It represents the net signal -- after any processing techniques selected in method such as blank correction, background correction, or peak processing have been applied.
Absorbance (Corrected)	The mean corrected absorbance after the blank has been subtracted. The system will derive this value from Signal Area, Signal Height, or Signal Average depending on the Measurement Mode specified in the method.
Intensity (Corrected)	The mean corrected intensity or absorbance after the blank has been subtracted. The system will derive this value from Signal Area, Signal Height, or Signal Average depending on the Measurement Mode specified in the method.
Transient Peak Area	The transient peak area.
Transient Peak Height	The transient peak height.

Background Peak Area	The result of integrating the background signal over the read time selected in the Method Editor.
Background Peak Height	The maximum background signal during the read time selected in the Method Editor.
Number of Peak Points	Number of data points collected in the measurement range for each analyte.
Number of Background Peak Points	The number of background peak points.
Use this Reading	If, in Data Reprocessing, data has been reprocessed and you have selected to "Omit Replicates", and that data is reprocessed and stored again, omitted replicates are not used. By selecting Use this Reading omitted replicates are shown.
Conc (Calib Units)	The sample concentration for the replicate expressed in calibration units. This value has not been corrected for weight, dilution, or the specified sample units.
Conc (Sample Units)	The sample concentration for the replicate expressed in sample units. All corrections for weight and dilution have also been performed.
Message	Text you added dynamically during an analysis. (The message box is accessed from the File/Message menu.)

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Finish** to export the data file.
- Click **Cancel** to close the wizard without creating a report.

Select Export Options

Use this dialog to define how you want to delimit data (i.e., tell each item in a record apart), where you want to store the file, and other details.

The options to select in this dialog are:

Name:	Select Same as Data Set or type in your own choice for an export file name. (Do not include the file extension.)
Extension:	Select one of the following for the export file extension: CSV, TXT, PRN Or, type another extension in the entry field.
Directory:	Select Default Report Directory or click Browse to select another location where the export file will be created.
If File Already Exists:	Choose whether you want to append new data to the current export file or overwrite the file--if one

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 63

exists in the directory selected.

Data Delimited by: Select a character from the drop-down list (or type a character) to insert between each record of data. Your choice should be influenced by the preference your spreadsheet or database manager has (if any) when importing data.

Choices are:

, Use a comma as the delimiter.

TAB Use a tab as the delimiter.

; Use a semicolon as the delimiter

@ Use an @ sign as the delimiter.

Or, type another character in the entry field.

Include Descriptive Header Include column headings (i.e., a description of the data items), as the first record in the file.

Quote Strings Place quotation marks around non-numeric strings (i.e., words and phrases), as required by some spreadsheet and database managers.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Back** to return to the previous dialog of the wizard.
- Click **Finish** to export the data file.
- Click **Cancel** to close the wizard without creating a report.

Export Data Set

In this final dialog you can create the export data file and save the parameters chosen for the file in an export design.

The choices in this dialog are:

Export Data

The export dialog appears showing that the data is being written to the delimited data set.

	A	B	C	D	E	F
1	Sample ID	Sample Ty	Analyte	Conc(Sam	Samp Unit	SD (Samp
2	Calib Std 1	1	Cu 324.752		mg/kg	0
3	Calib Std 1	1	Fe 238.204		ppm	0
4	Calib Std 1	1	Ni 232.003		Oz/Ton	0
5	Calib Std 1	1	Zn 213.856		wt%	0
6	Calib Blank	101	Cu 324.752		mg/kg	0
7	Calib Blank	101	Fe 238.204		ppm	0
8	Calib Blank	101	Ni 232.003		Oz/Ton	0
9	Calib Blank	101	Zn 213.856		wt%	0
10	Calib Std 1	1	Cu 324.752		mg/kg	0
11	Calib Std 1	1	Fe 238.204		ppm	0
12	Calib Std 1	1	Ni 232.003		Oz/Ton	0
13	Calib Std 1	1	Zn 213.856		wt%	0

Save Design

Opens the **Save As** dialog, which you can use to:

- Assign a name to an untitled design and save it
- or
- Rename and save an existing design. This is useful if you want to make changes to a design and save it, but you don't want to overwrite the original version of the design.

When you are done with this dialog:

- Click **Back** to return to the previous dialog of the wizard.
- Click **Cancel** or **Finish** to close the wizard.

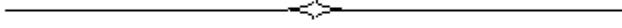
Saving an Export Design

You can save an export design and reuse it later with a new group of results data sets.

To save the design:

1. On the final dialog (Export Data Set) of the Data Export Wizard, click **Save Design**.
2. In the **Save As** dialog that appears, type a name in the **File name** entry field. For example, name the design EPA_RESULTS. Notice that it has an .XPT extension.
3. Save the design in the **Designs** folder, or select another folder to store the design file.
4. Click **Save**.

QC Charting Wizard



Overview of the QC Charting Wizard

The **QC Chart** button in the Reporting group on the ribbon provides access to the QC Charting Wizard. This wizard lets you produce a report from the results data set(s) currently selected in the Data Manager. You can control the design of and the information included in the report every step of the way.

The QC Charting Wizard has ten steps:

1. Select QC Chart Design
2. Select Technique
3. Select Method
4. Select Sample Type and Date Range
5. Select Sample to Chart
6. Select Analytes to Chart
7. Chart Parameters
8. Select Results to Chart
9. Title and Footer
10. Save Design and Export Data

 *If you select an existing report design in Step 1, you can skip to Step 10 to print the report.*

Select QC Chart Design

In the first dialog of the QC Charting Wizard, you can:

- **Create New Design.** If you select this option, the next several dialogs of the QC Charting Wizard present default selections.

or

- Use an existing design. An existing design is one that you or another user has created previously. If you choose an existing design you can open it immediately by selecting **Next**.

To open an existing design:

1. Click the button next to **Use Existing Design**.
2. Click the **Browse** button.
3. In the **Open** dialog, select a chart design. Each charting design style file has an .CHT extension.
4. Click **Open**.

When you are done with this dialog:

- Click **Next** to go to the next dialog of the wizard.
- Click **Preview** to bring up the **QC Chart Preview** dialog, using current selections in the Wizard (default selections always exist).
- Click **Cancel** to close the wizard.

Select Technique

The **Select Technique** page is the first step in the selection process; all further selections and queries are specific to the technique chosen here.

The default technique is the current Syngistix technique.

Select Method

The **Select Method** page displays a list of available methods based on the previously selected technique. One or more methods can be selected; by default, the first in the list (sorted by date, most recent first) is selected.

Sort by Date - Sorts the list of methods by date of last update in descending order, most recent first.

Sort by Name - Sorts the list of methods alphabetically by name in ascending order.

Select All – Selects all methods in the method list.

Deselect All – Deselects all methods in the method list.

