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Star Chromatography Workstation
Version 6

Star Custom Report Writer

Operation Manual

QUALITY SYSTEM
ISO 9001
DERTIFIED

03-914740-00:Rev. 4

Trademark Acknowledgment

Table of Contents

Getting Started

About this Manual

This manual contains information about how to use the Star Custom Report Writer (also referred to as the Star Report Writer). It consists of the following sections.

This section contains a brief overview of the software, the manual, and terms used in both the software and the manual. Instructions for installing the Star Report Writer are also included in this section.

Creating Custom Report Templates, page 15—How to create a template that can be used to automatically generate custom printed reports. This section also describes the report objects that can be included in the template.

Interactive Viewing and Printing of Reports, ***page 53***—How to use Star Report Writer to view and print custom reports.

Specifying Report Templates in Methods, page 63—How to specify in your Method the report template you wish to use to generate custom reports during automated injections and recalculations.

Automatically Generating Reports, page 69—How to automatically invoke Star Report Writer from System Control to generate custom reports after each run.

Troubleshooting, page 71—Lists error messages and other problem symptoms, along with suggested actions for correction.

Other sources of information are available to help you get the most from this product.

On-line Help

Help is available directly from the Star Report Writer application.

Select Help Topics from the Help menu.
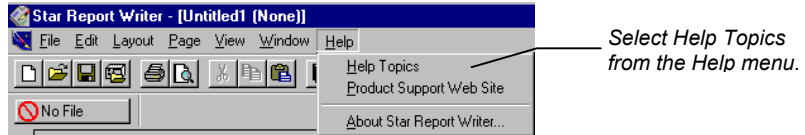
The on-line help describes each of the menu items, dialog boxes and windows in the Star Report Writer application.

Topics in the on-line help may be printed, and you may view keywords or search for specific text. This reference information is useful as you explore the software.

Release Notes

Release notes accompany the software and contain up-to-the-minute information that may be more recent than information in this manual. Refer to the release notes before installing or using the software.

Demonstration Templates

Included with the software and referenced from this manual are several Star Report Writer templates that demonstrate techniques and principles important for most effective use of the software. Throughout this manual, you will see references to specific templates that contain information demonstrating a particular topic.

☆ *Try it out!*

This symbol will be used when making references to these templates.

Sample Templates

Also included with the software are sample templates that you may use as-is, or modify to meet your specific needs. The following samples are located in the Examples directory where the Star Report Writer software is installed:

ES_ANLYS.WRT, ES_CALIB.WRT **and** *ES_VERIF.WRT*—templates for analysis, calibration and verification runs that use an external standard.

IS_ANLYS.WRT, IS_CALIB.WRT **and** *IS_VERIF.WRT*—templates for analysis, calibration and verification runs that use an internal standard.

STANDARD.WRT—a template approximating the report generated by the standard Report application in the Star Chromatography Workstation.

VLOGO.WRT—a concise template containing a logo, summary information about the run, a chromatogram and results table.

What does the Star Custom Report Writer do?

The Star Report Writer allows you to design a template that, when applied to your chromatographic Data Files, generates a report.

Star Report Writer allows you to visualize your report with real data as you create the template, eliminating the trial-and-error process often found when configuring reports. Star Report Writer provides you with unparalleled flexibility in the format of your report. You can change font type, size, style, color and orientation. You can add boxes, borders, and annotations. You can add graphic images or portions of other documents pasted in from the Windows clipboard. With Star Report Writer, you have the ability to automatically generate publication-quality documents.

You can create comparative reports where the results, chromatogram or other information from a reference Data File is presented next to the active Data File. You can also format your report to include data from multiple channels from the same Data File.

Once you have created a template, you select it in the Method that will be used to perform your chromatographic runs. A separate template can be used with each channel of data from each detector in your system, and you can name templates specific to the type of sample (unknown, calibration, or verification).

Not only can you use Star Report Writer to automatically generate printed reports, but you can also review reports interactively on screen. Multiple reports can be viewed at once, and new templates can be linked to chromatographic Data Files for later viewing or printing.

Installing Star Custom Report Writer

Note: **If you have not already installed the Star Workstation on your computer, do so before proceeding.**

Star Custom Report Writer is installed from the Star Workstation CD. Refer to the booklet included with the CD for instructions on installing software. When you run the Star Custom Report Writer installation, you will be prompted for your Star Custom Report Writer serial number, which appears on the software serial number card included with the product.

When Star Report Writer is installed, the Star Workstation will be configured to automatically generate custom reports after each injection when your Method specifies a custom report template.

Glossary of Star Report Writer Terms

The following Star Report Writer terms are used throughout this manual. You will also find information about these terms in the on-line help.

Active object—A report object that has been activated for editing by double clicking on it. Click anywhere outside the active object to return it to its inactive mode allowing it to be positioned with the mouse.

Auto Scale—A setting in the chromatogram properties used to automatically set the scaling to fit the highest and lowest data points in the chromatogram.

Automation Files—The report object that lists the SampleList and Sequence that were used for injection, and the application, version, RecalcList and Sequence used for the most recent calculation.

Border—A report object in the General tab of the Section window that allows separator lines to be placed on the template to visually break the printed report into sections. This differs from the *Border Style* in the Palette window.

Border Style—Found in the Palette window and is used to select the border to be applied to an object. The three types of border styles are none, a solid line, and a dashed line.

Calibration Section—The Section window tab that contains calibration objects that can be individually positioned in the template.

Calibration Data File Log—A report object used to print a table of the Data Files used for generating the calibration data.

Calibration Coefficients—A report object used to print a table of the calibration coefficients for all the peaks in the peak table.

Calibration Replicate Stats—A report object used to print a table of the integration results of all peaks in the peak table. A complete table is only available from the last Data File in the calibration set (and subsequent *Analysis* Data Files).

Calibration Summary—A report object that lists information about the calibration curve fit and conditions used to calculate the calibration data.

Chromatogram—A report object used to print the chromatogram, peak annotations and associated items.

Chromatogram Scaling—A setting in the chromatogram properties that can be used to either select *Auto Scale* or *Fixed Parameters*. When *Fixed Parameters* is selected, the minimum and maximum values for the detector response and the start and end time of the chromatogram can be entered.

Clear—Found in the Palette window, this button is used to give an object a clear background. This is especially useful when overlaying or superimposing one object on another.

Close Report—A File menu selection that closes the currently selected report template. If the template has not been saved, you will be prompted to save it before the template is closed.

Computer Info—A report object that lists the computer hardware and operating system information for the computer used during injection and any subsequent data calculations.

Container Object—A type of report object containing fields that can be individually moved within the object. Container objects include Run Description, Data Handling Params, Notes, Automation Files, Detector Info, Computer Info, and Calibration Summary.

Data File Section—The Section window tab that contains objects specific to the Data File. These objects can be individually positioned in the report template.

Data File/Channel Name—A report object that lists the Data File name and the channel being reported in the active Data File.

Data Handling Errors—A report object that lists the errors that occurred during data handling.

Data Handling Params—A report object that lists the parameters that were set in the data handling section of the Method.

Data Handling Time Events—A report object that lists each data handling time event (such as programmed peak width changes) and the time that it occurred.

Data Source—A File menu selection used to specify the Data File and detector channel for a selected object. You can access this dialog box from the context menu with a right mouse click on the active object.

Delete Header Footer—A Page menu selection that deletes all entries from the header and footer, and resets the header and footer to their default size. The contents will be deleted even if Show Header/ Footer is not checked.

Detector Info—A report object that lists the data acquisition rate, the detector run time, detector type, and other detector parameters. This object contains fields that can be individually positioned in the report template.

Field—A unit of information contained in an object. For example, the *Run Description* object contains individual data fields. Fields within an object can be edited individually or as a group.

Fields Displayed—Refers to the list of fields that are contained in an object. Fields can be displayed or suppressed from the Properties dialog box of the object.

File Marks—A report object used to print a table of the name and retention time for any event marks in the data file. When the object is active (done by double clicking on it), you can move columns and change column widths by clicking and dragging their headers.

General Section—The Section window tab that contains objects to add text, pictures, time & date and page numbers to the report template.

Generated Text—A report object that allows the display and formatting of a text file. It can be used to display a text file whose name is based on the data file, or any text file you specify.

Insert New Page—A Page menu selection that adds a new blank page to the report template before the current page. You can append a new page to the end of the template by using Add Page to End.

Instrument Section—The Section window tab that contains objects specific to the instrument used to generate the Data File. These objects can be individually positioned in the report template.

Int. Std. Amounts—A report object that lists the internal standards used and the amounts of each of them.

Link Template to Data File—A File menu selection used to make the active template the default analysis, calibration or verification template for that file. It is grayed out in the file menu until both a template and a Data File have been selected for viewing.

Lock Channel—A data source selection used to select the data handling channel that will always be used for this object. Select the channel from the list box.

Lock Template—An Edit menu selection used to specify a password that will be required to modify the template in the future. Once locked, the password must be supplied to unlock and modify the template.

Module Info Log—A report object that lists the data for each module in the instrument. These data are entered using the Module Information Editor in System Control. Adjust the object size to allow for all information to be printed.

New Template—A File menu selection used to create a new Template window which will appear as a blank page. To add a report object to the template, drag the icon for the object from the Report Sections window onto the page.

Notes—A report object that lists the injection notes that were entered in the SampleList and any calculation notes that may have been entered in the RecalcList during recalculation.

Open Report—A File menu selection used to select the Data File and the template that will be used to generate a report.

Overflow Printing—A File menu selection used to print overflowing objects. Objects such as the *Results Table* or *Run Log*, whose length may vary from run to run depending on the number of detected peaks or instrument events, may overflow the size of the object as set in the template. When overflow printing is enabled (checked), these objects will be continued on subsequent pages, repositioning all following report objects on the page down and potentially onto another page. Report objects always maintain their order, even when overflow occurs.

Page Number—A report object used to number the pages on the printed report.

Palette—A Layout menu selection that displays the Palette window. It is used to set the text/border and background colors for an object (or entire page). The buttons at the bottom of the window allow the selection of a border to be applied to an object.

Peak Range—A setting in the *Results Table*, *Calibration Coefficients*, *Calibration Replicate Stats*, and *Calibration Data File Log* properties, used to choose between the display of all peaks in the table or only those peaks in the designated range.

Picture—A report object that allows you to add a bitmap or Windows metafile graphic, such as a company logo, to the template.

Position—A Layout menu selection used to change the position of a selected object relative to other objects in the template. For example, you can place a text object on top of a chromatogram

object. By changing the background color to clear, they can be superimposed. Four options are available to position an object: *to front*, *forward one*, *back one*, and *to back*.

*Print Date/Time—*A report object used to show the date and time the report was printed. The format of the date and time is selected from the object's properties dialog box.

*Print Preview—*A File menu selection that opens the Print Preview window, which displays the report as it will be printed. Useful when designing report templates and reviewing multi-page reports.

*Properties—*A Layout menu selection used to adjust the appearance of report objects. Report objects have properties that affect the information they contain and how it is formatted in the report. Different types of objects have different properties. The Properties dialog box allows you to change the data that is displayed in the object.

*Report Sections—*A View menu selection used to display the Report Sections window. Star Report Writer groups information about your analysis into four sections: Data File, Instrument, Calibration and General.

*Results Table—*A report object used to print a table of the numerical results of peak integration. When the object is active (done by double clicking on it), you can move columns and change column widths by clicking and dragging their headers.

*Revision Log—*A report object that lists the time, date and the Method used for each recalculation of the Data File. Data file Versions are also listed in this object if the Access Control and Audit Trail software is installed on the Workstation.

*Run Description—*A report object that contains fields that identify the Data File. Fields can be individually positioned in the template and can also be disabled from the Properties dialog box.

*Run Log—*A report object that lists the instrument (hardware) parameters as specified in the Method.

*Sample Prep Info—*A report object that lists the rack and vial number, number of injections, and injection volume for the sample.

Save Template—A File menu selection that saves the currently selected template with its existing name. If the template has not been named, the Save Template As... dialog box will be displayed, allowing you to specify a name.

Save Template As...—A File menu selection that allows you to specify a name and location for the currently selected template.

Sections—Same as Report Sections.

Select All—An Edit menu selection that selects all the objects in the template, or all the fields in an object if the object is active.

Select Data File...—A File menu selection that opens the Select Data File dialog box, which you can use to select a Data File for viewing with the currently open template.

Select Permanent Data File—A data source selection used to select a Data File to always be used for this object. Use this function to insert the results or chromatogram of a reference Data File next to the active Data File.

Selected Object—A selected object is outlined with a dotted border. To select an object, click on it. When an object is selected, it can be moved with the mouse, and its menu can be displayed by right-clicking. To cancel a selection, click anywhere outside the selection in the template window.

Show Header / Footer—A Page menu selection that, when enabled (checked), the header and footer portion of the template are displayed for editing. Click and drag the separator bar to adjust the size of the header and footer. When displayed, the main portion of the template is not accessible for editing. Objects placed in the header/footer portion of the template will be printed on every page.

Status Bar—A View menu selection that turns on/off the display of the Status Bar. The Status Bar is located at the bottom of the Star Report Writer window. Moving the mouse cursor over an object on a template displays the object's name in the Status Bar. Moving the mouse over a toolbar item displays that tool's function in the Status Bar.

Template—A file created in Star Report Writer that defines the layout of a custom report. When a Data File is linked to a template,

a report is generated (either on the screen, or in print). Template files end in the extension ".WRT".

Text—A report object that allows the entering and formatting of free-form text. For example, this object can be used to provide additional labels on the chromatogram, to write a summary report, to enter headings, or to enter the company name, address and phone number.

Toolbar—A View menu selection that toggles the display of the Toolbar. The Toolbar items are shortcuts for several menu selections. Clicking and holding a toolbar item displays that tool's function in the Status Bar.