About Handling of Method Names

The combination of method name and date/time provides a unique identifier for a given stored method – if the same stored method is saved in the results database many times, instances of the same method (same name/date/time) can be filtered out to give a list of methods that are truly different.

When the list of method names is created, methods with the same name/date/time will be filtered out. This will give a list of unique saved methods. For example, if **method1** is modified and saved (in the methods database) five times, and an analysis run with each one, **method1** will be in the results database five times, and will appear five times in the list here. However, if five analyses are run with the same **method1**, it will also appear in the results database five times, but will appear in the list only once, since all five will have the same name/date/time.

If you are running Syngistix Enhanced Security, then the same mechanism will work – each saved method will have a unique name with a numerical extension (e.g., **method.1**, **method.2**). The only difference will be that the case of the same name stored multiple times in the methods database will not occur.

Select Sample Type and Date Range

The **Select Sample Type and Data Range** page is where you choose between QCs, Blanks, or Standards, and specifies a date range. These selections are used in all database queries to follow.

1. Select one of the following **Sample Types to Chart**:

QC's	Includes only QC samples in all further queries.
Blanks	Includes only Blanks in all further queries (this includes calibration, reagent, and internal standard blanks).
Standards	Includes only Standards in all further queries (this includes calibration and reslope standards).
With IDs Selected by Wildcards	Includes only samples with IDs described by what you entered in the field in further queries. You can use partial sample names plus "*" or "?" to designate samples to be included. * matches zero or more characters. For example, "soil*" finds all items containing the words "soil," "soil_01," "soil_02," and so on. ? will match any one character. For example, "?oil_01" finds all items containing the word "soil_01."

2. Select one of the following options to control the samples to include based on date analyzed:

Last 30 Days	Only include data analyzed over the last 30 days.
Last 90 Days	Only include data analyzed over the last 90 days.
Last x Days	Only include data analyzed over the last specified number of days.
Date Range	Only include data analyzed over the specified custom date range using a Start Date and an End Date .

3. Select one of the Analysis Dates to Include.

Select Sample to Chart

The **Select Sample to Chart** page is where you get a list of available sample IDs, based on previous selections, and pick the one that will be charted.

Select Analytes to Chart

The **Select Analytes to Chart** page works identically as the same page in the Reporter wizard. The available analytes are listed, and you can pick one or more (all are selected by default). The **Sample** list box displays an alphabetical list of available samples, based on selections on previous pages, so that you can select one.

All Analytes - Select this checkbox to force all analytes to be selected. When this option is turned on, all available analytes are put into the selected list, and both list boxes and all the Add/Remove buttons are disabled. Since this is on by default, you must first turn this option off before moving analytes between the two lists.

Available Analytes - Displays the number of analytes still available for selection.

List of **Available Analytes** – Displays the list of analytes still available for selection.

Selected Analyses - Displays the number of analytes for which QC charts will be produced.

List of **Selected Analytes** – Displays the list of analytes for which QC charts will be produced.

Add >	Click to move the highlighted analytes from the Available list to the Selected list.
Add All >>	Click to move all analytes from the Available list to the Selected list.
< Remove	Click to move the selected analytes from the Selected list to the Available list.
<< Remove All	Click to move all analytes from the Selected list back to the Available list.
Click check-box to..	Skip analytes not displayed/printed during analysis due to Multiline Calib setting.
Sort Display	Select an option that determines how the list of analytes should be sorted.
	Alphabetically by Name - Sort the list alphabetically by analyte name.
	By Wavelength - Sort the list by wavelength.

Chart Parameters

The **Chart Parameters** page allows selection of the type of data to be charted and the details of the chart display. Some special cases for these options:

- If the sample type chosen on previous pages is **Blanks** or **Standards**, the **Values to Chart** selection will automatically be set to **Absorbance/Intensity**, and the other choices will be disabled.

Values to Chart	Select the data value type to be charted
Absorbance / Intensity	Chart the sample's absorbance or intensity (the appropriate value based on the technique).
Concentration	Chart the sample's concentrations (available only if QCs are being charted).
Standard Units	If the Concentration choice is selected, this means that the concentration in standard units will be charted. <i>Note: The Standard/Sample Units radio buttons are disabled if Concentration is not selected.</i>
Sample Units	If the Concentration choice is selected, this means that the concentration in sample units will be charted. <i>Note: The Standard/Sample Units radio buttons are disabled if Concentration is not selected.</i>
Recovery (%)	Chart the QC recoveries (available only if QCs are being charted).
RSD (%)	Chart the RSD in % of the sample's replicates.
SD*	Chart the SD of the samples replicates.
Lamp Energy	Chart the Lamp energy.
Display	Select additional items to be displayed on the chart.
Standard Deviation Lines	Draw horizontal lines on the chart at 2 SD and 3 SD. This will be used to determine the y-scale of the plot.
Limit Lines	Draw horizontal lines on the chart at the specified limits. This will be used to determine the y-scale of the plot. <i>Note: When multiple analytes are being charted, the lines will be the same for all analytes.</i>

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 73

Upper	Enter the upper limit value used by the Limit Lines option.
Lower	Enter the lower limit value used by the Limit Lines option.
Mean Line	Check to draw a horizontal line on the chart at the mean of the data being plotted.
Expected Value Line	Check to draw a horizontal line on the chart at the specified "expected value".
	Enter the y-value where the "expected value" line should be drawn.
Statistics Summary	Include a statistics summary line below each chart.
Include Data Table	Include a data table following each analyte's chart on a separate page.

Select Results to Chart

The **Select Results to Chart** page is where you see a list of all data points to be charted, based on all previous selections. You can deselect points that you do not want to include in the chart (by default, all are selected).

When settings on previous pages have been modified (this includes recalling a stored design), the data list on this page will be re-created by a database query, and all points will be selected by default. The selection states of the points are not saved as part of a saved design – whenever this list is re-created, the entire list will be selected.

Data rows in this table are sorted by Analyte, followed by Date/Time (oldest first).

Available Results for: **Displays the sample name whose data points are listed in the table below.**

- Analyte** The analyte name for the data point that will be plotted. The list is sorted with each analyte's data together. Data points can be removed from the chart by deselecting them in the list.

- Data Set** The results data set that the data point came from.

- Date/Time** The date and time the data was analyzed.

- Pass/Fail** Tells if the QC sample passed or failed its analyte limit check when analyzed. If the sample being charted is a Blank, Standard, or Unknown, this will be blank. Also, for a QC that did not have any concentration reported, this will be blank.

- Select All** Selects all data in the list box.

- Deselect All** Deselects all data in the list box.

- Hide Failed QCs** When this option is checked, QCs that are marked as "failed" will be removed from the list. If the sample type being charted is Blanks or Standards, this checkbox will be disabled.

Title and Footer

The **Title and Footer** page is where you can enter a title, to be shown at the top of each page, and a footer, with left/center/right aligned sections, to be shown at the bottom of each page. As with the report headers/footers, special field codes can be inserted in this text.