Use Active Data File—An object's data source selection that uses the Data File that was just collected or recalculated (in System Control) or selected from the Open Report or Select Data File dialog box (from Star Report Writer). You can alternatively specify a permanent Data File as an object's data source.

Use Active Channel—An object's data source selection that uses the active detector channel specified in the Method (during automation) or specified when the Data File is selected (in Star Report Writer). To create a two channel report, one object can use the active channel and the second can be a locked channel or a Data File that is selected permanently.

Creating Custom Report Templates

Creating a New Report Template

The Star Report Writer application allows you to create new report templates, view the templates with real Data Files, and print the reports. Star Report Writer may be launched from the Star Toolbar.

*Click on the Star Custom Report Writer button.*
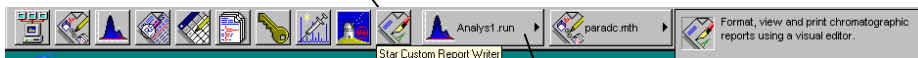
If the Data File you wish to view appears in a QuickLink button, select View Custom Report from the menu.

If you did not select View Custom Report from a QuickLink menu, an empty template is automatically opened in the Report Writer window, otherwise, the custom report associated with the Data File in the Quick Link button is opened. If you wish to create another new template, pull down the File menu.
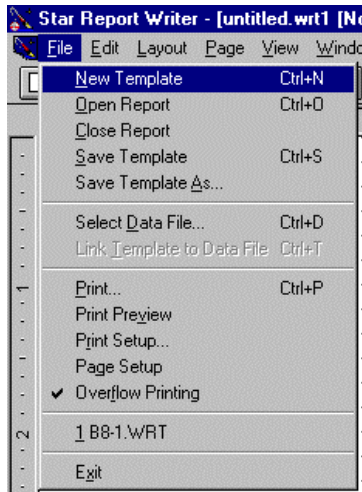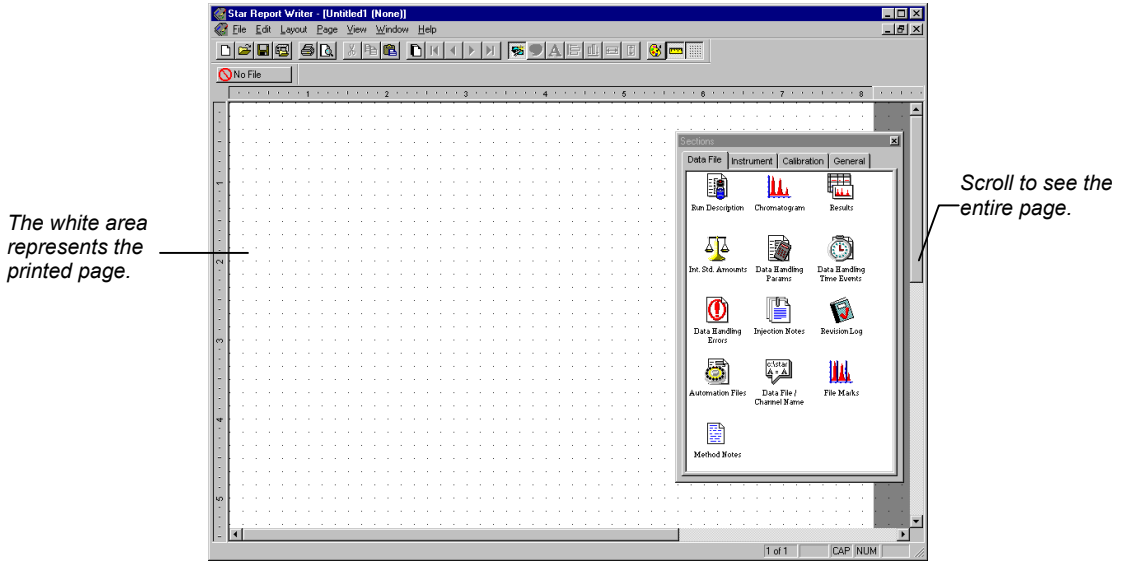
Click on the New Template item.

The template is displayed as an empty page in the main portion of the Star Report Writer window.
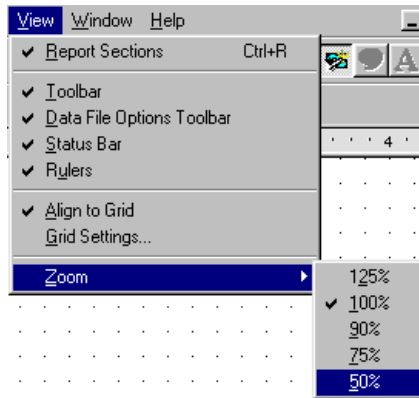
To change the amount of the template page visible, adjust the zoom factor.

The page is resized with the selected zoom factor.

The white area represents the printed page.

Scroll to see the entire page.

Selecting a Data File to View While Building a Template

You may wish to view data from a Star Workstation Data File while you are creating or editing your report template. To select a Data File for viewing, pull down the File menu.
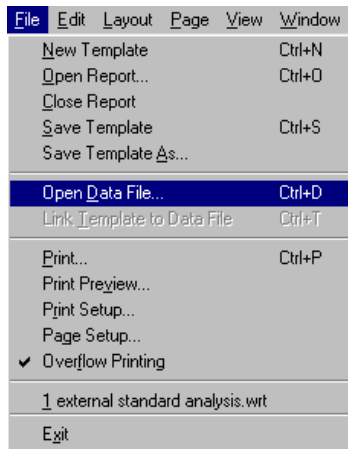
Click on Open Data File.

The Open Data File dialog box is displayed.

Select the Data File.

Select the channel in the Data File whose report you wish to view.
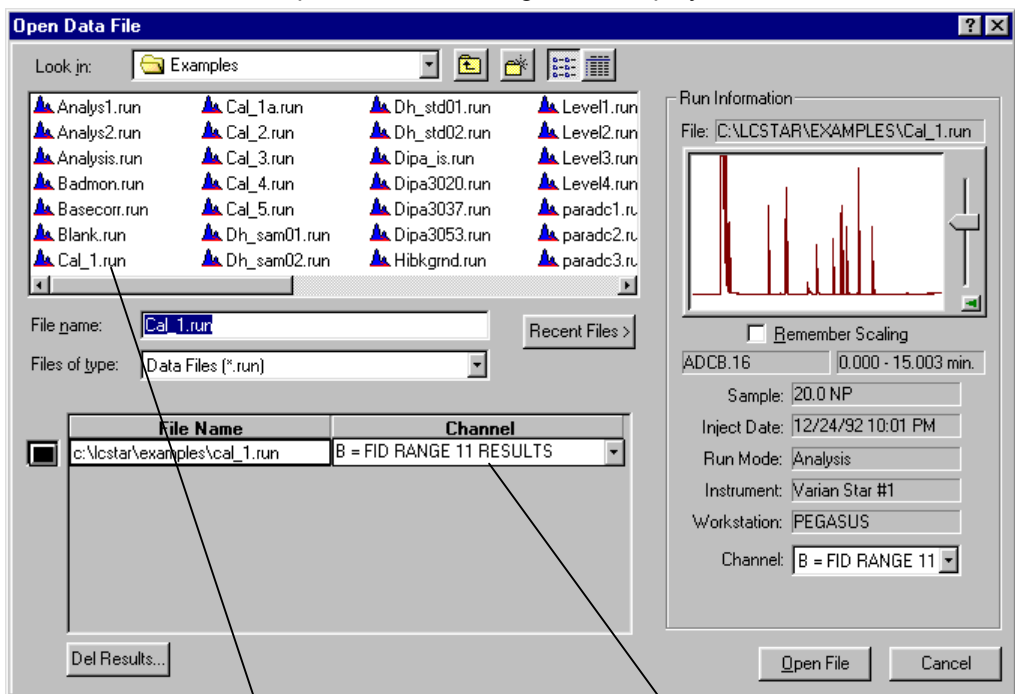
Now, when you place report information into your template, data from the selected Data File will be shown.

Placing Report Information in the Template

Star Report Writer groups information about your analysis into four sections: Data File, Instrument, Calibration and General. Each section contains several *report objects*. A single report object contains a collection of data items that go together. Since the information is already organized in the report objects, designing a report template is easy—you simply place report objects on the page, arrange them to your liking, and alter the format and contents of each object if necessary.

When you started Star Report Writer, the Sections window was displayed. If it is not currently open, select it from the View menu.

Click on Report Sections.
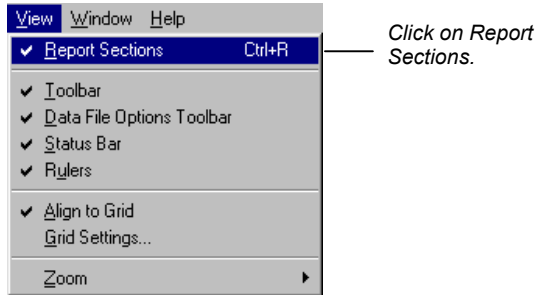
The Sections window is displayed. This window can be sized and moved to a convenient location on the screen.

Click and drag report object icons onto the template.

Click on the tabs to view sections containing report objects.
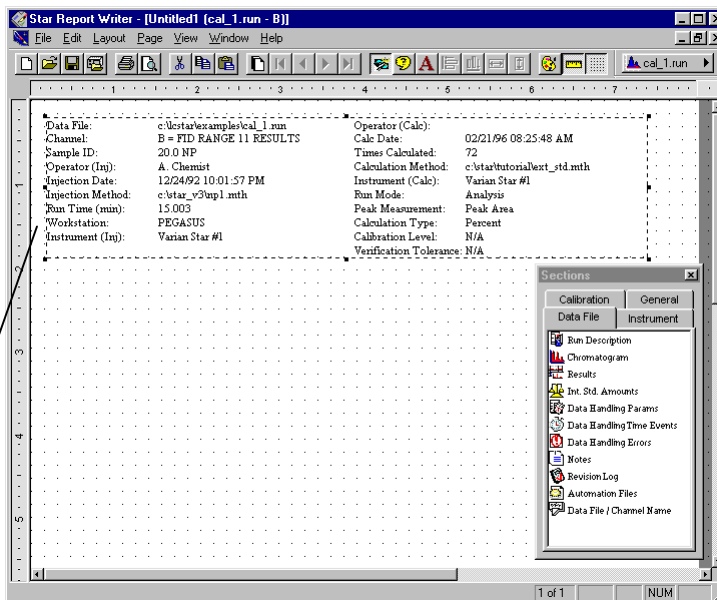
Report objects contain groups of related information, tables, or graphics.

Right-click in the sections window to select how the icons are displayed (large, small or list).
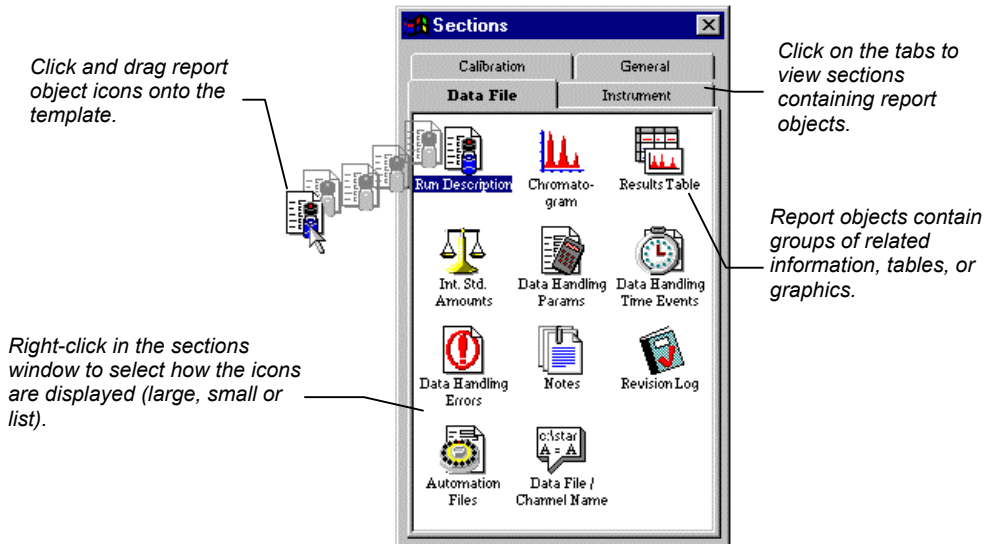
When you drop a report icon onto the template, the report object represented by the icon is displayed.

The object can now be positioned on the template page by dragging it with the mouse.

☆ *Try it out!*

Open the report template named BEGIN.WRT, located in the directory where you installed Star Report Writer. To do so, select *Open Report* from the File menu, then choose BEGIN.WRT from the Template tab. This template illustrates some of the techniques described in this section.

Report Object Contents

The following pages show a report with the default contents of each report object. The objects are called out with the tab name (in the Report Sections window) followed by the object name. For a complete description of each object, refer to the on-line help.