Page Title Enter the text that you want printed at the top of each page of the chart and data table report. Click in the field then select from the field code buttons on the screen.
For example, "\$E] [\$S]" shows a default page title of the analyte followed by the Sample ID.

Footer Enter text that should be printed at the bottom of each page of the chart and data table report. Select the position of your desired footer information; **Left**, **Center**, and **Right**. Click in the field then select from the field code buttons on the screen.

Select the button corresponding to the codes you want to enter:

Date Range Selecting this option will insert code **[\$R]** at the current cursor position. Will be replaced during display/printing by the date range defined for the data.

Analyte Selecting this option will insert code **[\$E]** at the current cursor position. Will be replaced during display/printing by the analyte name of the data being charted.

Analyst Name Selecting this option will insert code **[\$A]** at the current cursor position. Will be replaced during display/printing by the currently logged-in analyst name.

Page No. Selecting this option will insert code **[\$P]** at the current cursor position. Will be replaced during display/printing by the page number.

Print Date Selecting this option will insert code **[\$D]** at the current cursor position. Will be replaced during display/printing by the current date.

Sample ID Selecting this option will insert code **[\$S]** at the current cursor position. Will be replaced during display/printing by the selected sample ID.

Save Design and Export Data

The **Save Design and Export Data** page is where you can save the design just created on previous pages in a .CHT file for future use. You can also export the selected data being charted to a .CSV file. *The data being charted can be saved in a comma-delimited file for use by other applications such as Excel.*

- Save Design...** To store your design, click this button to display the **Save As** dialog where you can enter a name for this design and save it as a *.CHT file.
- Export Data...** To export your data, click this button to display the **Save As** dialog where you can enter a name for the exported data file to save the data being charted as a comma-delimited *.CSV, *.TXT, or *.PRN file.

Storing Your Design

When a design is stored/recalled in a *.CHT file, all information entered in the Wizard is part of the stored design, except for the selections on the **Select Results to Chart** page. The stored design includes which method names and analyte names are selected, and the selected sample ID. The selection information in the **Select Results** table (which specifies which individual points are to be included in the chart), however, is not stored. The result of this is that when a design is recalled, the list on the **Select Results** table will be re-created by a database query, and all points will be selected by default, regardless of the state of the table when the design was stored.

Export Data

Selecting the **Export Data** button displays the **Save As** dialog for you to pick a file name. Selecting **Save** stores the data being charted (all points for all analytes) in a comma-delimited file format.

Each line in the exported file will represent the data for one point on the chart, in the format: **Analyte Name, Date/Time, Value, Method Name, Data Set Name**

For example:

```
Cu 324.8,06/12/04 3:23:14 PM,101.4,Method 1,Results 1
Cu 324.8,06/13/04 3:23:14 PM,100.7,Method 1,Results 1
As 193.7,06/12/04 3:23:14 PM,99.3,Method 1,Results 1
As 193.7,06/12/04 3:23:14 PM,100.6,Method 1,Results 1
```


Entries on the **QC Chart Preview** dialog are described below:

Page x of y	Shows the page currently displayed on the dialog, and the total number of pages in the chart.
First Page	Displays the first page of the chart in the dialog.
Previous Page	Displays the previous page of the chart in the dialog.
Next Page	Displays the next page of the chart in the dialog.
Last Page	Displays the last page of the chart in the dialog.
Print	Prints the complete chart on the selected printer.
Exit	Closes the dialog.

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 79

Data Table

If the Data Table option is turned on, the table will list the points charted for the current analyte, in chronological order, for example:

Date/Time Recov. (%) Method Data Set

1 06/10/04 11:22:44 AM 99.5 MyMethod1 MyDataSet1
2 06/11/04 10:44:33 AM 100.2 MyMethod2 MyDataSet1
3 06/12/04 10:33:22 AM 98.3 MyMethod2 MyDataSet2

The third column is the value being charted; the heading will be one of the following:

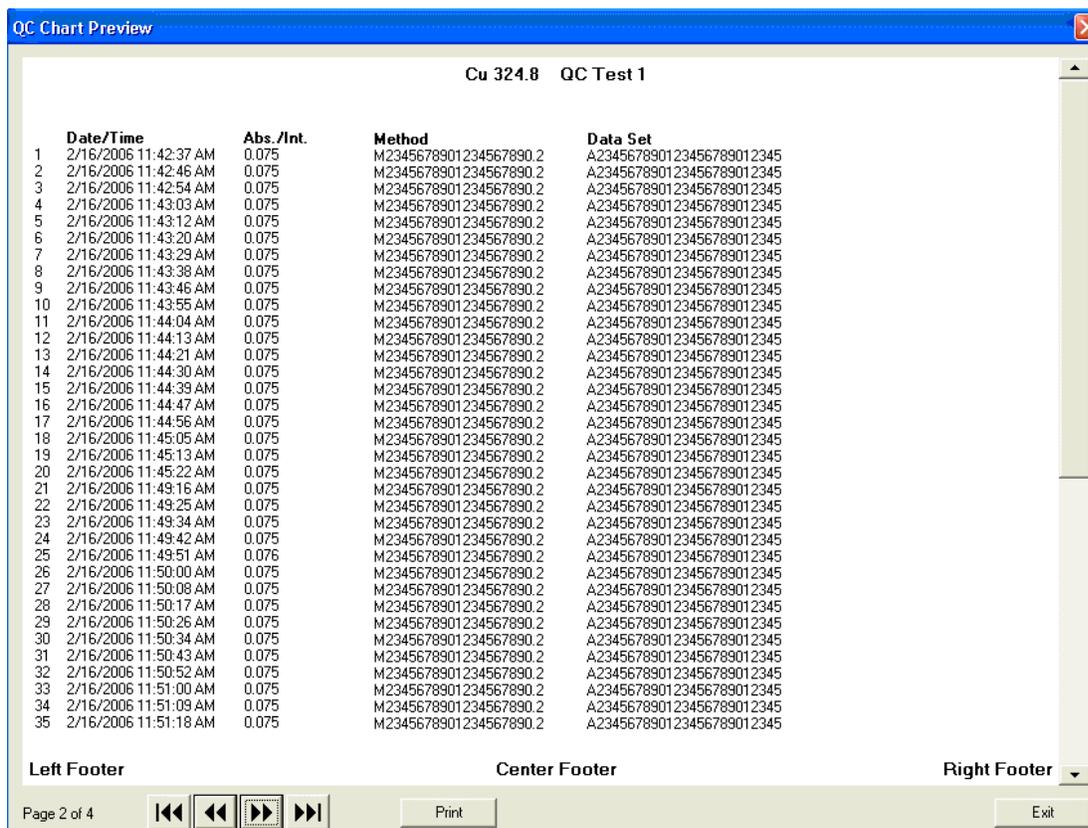
Abs./Int.

Conc. (mg/L) (for example; actual concentration units from database)

Recov. (%)

RSD (%)

Only one "newspaper column" of data will be printed on a page; there is not enough space, even in landscape mode, for two such columns. The data table is printed in landscape mode, showing 60 lines per page. On the **Preview** dialog, however, only about 35 lines will fit vertically on a page. If necessary, a scroll bar will appear at the right edge of the drawing surface. An example of the data table in the **QC Chart Preview** dialog, with a scroll bar, is shown below.



QC Chart Preview

Cu 324.8 QC Test 1

	Date/Time	Abs./Int.	Method	Data Set
1	2/16/2006 11:42:37 AM	0.075	M2345678901234567890.2	A234567890123456789012345
2	2/16/2006 11:42:46 AM	0.075	M2345678901234567890.2	A234567890123456789012345
3	2/16/2006 11:42:54 AM	0.075	M2345678901234567890.2	A234567890123456789012345
4	2/16/2006 11:43:03 AM	0.075	M2345678901234567890.2	A234567890123456789012345
5	2/16/2006 11:43:12 AM	0.075	M2345678901234567890.2	A234567890123456789012345
6	2/16/2006 11:43:20 AM	0.075	M2345678901234567890.2	A234567890123456789012345
7	2/16/2006 11:43:29 AM	0.075	M2345678901234567890.2	A234567890123456789012345
8	2/16/2006 11:43:38 AM	0.075	M2345678901234567890.2	A234567890123456789012345
9	2/16/2006 11:43:46 AM	0.075	M2345678901234567890.2	A234567890123456789012345
10	2/16/2006 11:43:55 AM	0.075	M2345678901234567890.2	A234567890123456789012345
11	2/16/2006 11:44:04 AM	0.075	M2345678901234567890.2	A234567890123456789012345
12	2/16/2006 11:44:13 AM	0.075	M2345678901234567890.2	A234567890123456789012345
13	2/16/2006 11:44:21 AM	0.075	M2345678901234567890.2	A234567890123456789012345
14	2/16/2006 11:44:30 AM	0.075	M2345678901234567890.2	A234567890123456789012345
15	2/16/2006 11:44:39 AM	0.075	M2345678901234567890.2	A234567890123456789012345
16	2/16/2006 11:44:47 AM	0.075	M2345678901234567890.2	A234567890123456789012345
17	2/16/2006 11:44:56 AM	0.075	M2345678901234567890.2	A234567890123456789012345
18	2/16/2006 11:45:05 AM	0.075	M2345678901234567890.2	A234567890123456789012345
19	2/16/2006 11:45:13 AM	0.075	M2345678901234567890.2	A234567890123456789012345
20	2/16/2006 11:45:22 AM	0.075	M2345678901234567890.2	A234567890123456789012345
21	2/16/2006 11:49:16 AM	0.075	M2345678901234567890.2	A234567890123456789012345
22	2/16/2006 11:49:25 AM	0.075	M2345678901234567890.2	A234567890123456789012345
23	2/16/2006 11:49:34 AM	0.075	M2345678901234567890.2	A234567890123456789012345
24	2/16/2006 11:49:42 AM	0.075	M2345678901234567890.2	A234567890123456789012345
25	2/16/2006 11:49:51 AM	0.076	M2345678901234567890.2	A234567890123456789012345
26	2/16/2006 11:50:00 AM	0.075	M2345678901234567890.2	A234567890123456789012345
27	2/16/2006 11:50:08 AM	0.075	M2345678901234567890.2	A234567890123456789012345
28	2/16/2006 11:50:17 AM	0.075	M2345678901234567890.2	A234567890123456789012345
29	2/16/2006 11:50:26 AM	0.075	M2345678901234567890.2	A234567890123456789012345
30	2/16/2006 11:50:34 AM	0.075	M2345678901234567890.2	A234567890123456789012345
31	2/16/2006 11:50:43 AM	0.075	M2345678901234567890.2	A234567890123456789012345
32	2/16/2006 11:50:52 AM	0.075	M2345678901234567890.2	A234567890123456789012345
33	2/16/2006 11:51:00 AM	0.075	M2345678901234567890.2	A234567890123456789012345
34	2/16/2006 11:51:09 AM	0.075	M2345678901234567890.2	A234567890123456789012345
35	2/16/2006 11:51:18 AM	0.075	M2345678901234567890.2	A234567890123456789012345

Left Footer: Page 2 of 4

Center Footer: Print

Right Footer: Exit

Chart Drawing

Axis Scaling

The x-axis goes from the "start date" to the "end date", however, the points are laid out chronologically and evenly spaced, regardless of where they fall within the range. The date of each point is labeled at the bottom with vertical text; if there are so many points that this labeling would become cluttered, an appropriate algorithm will be used to skip some of the labels.

The scale of the y-axis depends on the data being plotted. The highest of the following:

Maximum data value

+3 SD value (if selected)

Upper Control Limit value (if selected)

Expected Value (if selected)

will be scaled at 90% of the chart height. The lowest of the following:

Minimum data value

-3 SD value (if selected)

Lower Control Limit value (if selected)

Expected Value (if selected)

will be scaled at 10% of the chart height. Tic marks and y-axis labels will be shown at appropriate "round" data values (these labels will not necessarily match any of the lines or data being plotted). The y-axis itself will also be labeled with vertical text of the appropriate value type:

Absorbance / Intensity

Concentration (mg/L) (for example; actual concentration units from database)

Recovery (%)

RSD (%)

Drawing Data

The following will be drawn on the chart:

- The individual data points are plotted as small square outlines (black). The first is plotted at the y-axis, the last at the end of the x-axis.
- A "connect-the-dots" line is plotted through the data points (solid, black, 1 pixel wide).
- If the **Mean Line** option is turned on, a horizontal line is drawn at the mean value (solid, black, 1 pixel wide), labeled at the right as "Mean".
- If the **Standard Deviation Lines** option is turned on, horizontal lines are drawn at +2 SD, +3 SD, -2 SD, and -3 SD (dashed, black, 1 pixel wide), labeled at the right as "+2 SD", "+3 SD", "-2 SD", "-3 SD".
- If the **Limit Lines** option is turned on, horizontal lines are drawn at the upper and lower control limit values (dashed, black, 1 pixel wide), labeled at the right as "Upper Limit" and "Lower Limit".

Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 81

- If the **Expected Value Line** option is turned on, a horizontal line is drawn at the entered expected value (dotted, black, 1 pixel wide), labeled at the right as "Expected Value."
- If the **Statistics Summary** option is turned on, the summary will be shown just below the chart, just above the footer line. The first line of the summary will be in the format:

Mean: xxxx SD: xxxx RSD (%): xxxx N: xxxx

The **Mean**, **SD**, and **RSD** values are based on the plotted data points (each representing a mean analysis value).