Data File: Data File/Channel Name

Data File: Run Description

Data File: Chromatogram

Data File: Results Table

Data File: Int. Std. Amounts

Data File: Data Handling Params

General: Page Number

General: Border

General: Print Date/Time

k:\9146xx\914639\is-010.run   A = FID RESULTS   09/27/96 03:37:52 PM

Data File: k:\9146xx\914639\is-010.run	**Operator (Calc):** N.GARAS
Channel: A = FID RESULTS	**Calc Date:** 09/27/96 03:17:06 PM
Sample ID: C14-C17	**Times Calculated:** 1
Operator (Inj): N.GARAS	**Calculation Method:** c:\star\is-cal.mth
Injection Date: 09/27/96 03:08:46 PM	**Instrument (Calc):** GC Research
Injection Method: c:\star\is-cal.mth	**Run Mode:** Calibration
Run Time (min): 8.252	**Peak Measure:** Peak Area
Workstation: JUPITER-C	**Calculation Type:** Internal Std.
Instrument (Inj): GC Research	**Calibration Level:** 1
	Verification Tolerance: N/A

mVolts: 50 40 30 20 10

minutes: 1 2 3 4 5 6 7 8

n-Tetradecane, n-Pentadecane, n-Hexadecane, n-Heptadecane

Peak No	Peak Name	Result ()	Ret. Time (min)	Time Offset (min)	Area (counts)	Rel Ret Time	Sep. Code	Width 1/2 (sec)	Status Codes	Standard Used
1	n-Tetradecane	0.0000	6.020	0.000	71764	0.00	BB	1.1		n-Pentadec:
2	n-Pentadecane	Int Std	6.690	-0.000	76649	0.00	BB	1.3	S	
3	n-Hexadecane	0.0000	7.324	0.004	72897	0.00	BB	1.9		n-Pentadec:
4	n-Heptadecane	0.0000	7.934	0.004	38286	0.00	VV	1.4		n-Pentadec:
5		0.0000	7.988	0.000	23863	0.00	VB	7.6		
	Totals	**0.0000**		**0.008**	**283459**					

Status Codes:
S - Internal standard peak

Int. Std. Amounts
Standard Peak Amount:
n-Pentadecane   Amount = 25

Tangent %: 10	**Multiplier:** 1.000
Peak Width (sec): 4	**Divisor:** 1.000
Peak Reject Value: 6000.000	**Unident. Peak Factor:** 0.000
S/N Ratio: 5	**Baseline Offset:** 301 microVolts
Noise Before Run: 70 microVolts	**Detected Peaks:** 13
Noise Used: 70 microVolts	**Rejected Peaks:** 8
Noise Source: monitored before this run	**Identified Peaks:** 4
	Unidentified Counts: 23863

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Objects placed in the page header and footer areas are printed on every page of the report. The header and footer are only shown for editing when *Show Header/Footer* is selected from the Page menu.

Data File: Data Handling Time Events

Data Handling Time Events
Time
(min)   Event
-------   ---------------
 0.000   SR on
 2.400   SR off
 2.512   II on
 2.512   WI 2.0 sec
 3.501   II off
 8.241   WI 4.0 sec

Data Handling Errors
No Data Handling Errors

Data File: Data Handling Errors

Injection Notes: Injected sample is a diluted solution (1:10,000 in hexane) of the Aliphatic
                       Hydrocarbons C14-C17 standard mix.

Calculation Notes:

Data File: Notes

Data File: Revision Log

Revision Log
27-SEP-96 3:17 PM: Calculated results from channel A using method:
    'C:\STAR\IS-CAL.MTH'

Instrument: Detector Info

Sample List (Inj):	c:\star\manual1.smp		
Sequence List (Inj):	c:\star\manual1.seq	Run Time (min):	8.252
Application:	System Control Application	Sample Rate (Hz):	10.000
Version:	Version 4.5	Detector Type:	ADCB (1 Volt)
Sequence List (Calc):	c:\star\manual1.smp	Bus Address:	16
Sample List (Calc):	c:\star\manual1.seq	Total Channels:	2
		Channel Used:	A = FID RESULTS

Data File: Automation Files

Sample Prep Info
Vial: 1   Injection Number: 1   Volume: 1.0 uL

Instrument: Sample Prep Info

Computer Type (Inj):	i486	Computer Type (Calc):	i486
Operating Sys. (Inj):	Windows 3.95 DOS 7.0	Operating Sys. (Calc):	Windows 3.95 DOS 7.0
Coprocessor (Inj):	Yes	Coprocessor (Calc):	Yes
Workstation:	JUPITER-C		

Instrument: Computer Info

k:\9146xx\914639\is-010.run   A = FID RESULTS   09/27/96 03:37:52 PM

Run Log
****
   3400 GC
****
Module Address: 17

GC Injector

Injector Type   : Temperature Programmable
GC Injector Oven On?   : Yes
Initial GC Injector Temperature : 75 degrees C
Initial GC Injector Hold Time   : 0.00 minutes

Coolant To Injector/Aux Valve On?: No
Coolant Timeout   : INFINITE

GC Auxiliary

Injector Type   : Not used
GC Auxiliary Oven On?   : No
GC Auxiliary Description   :

GC Column

Column Oven On?   : Yes
Initial Column Temperature : 75 degrees C
Initial Column Hold Time   : 0.50 minutes
Thermal Stabilization Time : 0.50 minutes

Coolant To Column Valve On?   : No
Coolant Timeout   : INFINITE

GC Column Temperature Program 1

 Final Temperature   : 220 degrees C
 Rate   : 20.0 degrees C / minute
 Hold Time   : 0.50 minutes

GC Column A Parameters

Installed?   : No
Length   : 0.0 meters
Diameter   : 0 microns
Carrier Gas   : Helium

GC Column B Parameters

Installed?   : No
Length   : 0.0 meters
Diameter   : 0 microns
Carrier Gas   : Helium

GC Detector Heater

Module Info Log
=======================
Module 17 Information
=======================
Module
 Description = GC 3400 / SPI injector /FID &FPD detectors
 Serial Number = 10938
 Date Installed = January 11, 1991
 Operator = Nabil Garas
 Date Last Serviced
 Column = DB-1 (30m x 320 um x 0.25 um) Installed October 1, 1

=======================
Module 28 Information
=======================
Module
 Description = 8200/SPME PC-Controlled
 Serial Number = 2229
 Date Installed = 6-29-1995
 Date Last Serviced = 5-12-1996.... new syringe

=======================
Module 16 Information
=======================
Module
 Description = ADC Board
 Serial Number = 509403295
 Date Installed = Not known
 Date Last Serviced = December 15, 1995
 Operator = Nabil Garas

Instrument: Run Log

Instrument: Module Info Log

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Note that the Run Log object on this page has overflowed the page boundary and would be continued on the subsequent page. Refer to for details on how objects overflow their boundaries.

Curve Type:	Linear				Bus Address:	16
Origin:	Force				Channel:	A = FID RESULTS
Calibration Type:	Internal Standard Analysis				Injection Date:	09/27/96 03:08:46 PM
Detector:	ADCB				Calculation Date:	09/27/96 03:17:06 PM

Calibration: Calibration Summary

Peak No	Ret Time (min)	Peak Name	Curve / Origin	X^3	X^2	X	C	R^2	Cal Range	No. of Points	Edit Mode
1	6.020	n-Tetradecane	1 F	0.000e+000	0.000e+000	4.873e-001	0.000e+000	2.819e-001	1-1	2	
2	6.689	n-Pentadecane	Std						1-1	4	
3	7.324	n-Hexadecane	1 F	0.000e+000	0.000e+000	9.843e-001	0.000e+000	9.976e-001	1-1	3	
4	7.934	n-Heptadecane	1 F	0.000e+000	0.000e+000	5.397e-001	0.000e+000	3.676e-001	1-1	3	

Calibration: Calibration Coefficients

Peak No	Ret Time (min)	Peak Name	Curve / Origin	Standard Used	Peak Measure	Level	Amount	Rep No	Response	Avg Response	Std Dev
1	6.020	n-Tetradecane	Not Cali								
			Not Cali								
						1	25.000000	3	8397	40080.7	#
						1	25.000000	4	71764	40080.7	#
2	6.689	n-Pentadecane	Std		Area	1	25.000000	1	91555	115406.0	27.74
						1	25.000000	2	73828	115406.0	27.74
						1	25.000000	3	219592	115406.0	27.74
						1	25.000000	4	76649	115406.0	27.74
3	7.324	n-Hexadecane	1 F	n-Pentadecane	Area	1	25.000000	1	90968	79436.6	78.65
						1	25.000000	2	74445	79436.6	78.65
			Not Cali								
						1	25.000000	4	72897	79436.6	78.65
4	7.934	n-Heptadecane	1 F	n-Pentadecane	Area	1	25.000000	1	11693	41068.6	97.47
						1	25.000000	2	73226	41068.6	97.47
			Not Cali								
						1	25.000000	4	38286	41068.6	97.47

Calibration: Calibration Replicate Stats

Peak No	Ret Time (min)	Peak Name	Level	Replicate	Injection Date	Data File
1	6.020	n-Tetradecane	1	1	Not Calib'd	Not Calib'd
			1	2	Not Calib'd	Not Calib'd
			1	3	09/27/96 12:57:53 PM	c:\star\module16\module16\is-005.run
			1	4	09/27/96 03:08:46 PM	c:\star\module16\module16\is-010.run
2	6.689	n-Pentadecane	1	1	09/27/96 12:14:42 PM	c:\star\module16\module16\is-003.run
			1	2	09/27/96 12:39:31 PM	c:\star\module16\module16\is-004.run
			1	3	09/27/96 12:57:53 PM	c:\star\module16\module16\is-005.run
			1	4	09/27/96 03:08:46 PM	c:\star\module16\module16\is-010.run
3	7.324	n-Hexadecane	1	1	09/27/96 12:14:42 PM	c:\star\module16\module16\is-003.run
			1	2	09/27/96 12:39:31 PM	c:\star\module16\module16\is-004.run
			1	3	Not Calib'd	Not Calib'd
			1	4	09/27/96 03:08:46 PM	c:\star\module16\module16\is-010.run
4	7.934	n-Heptadecane	1	1	09/27/96 12:14:42 PM	c:\star\module16\module16\is-003.run
			1	2	09/27/96 12:39:31 PM	c:\star\module16\module16\is-004.run
			1	3	Not Calib'd	Not Calib'd
			1	4	09/27/96 03:08:46 PM	c:\star\module16\module16\is-010.run

Calibration: Calibration Data File Log

Solvent Gradient Display

If you are using the ProStar/Dynamax HPLC system and you are running a solvent gradient, then plots of the gradient profiles will be superimposed over the Chromatogram. When viewed on the screen or printed on a color printer, each of the solvent profiles will be plotted in a different color. A Solvent % scale will also be displayed at the right-hand side of the chromatogram. The figure below shows an example Chromatogram object that includes solvent gradient profiles.
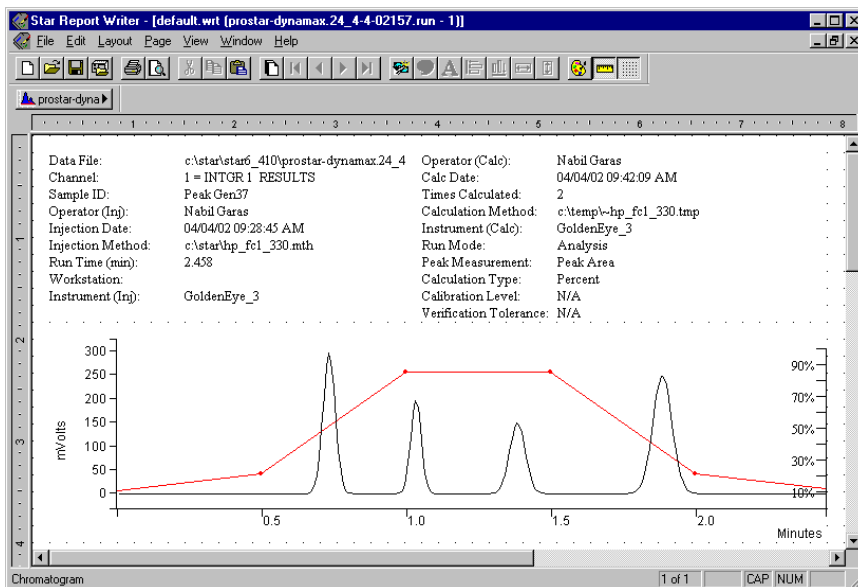
You can turn off the solvent gradient display if you wish. Do this by modifying the Star32.Ini file as follows:

1. Click on the Windows 'Start' button and then select 'Run'. In the 'Open' field, type the following:
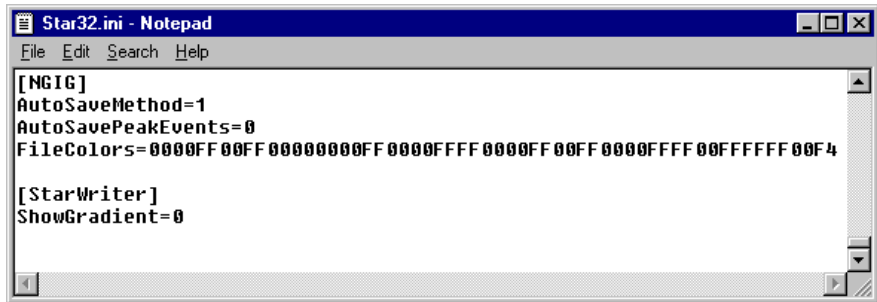
    ```
    Star32.Ini
    ```

The Star32.Ini file will be loaded into the Window Notepad editor.

2. Add a new section to the end of the Star32.ini file by typing the following:

```
[StarWriter]

ShowGradient=0
```

The end of the Star32.ini file should appear similar to the following figure.



```
[NGIG]
AutoSaveMethod=1
AutoSavePeakEvents=0
FileColors=0000FF00FF00000000FF0000FFFF0000FF00FF0000FFFF00FFFFFF00F4

[StarWriter]
ShowGradient=0
```

3. Save the modified Star32.ini file.

Changing Report Object Properties

Report objects have properties that affect the information they display and how it is formatted in the report. Different types of objects have different properties. To change the properties of an object, first select the object by clicking on it with the mouse in the report template. When the object is selected, a dotted border appears around it.

Right click the mouse to display the object's context menu.