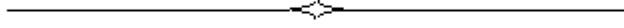
N is the number of points plotted.

The second line depends on which "line" options are chosen; two examples are:

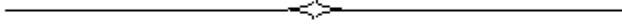
Upper Limit: xxxx Lower Limit: xxxx Expected Value: xxxx

+/-2 SD: xxxx +/-3 SD: xxxx Expected Value: xxxx

The **Upper Limit**, **Lower Limit**, and **Expected Value** values are in y units and are shown to the same number of decimal places as the data extracted from the database. The **SD** values are not actual y values – they are offsets from the mean y value.



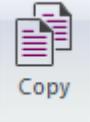
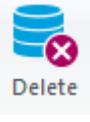
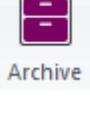
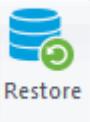
Menus, Toolbars and Dialogs



Menus and Toolbars

Tasks

Use the commands in the ribbon for all data management tasks. The function of each of these commands is described below.

Command	Definition	Ribbon Equivalent
Copy Data Sets...	After you have highlighted one or more data sets in a Data window, select this command to open the Copy Data Sets dialog. Use this dialog to copy data sets to another library. If the library does not exist, it will be created automatically for you.	 Copy
Delete Data Sets...	After you have highlighted one or more data sets in a Data window, select this command to open the Delete Data Sets dialog. Use this dialog to remove the data sets from the selected library.	 Delete
Rename Data Sets...	After you have highlighted a data set in a Data window, select this command to open the Rename Data Set dialog. Use this dialog to give the data set a new name.	 Rename
Archive Data...	After highlighting one or more data sets in a Data window, select this command to open the Archive Data dialog. Use this dialog to create a compressed (zipped) archive file containing the data sets that you selected. Also, if you are using the Enhanced Security Version of Syngistix, use this command to make a copy of the contents of the Event and File Change Logs.	 Archive
Restore Data from Archive...	Opens the Restore from Archive dialog. Use this dialog to select data from an archive that is to be restored to an existing or new library. Also, if you are using the Enhanced Security Version of Syngistix, use this command to restore an archived Event Log or File Change Log Library for viewing only.	 Restore

Create New Library...	Opens the Create Library dialog. Use this dialog to select a directory location where a new library should be created.	 Create Library
Verify Data Set Signatures...	After you have highlighted one or more data sets in a Data window, select this command to open the Verify Data Set Signatures dialog . Use this dialog to verify that stored data has not been modified.	 Verify Signatures
Check Library Tables...	Opens the Check Library dialog . Use this dialog to find and repair certain types of problems in library tables and indices.	 Check
Pack Library Tables	Packs the active library by rearranging the data sets to free unused disk space. See Packing a Library for additional information.	 Pack
Write Report	After highlighting one or more data sets in a Data window, select this command to open the Data Reporting Wizard.	 Report
Export Data	After highlighting one or more data sets in a Data window, select this command to open the Data Export Wizard. Also, if you are using the Enhanced Security Version of Syngistix, use this command to export the contents of the Event Log and File Change Log databases.	 Export
Export To LABWORKS	After highlighting one or more data sets in a Data window, select this command to export data to LABWORKS. When you perform this command data is exported using the LABWORKS.xpt file, which is already installed with your software, and can be customized using the Data Export Wizard.	 Export to LABWORKS

Dialogs

Archive Data Dialog

What It Does

Copies individual data sets or complete libraries to compressed archive files.

Why Use This?

To make backup copies of methods, or to prepare results data, event logs, and the file change log, for long term storage. It is recommended that you archive data when the results library and the event log library (the .mdb file) get very large. This could be monthly or more often.

Note: *The event log and file change log appear only in the Enhanced Security Version of Syngistix.*

Task Summary

Before you select this command, make sure you have selected the library category that you need: Results, Methods, Event Log, or File Change Log. Also, make sure that the data sets to be archived are highlighted in the active Data window unless you plan to archive the entire library. Click the **Archive** button in the Maintenance group. Select the options in the dialog and click the **Archive** button on this dialog to create an archive.

Check Library Tables Dialog

What It Does

Checks libraries for a variety of problems and makes repairs to the library tables whenever possible.

Why Use This?

If you have problems saving or recalling methods or results, it is possible that the cause is a corrupted library. This command allows you to check your libraries and make minor repairs. If major problems are detected, you will be advised to replace the corrupted library with a backup copy from an archive.

Tip: *Perform the Check command before you archive or copy datasets so as not to replicate an error.*

Copy Data Sets Dialog

What It Does

Copies results or methods data sets from one library to another. The libraries must be from the same library category.

Why Use This?

You may want to make a backup copy of your data or consolidate data sets from several libraries. For example, you can organize all soil results in one library.

Task Summary

Before you select this command, make sure you have selected the "Results" library category. Also, make sure that the data sets to be copied are highlighted in an active Data window.

Click on the **Copy** button in the **Maintenance** group, select the destination library, and click the Copy button in this dialog.

Create Library Dialog

What It Does

Creates a new library and opens a new Data window to display its contents.

Why Use This?

You may want to create a new library to separate the results from different analyses or to consolidate data sets from several libraries.

Task Summary

Before you select this command, make sure that the library category for the new Results or Methods library appears on the toolbar display. In the **Library** group, click on the **Create Library** button. In the dialog that appears, select the directory path for the new library.

 *Note that the directory must already exist; use the Windows Explorer to create a new directory before you use this dialog to create a library.*

Hint

When you use the **Copy** command to copy data sets to a location that does not contain a library structure already, the software creates a new library there automatically for you.

Delete Data Sets Dialog

What It Does

Deletes all information for one or more data sets stored in the active library.

Why Use This?

After you have archived a data set, or when you no longer need a data set, you should delete it so that more disk space will be available to store other data sets.

To reduce library size, be sure to Pack the library after you delete data sets.

 *Deleting a data set by itself does not reduce library size.*

Task Summary

Before you select this command, make sure you have selected the library category you need (results or methods). Also, make sure the data sets to be deleted are highlighted in the active Data window.

In the Maintenance group click on the **Delete** button to display the Delete Data Sets dialog. Make sure the list contains the data sets to be deleted and click on **OK** to delete them from the library.

Enable/Disable Samples Dialog

What it Does

All the samples in a data set are listed in this dialog. Use the Enable/Disable Samples option to select which samples you want to include or exclude from a report or export file.

Why Use This

When you select or hide the samples in this dialog first, then open the Report or Export feature, the samples will already be selected and will match the selections you made in this dialog.

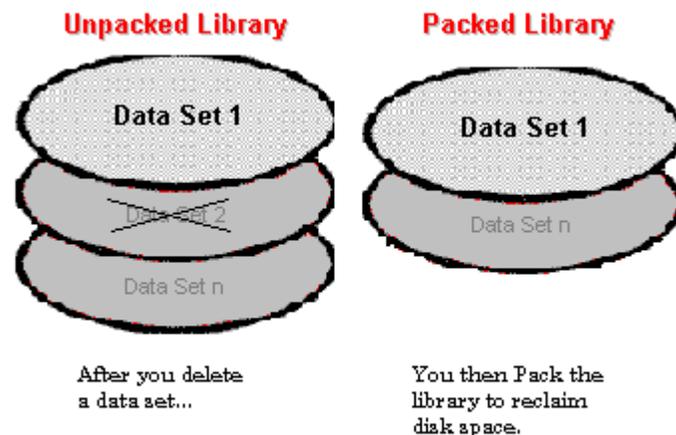
Task Summary

Before you do this, make sure you have selected the data set you want to report on in the active Data window. Click on a data set name to select it. In the **Sort** group click **Enable/Disable Samples**.

In the dialog that appears, click in the Enabled column of each sample you want to include or double-click the **Enabled** column header to select all the samples in the data set. Click **OK** to record your selections and close the dialog.

Pack Library Dialog

What It Does



Packs the active library by rearranging the data sets to free unused disk space.

Why Use This?

After you delete data sets from a library, you can pack the library to reduce its size and thus reduce the space it occupies on your hard drive. Library size is not reduced automatically when you delete data sets.

It is recommended that you pack a results library when the library (the .mdb file) gets very large and you have deleted data sets from it. This could be weekly.

Task Summary

Periodically, you should pack your libraries to reclaim the disk space occupied by deleted data sets. This process rearranges the data sets and frees unused disk space.

Remove Locks Dialog

What it Does

Syngistix programs lock data sets while they are in use to prevent other Syngistix programs from making changes that could cause damage. Locks are normally removed when the program is finished using the data set. In rare instances it may be necessary to manually remove a lock because a program has terminated abnormally.

Why Use This

To remove any "View Only" restrictions that have been placed on a data set.

Task Summary

To manually remove a lock, click the **Security** button on the ribbon and select **Remove Locks**.

Rename Data Set Dialog

What It Does

Changes the name of a data set in the active Data window.

Why Use This?

You may want to rename a data set to correct errors made in the name or to better describe the data set contents.

Task Summary

Before you select this command, make sure you have selected the "Results" library category.

Highlight the name of the data set to be renamed in a Data window and click the **Rename** button in the Maintenance group. In the dialog that appears, type the new name in 25 characters or less.

Restore from Archive Dialog

What It Does

Restores data sets from a compressed archive to an existing or new library. In the case of restoring an event log or file change log, the restore command functions only to unzip the archived database for viewing.

Note: The event log and file change log appear only in the Enhanced Security Version of Syngistix.

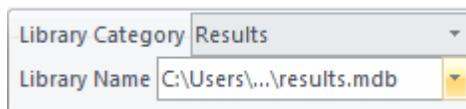
Why Use This?

You may want to use a data set previously archived, replace a damaged library with a backup copy contained in an archive, or simply view the contents of an archived database.

Task Summary

Before you select this command, make sure you have selected the library category you need: Methods, Results, Event Log, or File Change Log. Select the archive to be restored, select the data sets to be restored, and select the location of the library where the restored data sets will be placed.

Select Library Category Dialog



How It Works

Selects a different **Library Category**.

When you change the library category, the name of the new category, such as methods appears on the toolbar display. The title bar of each open Data window identifies the default library location for the library category that you have just selected. The data sets or audit trails that are listed in each open Data window are those that are stored in that library in the location shown on the title bar.

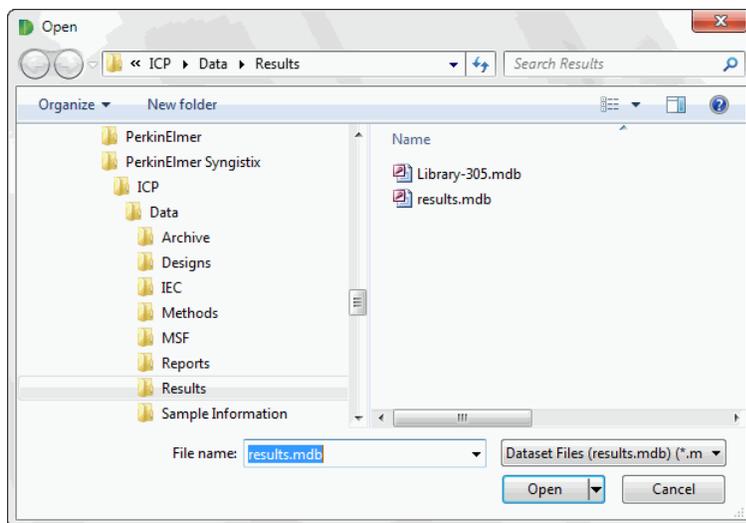
Why Use This?

In Syngistix, you work on one library category at a time. If you want to work on data sets in a different category, you use this command to change the active library category.

How Do I...?

1. Click **Library Category** drop-down button to display the available categories.
2. Click on the desired library category.

Select Library Dialog



How It Works

Searches for an existing library and displays the data sets contained in that library.

Why Use This?

If the data sets that you want to work with are not displayed on the screen and the correct library category appears, you use this command to find the library containing the data sets.

How Do I...?

1. Before you use this command:

Make sure that the library category name for the library to be selected appears on the toolbar. See the Select Library Category Dialog topic for details.

and

Make sure you have an active Data window to view the library.

- If you have more than one Data window on the screen, click on the preferred window to make it active.

or

2. Click on the **Open Library** button in the Library group on the ribbon.
3. In the **Open** dialog, the Results directory path is displayed by default.
4. To view the data sets in the library file, click the **Open** button.

The data sets of the selected library appear in the active window. The title bar of this window identifies the library category and location.

Verify Data Set Signatures Dialog

What it Does

When data is saved from an analysis, a digital signature is also computed and stored in the database. The Verify Signatures option checks the signature and verifies that the data has not been manually modified since the last time it was used.

Why Use This?

If someone alters the data that the analysis produced, e.g., alters a concentration value, it can be easily detected by using the Verify Signatures option. Data Manager recomputes the digital signature and compares it with the one that is stored with the data. If the signatures do not match, Data Manager reports that the sample has failed the verification.

Task Summary

Before you do this, make sure you have selected the data set you want to verify in the active Data window. Click on the Security button then select Verify Signatures. The Verify in Progress dialog appears and monitors the process.

Explanation of Action

What it Does

In the Enhanced Security Version of Syngistix, you use this window to record the reason for modifications to files or data objects. Whenever a user saves his work, after performing an

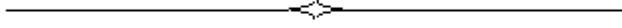
Fehler! Verwenden Sie die Registerkarte 'Start', um Heading 1 dem Text zuzuweisen, der hier angezeigt werden soll. . 93

action that affects the results of data or files, such as "Canceling Analysis" or "Saving" a method or data set, the user is prompted with this dialog.