Select Properties.
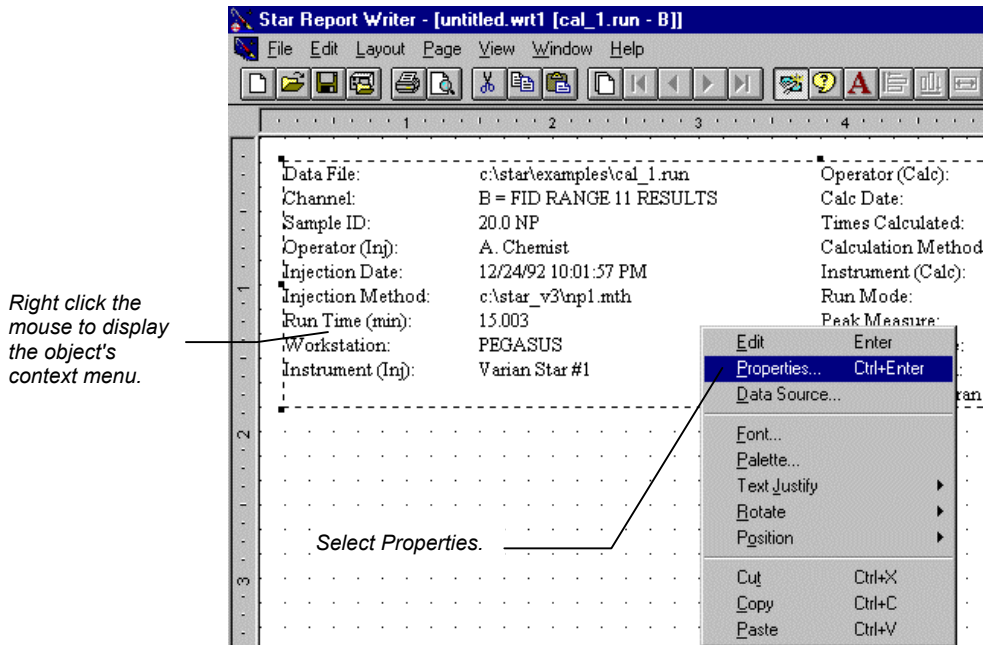
The object's Properties dialog box is displayed. Depending on the type of object, the contents of the Properties dialog box will vary. This is an example of a *container object*, an object that contains individual data fields.

Highlighted fields will be displayed in the object.

Click on fields to toggle their display status.

Click OK for the changes to take effect.

Objects containing tables, such as the Results Table or Calibration Coefficients, have properties related to table formatting.

These attributes affect the entire table.

Select which peaks to display.

Change the position and size of the column header.

Adjust column width, data alignment, and number of digits after the decimal point.

Change the text appearing in the column heading by selecting the field and typing the new name.

Select columns to display in the table.

The chromatogram properties allow you to select the display range and choose plot annotations.

Select how the trace is drawn.

Select plot annotations.

Autoscale, or specify the exact amplitude scaling.

The chromatogram display reflects the current options. You can zoom on this chromatogram to specify plot ranges.

The time axis can be Autoscaled, or specified as a time range.

Select items to include in the chromatogram.

For a complete description of each object's properties, refer to the on-line help.

☆ *Try it out!*

Open the report template named C_GRAM.WRT, RESULTS.WRT or RUN_DESC.WRT. These templates illustrate some of the properties of the Chromatogram object, Results Table object, and the Run Description object.

Moving Items Within a Report Object

Items within certain report objects (such as the Run Description object) can be moved on the page after the object has been placed in the template. Report objects that contain moveable fields are called *container objects*. When editing of an object is allowed, a wide border appears around the active object. Clicking outside the object returns it to its inactive state, but it is still selected.

Activate the object for editing by double-clicking on it.

Fields in a container object can be moved by dragging them with the mouse.

Select multiple fields by dragging a rectangle around them, or by pressing the Shift key while clicking on them.
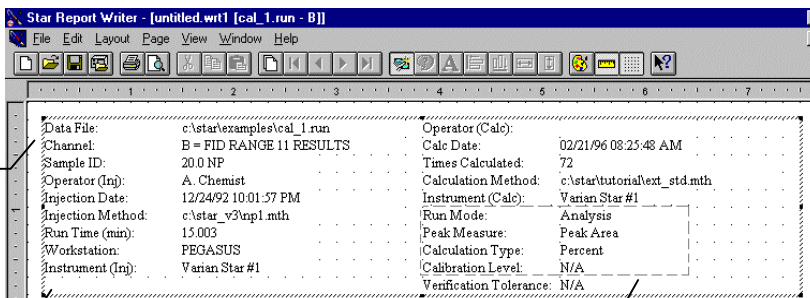
Fields within a container object can be aligned using the alignment options in the Layout menu.
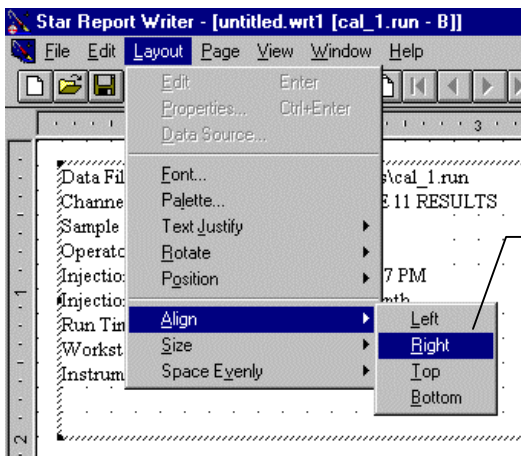
Select the fields to align and choose the desired alignment option.

Interacting with the Chromatogram Object

The chromatogram object's properties can also be changed when it is in the active state. When you zoom in on an area in the chromatogram, the time and amplitude ranges are set to correspond to the visible portion of the plot.
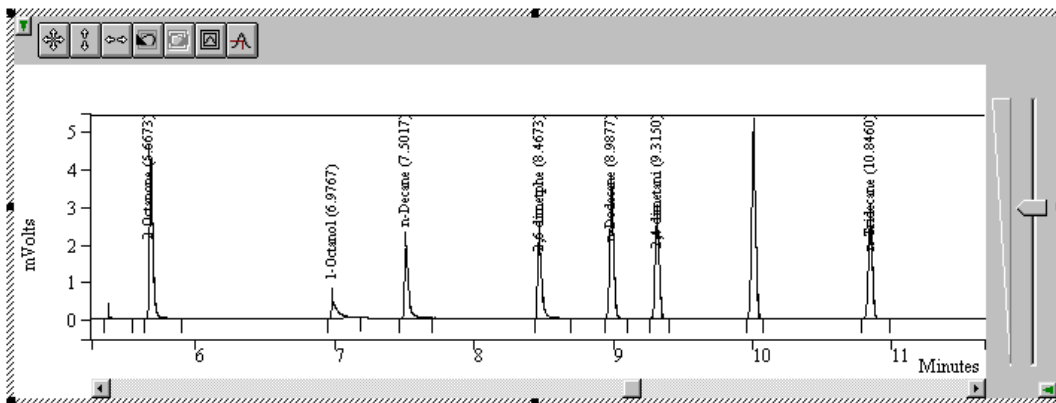
When active, the chromatogram object behaves the same as the chromatogram display in Interactive Graphics, the real-time chromatogram display in System Control, and the chromatogram display in other Star Workstation applications.

Rearranging and Sizing Columns in Table Objects

Objects containing tables such as the Run Description, Calibration Coefficients, Calibration Replicate Stats and Calibration Data File Log can have their table columns rearranged and resized by using the mouse.

Click and drag the column to change its position.

Click and drag between columns to change their width.

Activate the table for editing by double-clicking on it.

Peak No	Peak Name	Result ()	Ret. Time (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	2-Octanone	16.8363	5.663	13909	BB	1.5	
2	1-Octanol	4.5902	6.965	3792	BB	1.8	
3	n-Decane	10.1875	7.497	8416	BB	1.6	
4	2,6-dimetphe	10.7148	8.463	8852	BB	1.7	
5	n-Dodecane	14.6310	8.985	12087	BB	1.8	
6	2,4-dimetani	11.2395	9.312	9286	BB	1.8	
7	n-Tridecane	11.3159	10.843	9349	BB	1.9	
	Totals	79.5152		65691			

When you click outside the object (returning it to its inactive state), you will see that the column position and width changes you made are displayed in the report.

Adding Pages to a Report Template

You may create report templates that contain multiple pages. To add a page to a template, use the Page menu.

Add a new page after the last page in the template…

…or insert a page before the current page.
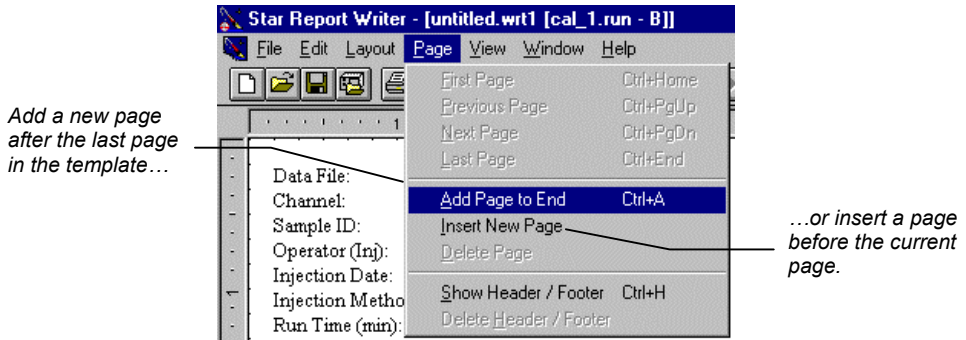
Add report objects to the new page as you did with the previous page. To change which page is currently displayed, use the toolbar navigation buttons.

Go to first page.

Go to last page.

Go to the previous page.

Go to the next page.
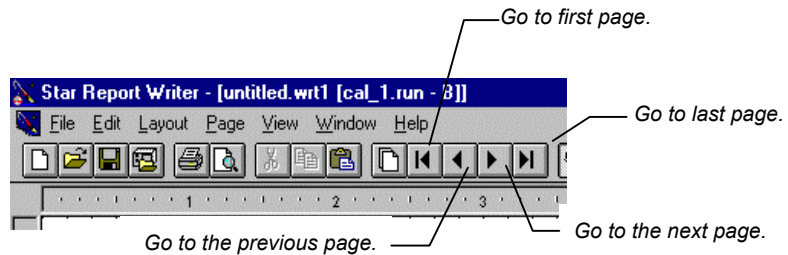
Adding a Header and Footer

You may wish to have information printed at the top and bottom of each page. To do so, add a header and footer to your template.
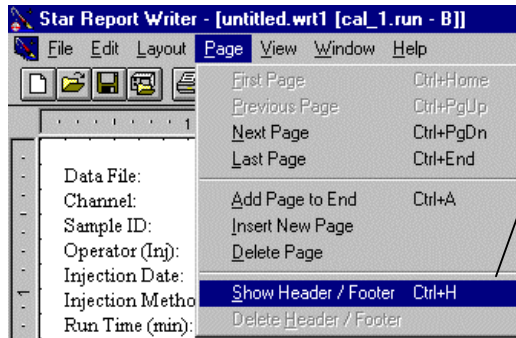
Add and display the header/footer in the template.

The current page is shown, but only the top and bottom of the page is accessible. You may now place report objects in these portions of the page.

Drag and drop objects into the header or footer.

Change the size of the header and footer by dragging the separator bar.
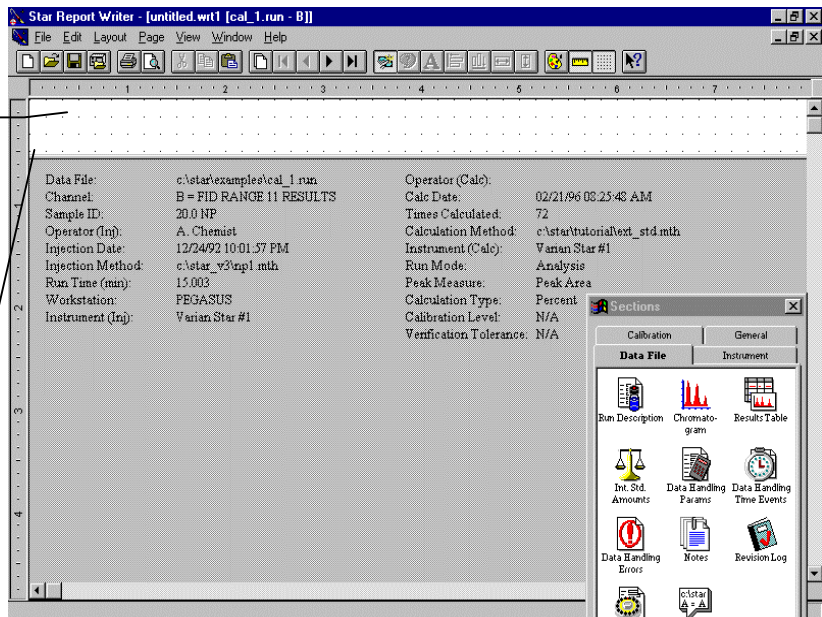
Once you are satisfied with the header and footer, turn off their display to return access to the main portion of the template.

Toggles display of header/footer.
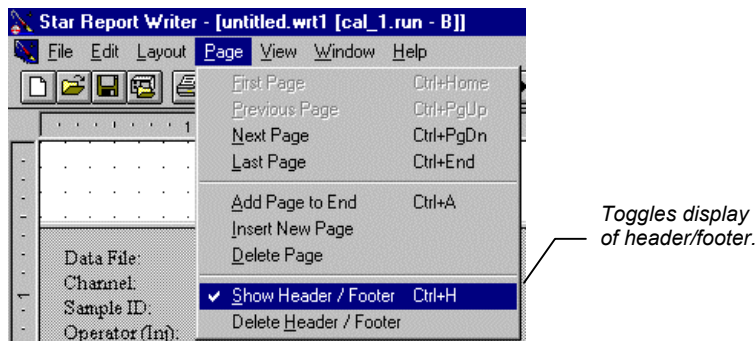
The header and footer are not shown when editing the main part of the report template page. To view the header and footer, select Print Preview from the File menu.

☆ *Try it out!*

Open the report template named H_FOOTER.WRT. This template illustrates how to place information such as print date and page number in a header and footer.

Objects that Overflow their Boundaries

Certain objects' contents may vary in length depending upon the Data File that is applied to the report template. For example, you may add a Results Table to your report template that is sized to fit only 10 peaks, but you may later apply the template to a Data File containing 20 peaks. When an object contains more data than can be displayed within its specified boundaries, it overflows and pushes other report objects on the page down and potentially onto another page.

Data File:	h:\users\rowley\data\tutorial\analys1.ru	Operator (Calc):	NS072393 CCK
Channel:	A = TCD RESULTS	Calc Date:	03/01/96 10:45:42 AM
Sample ID:	First analysis	Times Calculated:	11
Operator (Inj):	NS072393 CCK	Calculation Method:	h:\users\rowley\data\tutorial\analys1
Injection Date:	07/23/93 07:06:20 PM	Instrument (Calc):	Trap analysis #1
Injection Method:	c:\star_v3\brule.mth	Run Mode:	Calibration
Run Time (min):	6.002	Peak Measure:	Peak Area
Workstation:	GCWS_DEVEL	Calculation Type:	External Std.
Instrument (Inj):	Trap analysis #1	Calibration Level:	1
		Verification Tolerance:	N/A
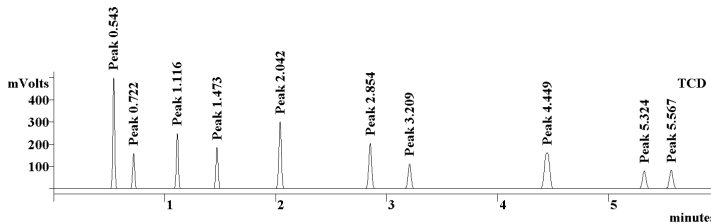
Run Time (min): 6.002
Sample Rate (Hz): 10.000
Detector Type: ADCB (1 Volt)
Bus Address: 16
Total Channels: 2
Channel Used: A = TCD RESULTS

Sample Prep Info
Rack: 1   Vial: 6   Injection Number: 1   Injection Volume: 1.0 ul

With 10 peaks, the results table fits on the first page.

Peak No	Peak Name	Result ()	Ret. Time (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1	Peak 0.543	0.0000	0.543	585453	BB	1.1	
2	Peak 0.722	0.0000	0.722	204377	BB	1.2	
3	Peak 1.116	0.0000	1.116	318067	BB	1.2	
4	Peak 1.473	0.0000	1.473	256003	BB	1.3	
5	Peak 2.042	0.0000	2.042	479012	BB	1.5	
6	Peak 2.854	0.0000	2.854	367344	BB	1.7	
7	Peak 3.209	0.0000	3.209	212678	BB	1.8	
8	Peak 4.449	0.0000	4.449	523497	BB	3.2	
9	Peak 5.324	0.0000	5.324	178827	BB	2.1	
10	Peak 5.567	0.0000	5.567	187667	BB	2.2	
	Totals	**0.0000**		**3312925**			

Status Codes:

When the same template is used with a different Data File, the results table may overflow.

Run Time (min):   16.997
Sample Rate (Hz):   5.000
Detector Type: ADCB (10 Volts)
Bus Address: 16
Total Channels: 2
Channel Used: A = FID 10 Volts RESULTS

<u>Sample Prep Info</u>
Manual injection

Peak No	Peak Name	Result ()	Ret. Time (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		0.2359	0.441	5432	VP	4.2	
2		0.0676	1.418	1557	VV	6.7	
3		0.3518	1.473	8101	VV	2.2	
4		0.4579	1.524	10544	VV	0.0	
5		0.5610	1.599	12920	VV	4.7	
6		0.9455	1.733	21772	VV	2.4	
7		1.0531	1.951	24252	VV	4.3	
8		0.7266	2.069	16733	VV	2.5	
9		0.8445	2.126	19447	VV	3.8	
10		0.2941	2.198	6772	VV	4.0	
11		0.5829	2.280	13423	VV	4.7	
12		1.0341	2.376	23814	VV	2.3	
13		0.3556	2.502	8190	VV	0.0	
14		0.5734	2.587	13205	VV	4.1	
15		0.3565	2.655	8210	VV	0.0	
16		0.4441	2.710	10228	VV	0.0	

Page 1 of 2

The Results Table object overflows to a second page to accommodate additional peaks.

h:\users\rowley\data\2887_a.runA = FID 10 Volts RESULTS   09/26/96 04:03:17 PM

Peak No	Peak Name	Result ()	Ret. Time (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
17		0.4931	2.761	11354	VV	0.0	
18		0.3695	2.817	8508	VV	5.1	
19		0.5252	2.906	12094	VV	2.6	
20		0.9855	2.988	22695	VV	2.3	
	Totals	11.2579		259251			

Status Codes:

Note that report objects only overflow when they are printed, or when you preview the printed report using Print Preview (from the File menu). The template that you edit will not show the overflow behavior (other than the fact that only a portion of the data is visible within the boundary of the object).

You can disable overflow printing by selecting the File menu.

The checkmark indicates that overflow printing is enabled.

Star Report Writer - [untitled.wrt1 [N

| File | Edit | Layout | Page | View | Windo |

New Template   Ctrl+N
Open Report   Ctrl+O
Close Report
Save Template   Ctrl+S
Save Template As...

Select Data File...   Ctrl+D
Link Template to Data File Ctrl+T

Print...   Ctrl+P
Print Preview
Print Setup...
Page Setup
✓ Overflow Printing

1 STANDARD.WRT
2 IS_ANLYS.WRT
3 IS_VERIF.WRT
4 IS_CALIB.WRT

Exit

Toggle overflow printing by selecting this menu item.

☆ *Try it out!*

Open the report template named OVERFLOW.WRT. This template illustrates how objects overflow onto subsequent pages.
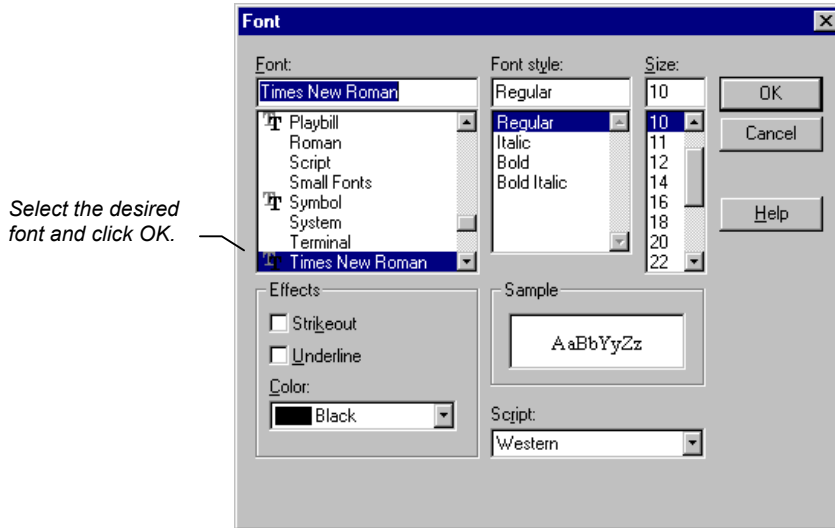
Changing an Object's Text Properties

You can change a report object's text style, color, justification, and in some cases, the orientation of the text.

Star Report Writer provides a full range of fonts from which to select. It is easy to format different report objects or fields within a report object to be printed in different fonts. To change the font or color for all text items in a report object, select the object by clicking on it, then right click to get the object's menu.

Select font…
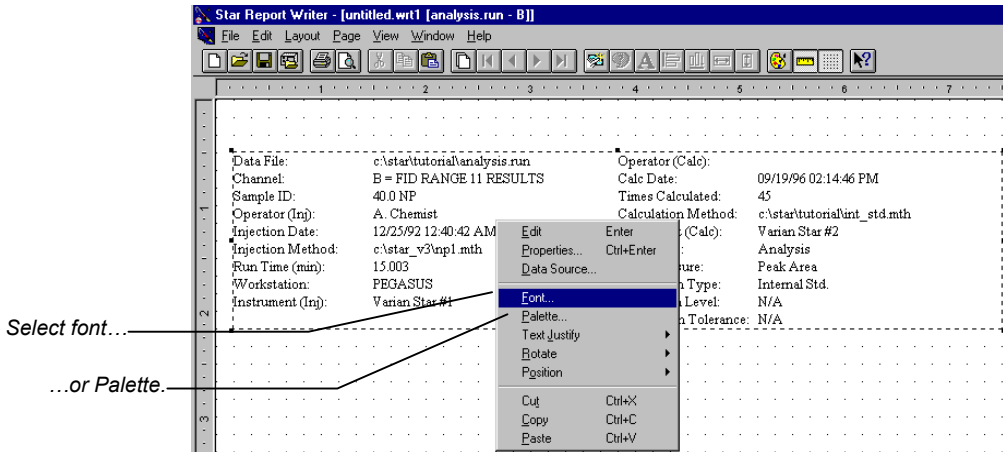
…or Palette.

If you selected Font, the Font dialog box is displayed.

Select the desired font and click OK.

If you selected Palette, the Palette window is displayed.

Change the object's background color.

Choose a border style for the object.

Palette

Text/Border Color:

Background Color:

Clear

Border Style:

Change the text and border color. This also affects a chromatogram object's trace color.

A clear background allows you to place text or chromatogram objects over other objects without obscuring them.
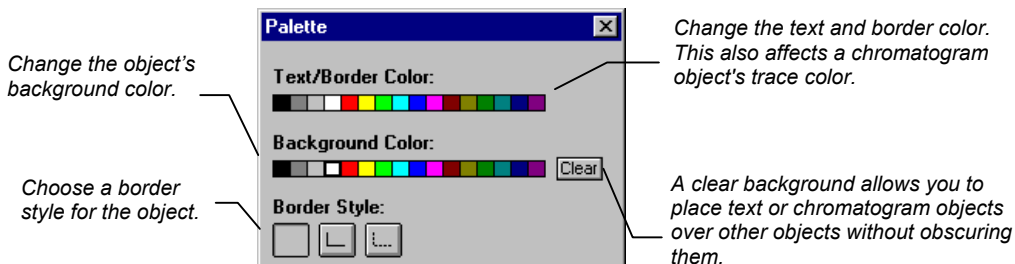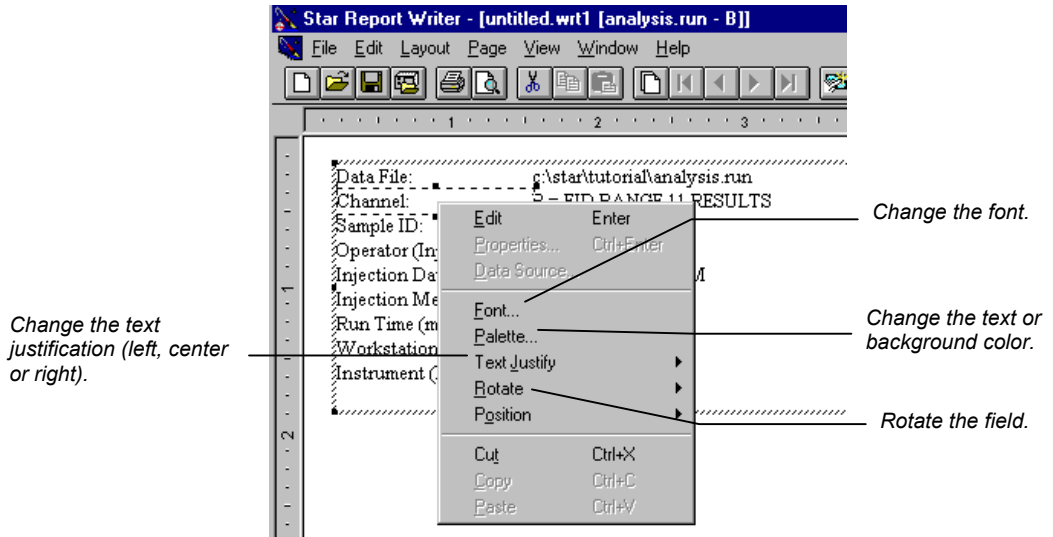
☆ *Try it out!*

Open the report template named RUN_DESC.WRT. This template uses a container object to illustrate font selection and palette features.

You can change the text properties of individual fields within a container object (one that contains separate text fields). Activate the object by double-clicking on it.

Star Report Writer - [untitled.wrt1 [analysis.run - B]]

File   Edit   Layout   Page   View   Window   Help

Data File:	c:\star\tutorial\analysis.run
Channel:	B = FID RANGE 11 RESULTS
Sample ID:	40.0 NP
Operator (Inj):	A. Chemist
Injection Date:	12/25/92 12:40:42 AM
Injection Method:	c:\star_v3\np1.mth
Run Time (min):	15.003
Workstation:	PEGASUS
Instrument (Inj):	Varian Star #1

Select one or more fields.
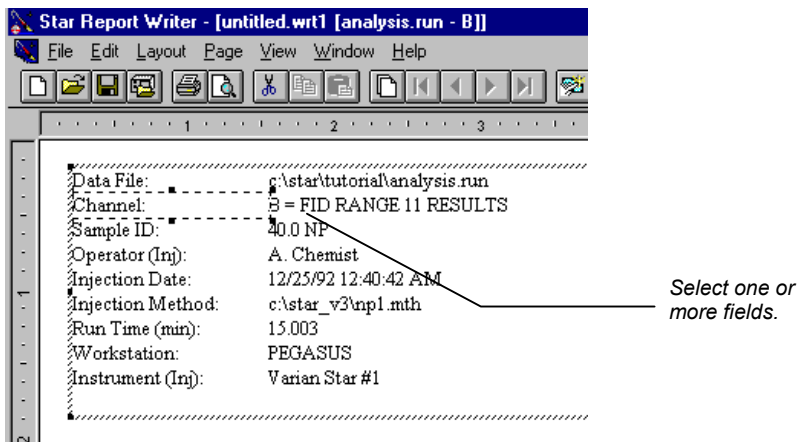
Right click to get the field's menu.

Change the font.

*Change the text justification (left, center or right).*

Change the text or background color.

Rotate the field.

Adding Borders, Background Color, and Graphics

Report objects can be displayed with a border surrounding them, and their background color can be specified.

To change the border or background color for a report object, select the object by clicking on it, then right click to get the object's menu.
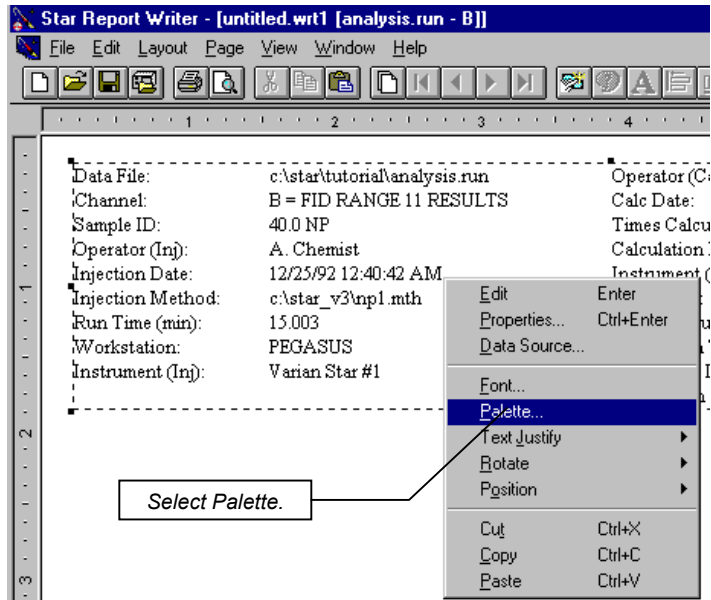

The Palette window is displayed. Refer to *Changing an Object's Text Properties* on page 38 for a description of the Palette window.

You can similarly add borders and background color to individual fields within a container object by activating the object, selecting the fields, right-clicking on them, and selecting the Palette menu item.

The Border object, found in the General tab in the Report Sections window, allows you to place a border around groups of report objects or add separator lines between other report objects in your template.

Drag the border icon onto the template.
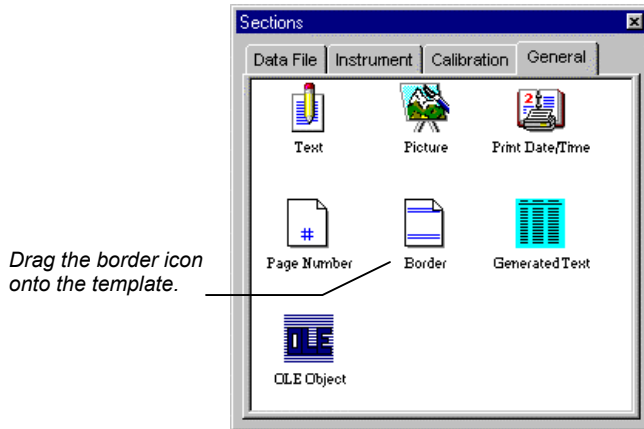
The border object can be resized by clicking and dragging any of the corners. Change the line style by selecting the object's properties menu by right-clicking on the object.

Select the desired style from the list.
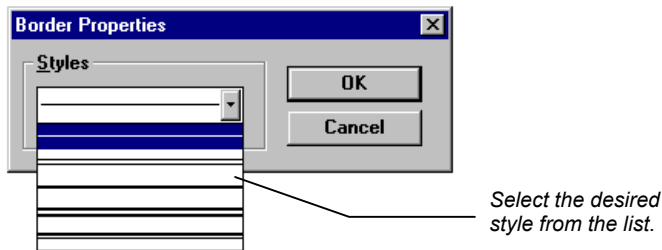
Borders can be rotated and have their color changed as with text objects.

You may wish to add graphics images to your report. For example, you may wish to insert your company logo in the page header or a scanned photograph of the operator into the report. Graphic images can be added by placing the Picture object in the template.

Drag the Picture icon onto the template.
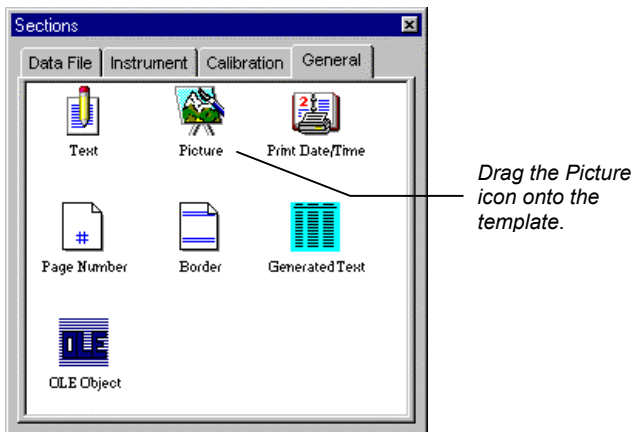
When you drop the object onto the template, you are prompted for the name of the graphics file you wish to place.

Select the graphics file to open.
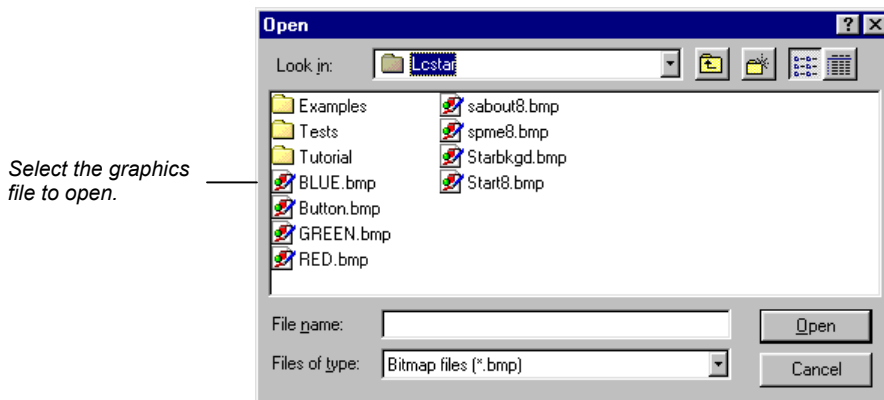
You may paste a graphic image into your template from the Windows clipboard. This can also be used to paste a chart created in a spreadsheet program, a chemical structure created in a drawing program, or other images created in Windows applications that support use of the clipboard.
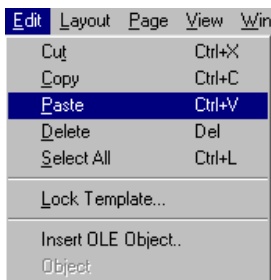
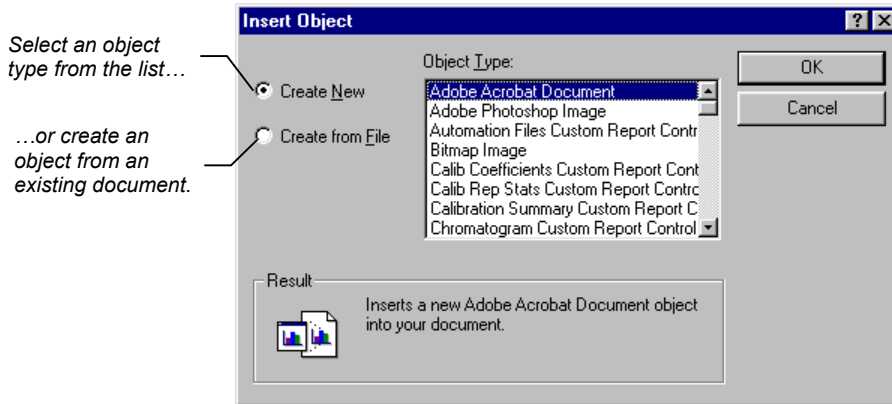*The contents of the clipboard will be inserted into the template.*

Inserting OLE Objects into your Template

Star Report Writer supports the insertion of OLE (*Object Linking and Embedding*) objects into report templates.
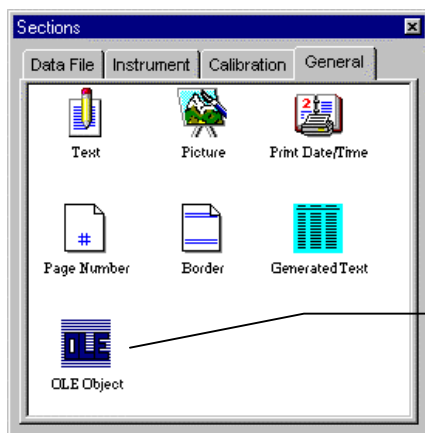
Drag the OLE Object icon onto the template.

When you drop the object onto the template, you are prompted for the name of the OLE object you wish to place.

Insert Object

Object Type:
- Adobe Acrobat Document
- Adobe Photoshop Image
- Automation Files Custom Report Contr
- Bitmap Image
- Calib Coefficients Custom Report Cont
- Calib Rep Stats Custom Report Contro
- Calibration Summary Custom Report C
- Chromatogram Custom Report Control

○ Create New
○ Create from File

OK

Cancel

Result

Inserts a new Adobe Acrobat Document object into your document.

Once inserted, an OLE object allows you to edit its contents as if you were running the application that created the document. This "in-place editing" allows you, for example, to modify a drawing object after it has been added to your report template.

Note: Not all OLE objects conform strictly to Microsoft's specifications for the OLE software interface. When using a report template with an embedded OLE object, it is recommended that you view and print the report prior to automated report generation.
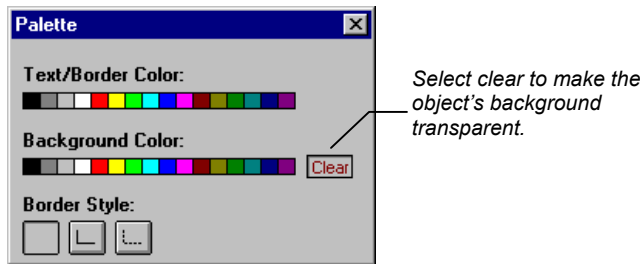
Overlapping Report Objects

You may wish to overlay two report objects without having one object cover up information on the other. This is useful, for example, if you wish to overlay two chromatograms, or if you wish to add text annotation to a chromatogram.

To do so, change the background color of the object that will appear "on top" by selecting the Palette window by right clicking on the object.

This text object has been selected.

Select Palette.
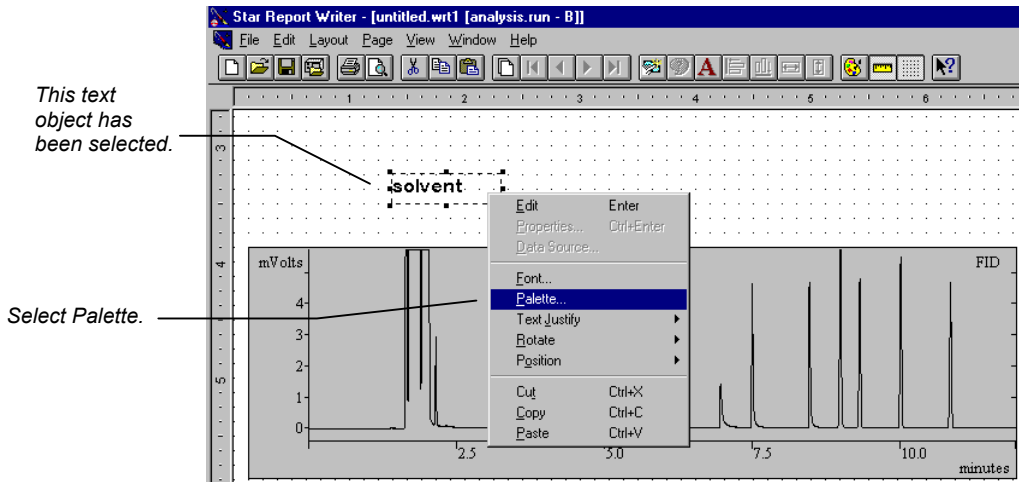
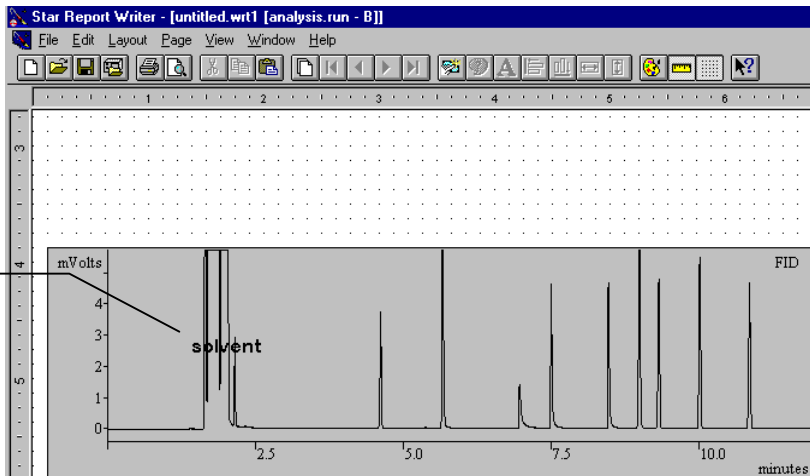The Palette window will be displayed.

Select clear to make the object's background transparent.
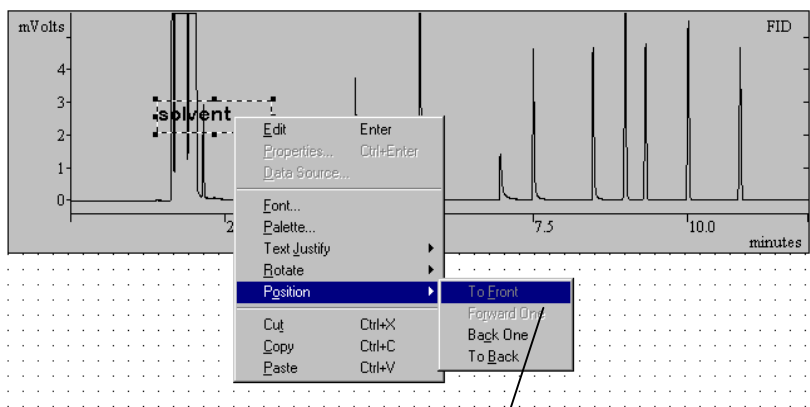
Now when you place this object on top of the other object, the other object will still be visible.

The text object appears on top of the chromatogram.

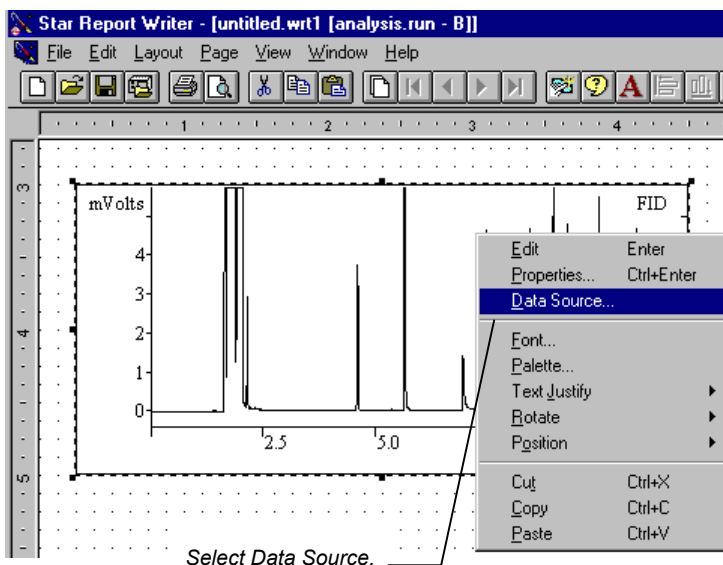To change which object is on top, right click on the topmost object.

Change the position of the overlapped objects.
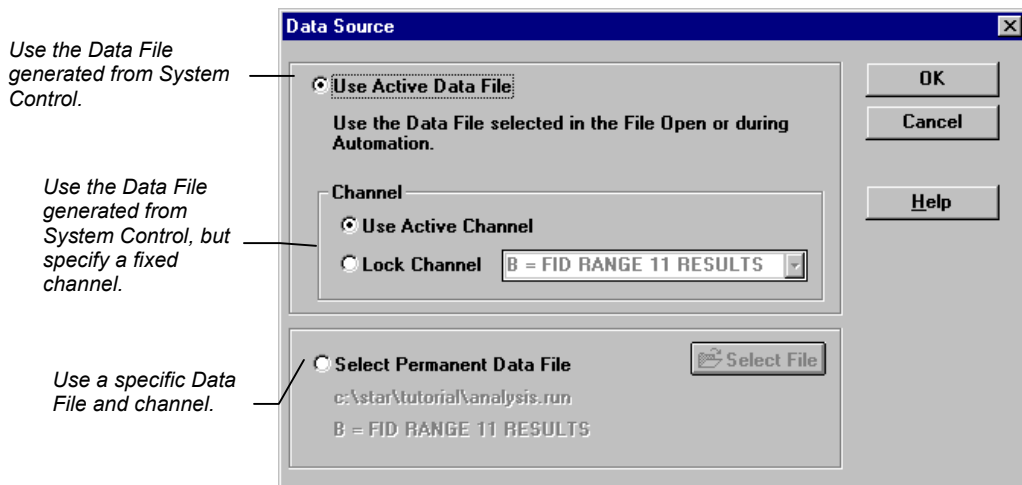
Specifying the Report Object's Data Source

Normally, when you print reports during automated injections or recalculations, a report object's data is obtained from the Data File currently being processed by System Control. You may, however, specify a fixed file as the data source for a report object. This is useful, for example, if you wish to show the chromatogram plot from a standard run in addition to the chromatogram plot from the current run.

Report templates are specified for each detector channel in the Method Builder, therefore each channel may have its own report. The default detector channel for a report object is the same as the channel specified in the Method. You may also lock a report object's detector channel to something other than the default. This is useful, for example, if you wish to show chromatograms for both channel A and channel B of an ADC board on the same report.

To change an object's data source, select the object by clicking on it. Then right click to display the object's menu.

Select Data Source.

The Data Source dialog box is displayed.

Data Source

◉ **Use Active Data File**

Use the Data File selected in the File Open or during Automation.

Channel

◉ **Use Active Channel**

○ **Lock Channel** | B = FID RANGE 11 RESULTS |

○ **Select Permanent Data File**   📂 **Select File**

c:\star\tutorial\analysis.run

B = FID RANGE 11 RESULTS

OK

Cancel

Help

☆ *Try it out!*

Open the report template named MULTI_CH.WRT. This template illustrates how to create a multi-channel report by fixing the channel number for a chromatogram object and results table. The template REFCGRAM.WRT demonstrates how to create a report that shows a reference chromatogram in addition to the chromatogram for the current run by specifying the reference chromatogram's Data File in the chromatogram object's data source.

Specifying a Password for a Report Template

Template files can be locked with a password for editing and saving. To lock a template, pull down the Edit menu.

Select Lock Template.

The Lock Template dialog box is displayed.

Check this box to enable locking.

Enter a password for this template.
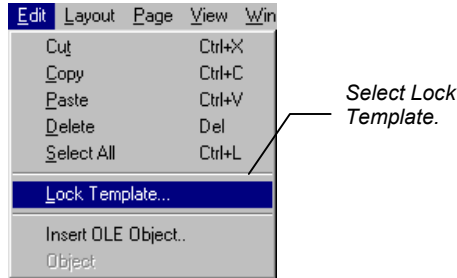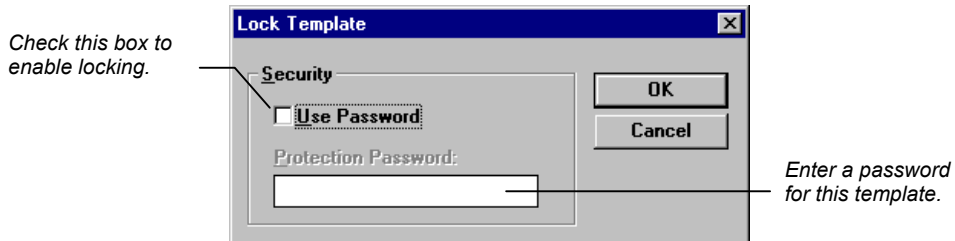
If you have not saved the template, you will be prompted to do so.

Once the template is locked, fields cannot be moved, added or changed, and the template file cannot be saved without changing the name. If you save a locked template under a different name, the new template will not be locked.

To unlock a template, pull down the Edit menu.

The checkmark indicates the template is currently locked.

Select this item to unlock the template.

The Unlock Template dialog box is displayed.

Enter the password used when locking the template.
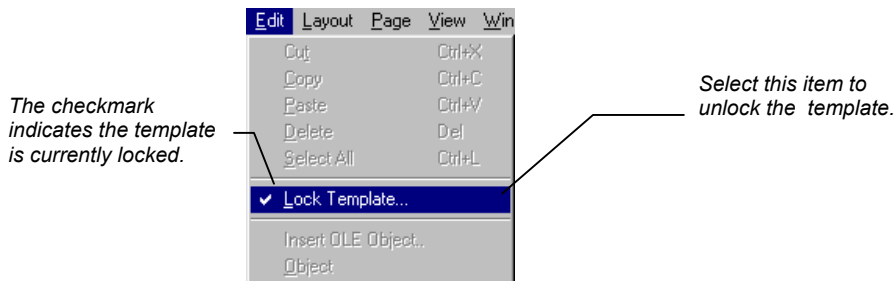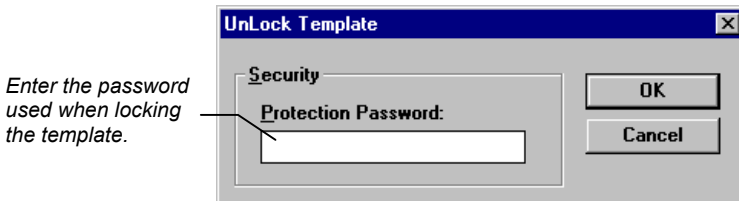
Interactive Viewing and Printing of Reports

Opening an Existing Report Template and Data File

The Star Report Writer application allows you to view and print reports made by associating a report template with a Data File. Star Report Writer may be launched from the Star Toolbar.

Click on the Star Custom Report Writer button.

If the Data File you wish to view appears in a QuickLink button, select View Custom Report from the menu.
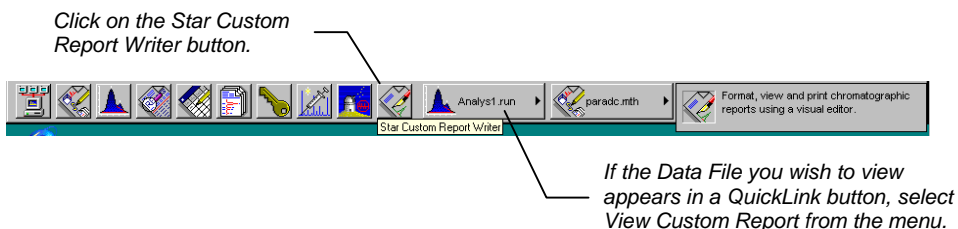
If you clicked on View Custom Report from a QuickLink menu, the custom report associated with the Data File in the Quick Link button is opened. If you clicked on the Star Custom Report Writer button in the Star Toolbar, an empty template is automatically opened in the Report Writer window.

To open an existing report template and Data File, pull down the File menu.

Click on the Open Report item.

The Open Report dialog box is displayed.

Click on the Template tab to choose an existing template file.

Select the Data File you wish to view.

Select this to load the template used with this Data File when run from System Control.

Open				☒
Data File:				
Template:				

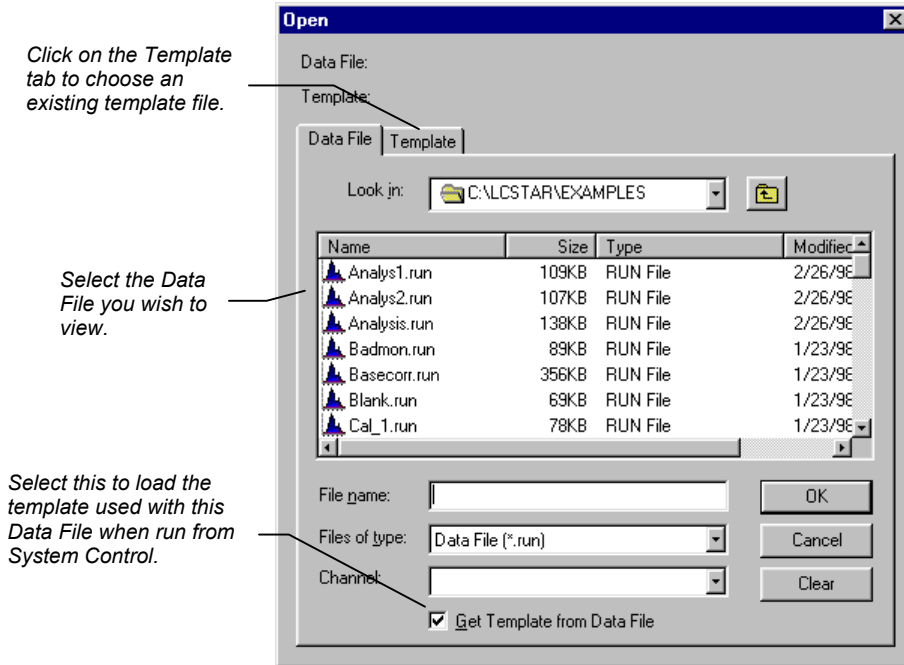**Data File** | Template

Look in: 🗀 C:\LCSTAR\EXAMPLES ▾ 🔼

Name	Size	Type	Modified ▲
Analys1.run	109KB	RUN File	2/26/98
Analys2.run	107KB	RUN File	2/26/98
Analysis.run	138KB	RUN File	2/26/98
Badmon.run	89KB	RUN File	1/23/98
Basecorr.run	356KB	RUN File	1/23/98
Blank.run	69KB	RUN File	1/23/98
Cal_1.run	78KB	RUN File	1/23/98 ▾

File name: | | OK

Files of type: Data File (*.run) ▾ | Cancel

Channel: ▾ | Clear
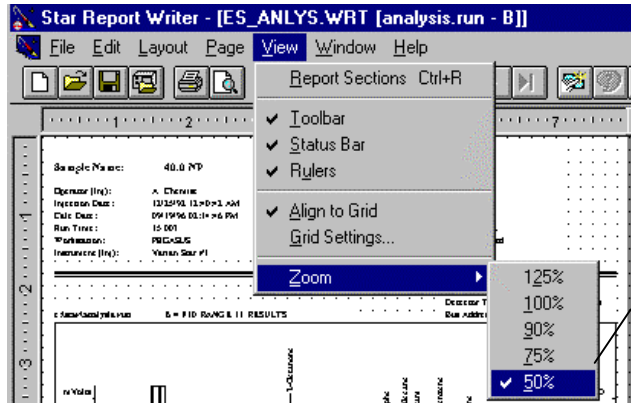
☑ Get Template from Data File

The report will be displayed in the Star Report Writer window.

Viewing the Report

After you have opened the Data File and template, you may view the report on the screen.

Use the scrollbars to view the entire page, or change the zoom amount using the Zoom item in the View menu.

To change the amount of the template page visible, adjust the zoom factor.

If the template contains multiple pages, use the navigation buttons on the toolbar or the corresponding items in the Page menu.
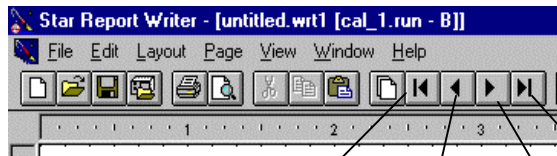
Go to last page.

Go to first page.

Go back one page.

Go forward one page.

Note that this view of the report does not show objects that have overflowed their boundaries. Refer to page 60 for details on how to view the report exactly as it will be printed.

Performing Operations on the Data File

The Quick Link button, available in the Data File Options toolbar, provides access to various operations on the Data File currently being displayed in Star Report Writer.

The Quick Link menu shows options available on the Data File.
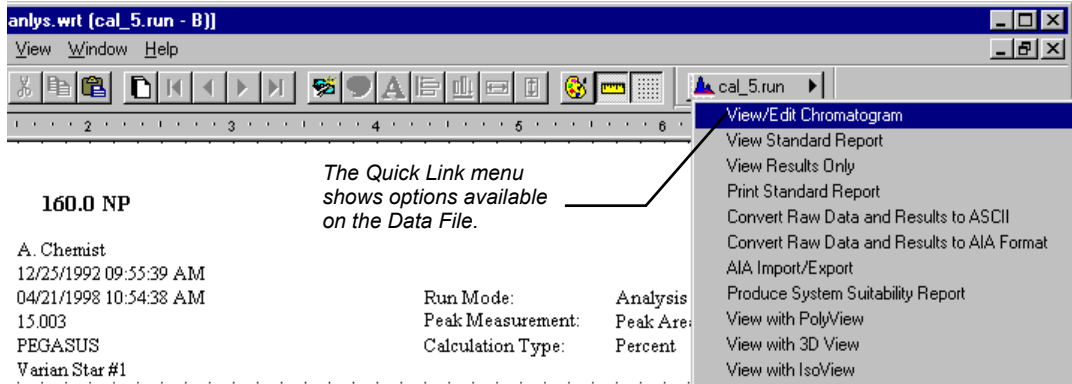
You may use the View/Edit Chromatogram option, for example, to modify data handling parameters that affect results. After you perform a recalculation on the detector channel being displayed in the report, the report is automatically updated to reflect the changes.

Applying a Report Template to a New Data File

If you wish to view a different Data File using the current template, pull down the File menu.

Click on Open Data File.

The Open Data File dialog box is displayed.

Select the Data File.

Select the channel in the Data File whose report you wish to view.
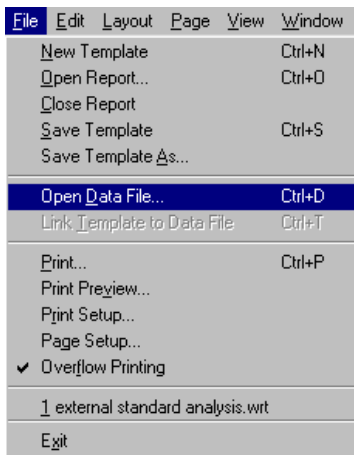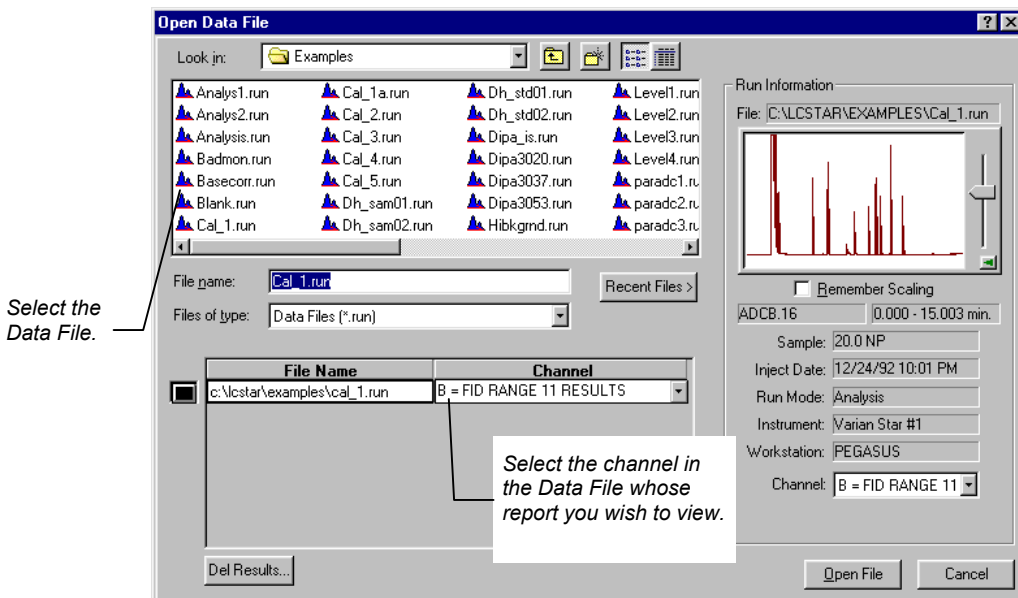
Now the current template contains data from the selected Data File.

You may link the current template to the current Data File so that you can more easily load them together from the Open Report dialog box (see page 53). To do so, pull down the File menu.
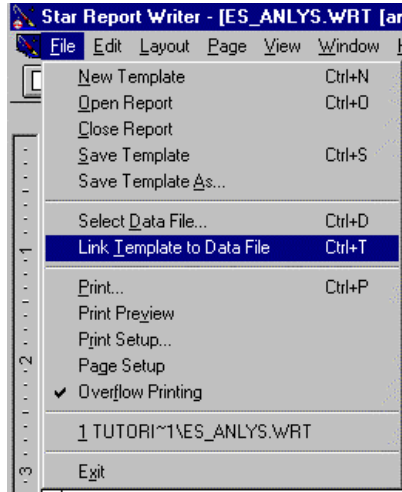
Select Link Template to Data File.

The Link Template to Data File dialog box will be opened.

Choose the run type that you want associated with this template.
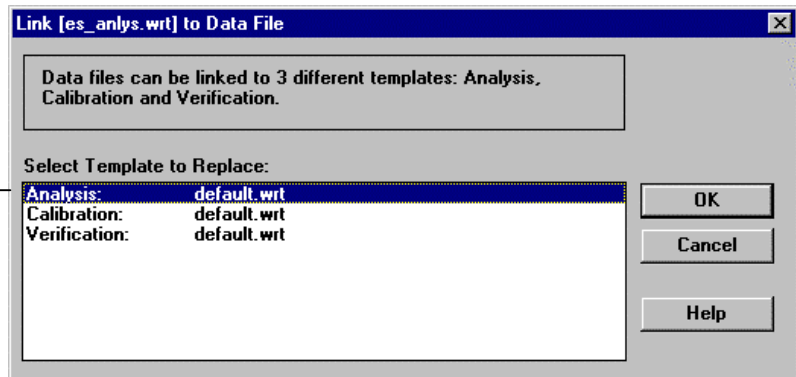
Previewing the Printed Report

The view of the report in the Star Report Writer main window shows all of the report objects and their contents, but it does not show objects that may have overflowed their boundaries (see page 35).
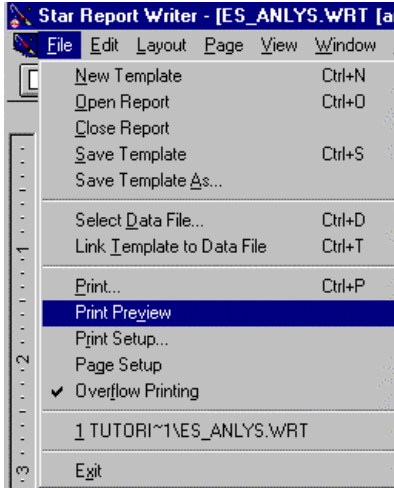
To see the report exactly as it will be printed, select Print Preview from the File menu.

The Print Preview window is shown.

Print the report.

View the next page of the report.

Show two adjacent pages.

Zoom in to see more detail.

Return to the main window.
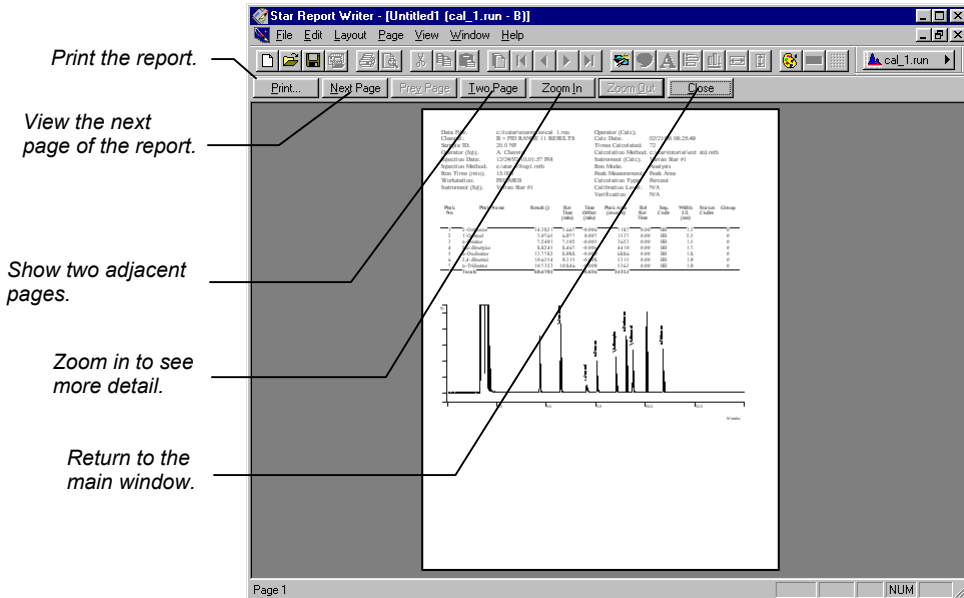
Printing the Report

To print the report from the main Star Report Writer window, pull
down the File menu.
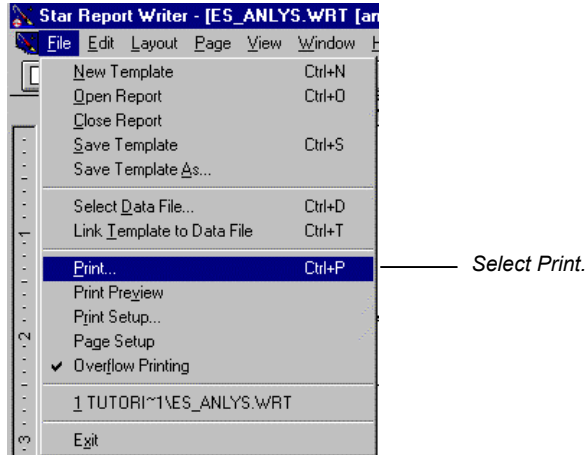
Select Print.

The Print dialog box is displayed.

*Choose the page
range. This range
refers to pages in
the template, not
necessarily pages
in the printout.*

*Click on OK to
print the report.*

*Change the
printer settings.*
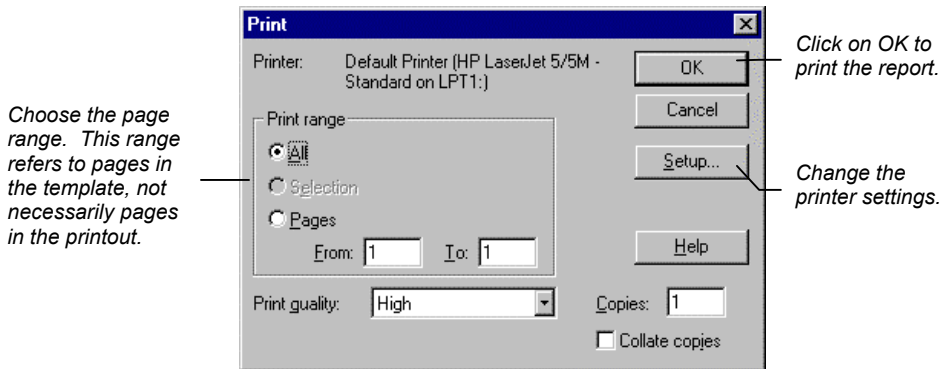
The report is printed with the information from the selected Data File
shown in the template. If any of the report objects are smaller than
the data that fills them, and if the Overflow Printing option is checked
in the File menu, then Star Report Writer may print extra pages.

Specifying Report Templates in Methods

Creating a Star Report Writer Method Section

Once you have created report templates in Star Report Writer, you can use them to automatically generate reports after each run performed in System Control. To do so, add a Star Report Writer section to the Method that you will use in System Control.

Method Builder may be launched from the Star Toolbar.

Click on the Method Builder button.

If the Method you wish to edit appears in a QuickLink button, select View/Edit Method from the menu.
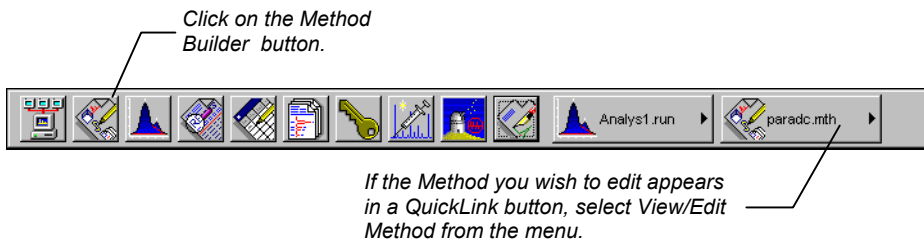
The Method Builder is opened. Open the