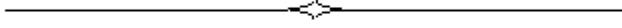
Using this Dialog

The Explanation of Action Dialog consists of the following areas:

- **Action:** The action that prompted this dialog is automatically defined.
- **Reason:** The user types in his/her own reason here to provide an explanation for the action that occurred.
- **User:** The full name of the logged-in user automatically appears in the dialog.
- **Date/Time:** The date and time is automatically recorded.
- **Help:** Click on this button for help on using the **Explanation of Action** dialog.
- **OK:** Once an explanation is typed in the **Reason** box, press enter to store this information in either the Event or File Change Log.



Windows



Event Log

If you are using the Enhanced Security Version of Syngistix, use this window to view the audit trails for all major events performed with your Syngistix software.

Note: *The **Event Log** in Enhanced Security will only display 2000 events regardless of whether you choose to display all events or specify a time period.*

Click on one of the links below to learn about:

- What is major events auditing?
- Using the Event Log window
- Performing Data Management functions on the Event Log

What is major events auditing?

In the Enhanced Security Version of Syngistix every significant operational event that affects a file or analytical data performed with your software is recorded and stored in an Access 2002 database, which can be viewed from the Data Manager in the Event Log Viewer. Some of the major audited events include:

- Starting and Exiting an application
- Opening, saving, or importing a method
- Copying data sets
- Archiving
- Report creation
- Export operations
- Error messages

Each recorded event has a date and time stamp, a message associated with the event, and the user name and application name are also displayed.

Using this window

1. In the **Library** group, click the **Library Category** drop-down button.
2. Click **Event Log**.
3. Click **OK**.
4. Select the application/s you wish to view the audit trails for by checking the check boxes next to the following application names: Syngistix, Data Manager, Syngistix Offline, and User Setup.
5. Select the date range of the audit trail you wish to view

Click **All** to display all audited events

or

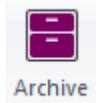
Select the Start and End radio button and select a **Start** and an **End** date from the corresponding drop downs.

The audit trails for the application/s you selected are displayed.

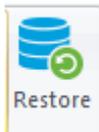
6. Click on the audited event for which you wish to view more details.

The date, time, name of user, name of application, command, and any additional information about an audited event appear in the lower portion of the event log viewer.

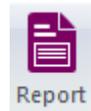
Performing Data Management functions on the Event Log



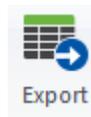
Use the **Archive** button to save a database as either zipped or unzipped and create a new database, or just make a zipped or unzipped copy of the database.



Use the **Restore** button to unzip a zipped archive so that can view it using the Event Log Viewer.



Use the **Report** button to print either a short or extended form of data displayed in the Event Log.



Use the **Export** button to export all the information for the items displayed in the Event Log viewer and write it into a file that can be read by many other programs, including spreadsheet and database management programs.

File Change Log

If you are using the Enhanced Security Version of Syngistix, use this window to view a system-wide revision history on files and data objects.

Click on one of the links below to learn about:

- How does file versioning work?
- Using the File Change Log Window
- Performing Data Management functions on the File Change Log

How does file versioning work?

In the Enhanced Security Version of Syngistix, when a user performs a **Save/Save As** command on a file or data object the following actions are performed:

- Files and methods are copied to two locations, a history directory and a user directory, and version numbers, in increments of 1, are created for all files or data objects being saved.
- The history directory contains copies of all versions for all files and methods, saved by all users and is only accessible to an administrator.
- Files and methods saved to the user's directory overwrite the previous version thereby only allowing the user to see the latest version of a file.
- Duplicate file names are not permitted among users.
- Only administrators are able to delete or view files from the archive directory.
- When a file or data object is saved the action is logged in the Event Log.
- When opening a file created in an earlier version of Syngistix the file is automatically saved as an Enhanced Security compliant file starting with version number 1.

Using this Window

1. Click the **Library Category** button on the tool bar or the **Select Library Category...** command from the File menu to view the Select Library Category dialog.
2. Click **File Change Log**.
3. Click **OK**.

4. Select the file or data object type for which you wish to view the audit trail by clicking on the corresponding radio button.

Names of files and/or data objects appear under the Name window.

5. In the Name window, click on the name of the file for which you wish to view the version history.

The various versions of the file appear along with date and time stamps in the middle window.

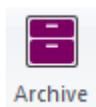
6. Click on the version of the File for which you wish to view additional information.

The following information is displayed in the left window for the selected file version:

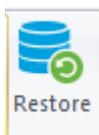
- Name of file

- Version number of file
- When the change occurred
- Who made the change
- Location of file
- What parameter/s were change
- Why the change was made

Performing Data Management Functions on the File Change Log



Use the **Archive** button to copy a complete database with the option to zip this database. This command is for backup only. The File Change Log database is never replaced with a new copy except when the software is installed on a clean system.

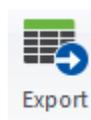


Use the **Restore** button to unzip a zipped archive.

Note: *This command only unzips an archived File Change Log for viewing purposes only.*

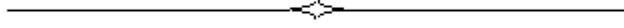


Use the **Report** button to print the contents of the File Log. Users are presented with two sets of two options for printing. The first set of options allows the user to select which file/s and version/s to be printed. The second set of options allows the user to select the format of the report, either a short or extended format.



Use the **Export** button to export all the information for the items displayed in the Event Log viewer and write it into a file that can be read by many other programs, including spreadsheet and database management programs.

Maintenance and **Troubleshooting**



Maintenance and Troubleshooting

Overview

Problems can happen. Hard disks can fail making data files unreadable or power surges and losses can corrupt files making entire libraries unreadable. These problems are very rare, but they can cause a disaster if your lab is not prepared. A backup copy of the various libraries that you have created is essential in case something unexpected happens.

In addition to the possibility of data loss, the results library will become large over time as you analyze samples. When this happens you might exceed the capacity of your hard disk or system performance may suffer. Periodically archiving data sets on floppy disk, tape, or other devices and deleting them from the working library is an essential part of operating your system.

The purpose of this section is to help you avoid library related problems, and to help you solve them if they do happen.

Maintenance and Troubleshooting

Library Maintenance

The recommended library and disk maintenance procedures are designed to minimize the possibility that problems will occur. Library and disk maintenance should be a regular laboratory activity that is as important as checks and maintenance of the spectrometer and its accessories. The procedures suggested below will help to insure that your data remains secure and accessible.

The topics in this section include:

1. Recommended library maintenance procedures
2. A discussion of archive programs for combining a group of files into a single, compressed file

Maintenance and Troubleshooting

Recommended Library Maintenance Procedures

We recommend that the following be performed on a regular basis in your laboratory. The frequency will depend on how often you create and save methods and other files, and on the quantity of data you collect.

1. **Archive results data sets** periodically to prevent your results library from becoming excessively large. Use the Data Manager to archive the data sets you no longer need on a periodic basis to a compressed archive file. After the data sets have been archived, they should be deleted from the results library to make room for additional data. See the topic on Archiving Data Sets for a procedure and the topic on [Restoring Data Sets from Archive](#)
2. **Archive the event log** periodically to prevent your event log library from becoming excessively large. Use the Data Manager to archive the event log on a periodic basis to a compressed, or uncompressed archive file. After the event log has been archived a new event log database with the version incremented by one is created with an entry stating that the previous contents were archived and the location.
3. **Delete out-of-date data sets.** This activity should be performed on all libraries on a periodic basis. Before deleting data sets be sure that you have made archive copies of any that you may need in the future. It is particularly important to remove data sets from the results library on a periodic basis to make room for new data. Use the Data Manager to delete data sets from libraries. See the topic on Deleting Data Sets for a step by step procedure on using Data Manager to delete data sets.
4. **Pack libraries.** Packing libraries rearranges the data in each library table so that the space occupied by deleted data sets is made available. If you do not pack the libraries, the space formerly occupied by deleted data sets can be used to store new data sets of the same category. See the topic on Packing A Library for a step by step procedure.
5. **Back up setup information.** Make regular backup copies of methods, sample information files, workspaces, Report and Export designs. Backup copies will allow you to restore critical information quickly with minimum disruption to your operations in the event that problems occur. Use the Windows Explorer to make backup copies of important files.
6. **Check the condition of your hard disk.** Check your disk drives for errors by opening the Windows Explorer, right-clicking on a disk drive letter and selecting Properties. In the Properties dialog, select the Tools tab. Click the **Check Now** button.

Maintenance and Troubleshooting

Archive Programs

There are a number of programs available that can be used to compress a data set into an archive. Archives typically have file extensions such as .zip, .arj, or .lzh depending on the program used to create them. Archives make it easy to combine files and minimize the amount of disk space they occupy.

The Syngistix Data Manager uses the zip file format for its archives because it is one of the most commonly used. This format is compatible with the zip files produced by Pkzip available from www.pkware.com or WinZip from www.WINZIP.com.

If you ever encounter a damaged zip file, it may be possible to repair it using Pkfix. This program is usually included with Pkzip and Pkunzip available from PKWARE.

Index

A	
A4 paper	41
Archive Data dialog.....	87
Archive Data... ..	85
Tasks menu command	85
Archiving data sets	19
Steps.....	19
Archiving the Event Log Steps	21
Archiving the File Change Log Steps.....	22
B	
Basic Steps for Creating a Report of the Event Log	35
Basic Steps for Creating a Report of the File Change Log	36
Basic Steps for Exporting the Event and File Change Log	53
Basic steps for preparing a report	37
C	
Chart Drawing.....	80
Chart Parameters	72
Check Library dialog	87
Check Library... ..	85
Tasks menu command	85
Checking a library.....	28
Steps.....	28
Copy Data Sets dialog.....	87
Copy Data Sets... ..	85
Tasks menu command	85
Copying data sets.....	15
Steps.....	15
Create Library dialog.....	88
Create Library... ..	85
Tasks menu command	85
Creating a new library.....	26
steps.....	26
D	
Data Manager	3
overview.....	3
Data Manager's reporting feature.....	35
data sets	8
definition	8
Data Table.....	79
E	
Delete Data Sets dialog	88
Delete Data Sets.....	85
Tasks menu command	85
Deleting data sets.....	17
Steps.....	17
Dialogs	91
Archive Data	87
Check Library	87
Copy Data Sets.....	87
Create Library	88
Delete Data Sets.....	88
Enable/Disable Samples	89
Remove Locks	90
Rename Data Set.....	90
Restore Data	90
Select Library	91
Select Library Category	91
F	
Enable/Disable samples.....	41, 56
Steps.....	30
Enable/Disable Samples dialog.....	89
Enter Limit Remarks dialog	47
Enter Page Footer and Report Appendix dialog.....	47
Enter Report Title and Page Header dialog	46
Event Log	97
Explanation of Action	92
Export Data Set dialog	63
Export design	64
saving	64
Exporting data overview	53
Exporting the Event and File Change Log	53
G	
Generating data.....	5
H	
How is data produced and where is it stored?	5

L	
Libraries.....	6
defined	8
described	6
Library	26
creating a new library	
Steps	26
Library maintenance	103, 104, 105
archive programs.....	106
recommended procedures	105
Limit remarks	47
M	
Maintenance and troubleshooting.....	103
Menus	
Tasks.....	85
O	
Overview of data management	14
Overview of Data Manager	3
Overview of exporting data.....	53
Overview of the QC Charting Wizard.....	67
P	
Pack Library	85
Tasks menu command	85
Pack Library dialog.....	89
Packing a library	29
Steps.....	29
PKzip compression	106
Previewing a report before printing	49, 50
Printing a report	38
Q	
QC Chart Preview Dialog	77
R	
Remove Locks	31
Steps.....	31
Remove Locks dialog.....	90
Rename Data Set dialog	90
Rename Data Set.....	85
Tasks menu command	85
Renaming data sets	18
Steps.....	18
Reports.....	35
enable/disable samples	41, 56
Enable/Disable samples.....	30
previewing	49, 50
printing.....	38
Restore Data dialog	90
Restore Data from Archive.....	85
Tasks menu command	85
Restoring an Event Log	25
Restoring data sets	23
Steps	23
S	
Save Design and Export Data	76
Saving a Report Design dialog.....	49
Select Analytes to Chart.....	71
Select Analytes to Export dialog	41, 56
Select Analytes to Report dialog	41, 56
Select Export Design dialog.....	54
Select Export Options dialog	62
Select Library	91
dialog	91
Select Library Category.....	91
dialog	91
Select Mean-Related Parameters dialog.....	58
Select Method.....	69
Select QC Chart Design	68
Select Replicate-Related Parameters dialog ..	61
Select Report Design dialog	39
Select Report Format dialog	41
Select Results to Chart	74
Select Sample Parameters dialog.....	56
Select Sample to Chart	70
Select Sample Type and Date Range	70
Select Samples to Export dialog.....	39, 55
Select Samples to Report dialog	39, 55
Select Technique	68
Storing data	5
T	
Task overview	14
Tasks menu.....	85
Archive Data... command.....	85
Check Library... command	85
Copy Data Sets... command.....	85
Create Library... command.....	85
Delete Data Sets... command.....	85
Enable/Disable Samples.....	85
Export Data	85
Pack Library... command	85
Rename Data Set... command.....	85
Restore Data from Archive... command....	85
Verify Data Set Signatures	92
Write Report.....	85
Tasks Menu	85
Title and Footer	75
V	
Verify data set signatures	27
Steps	27
Verify Data Set Signatures	92
View and print a report.....	49
W	
Windows Explorer	8
copying libraries with	8
WinZip compression	106

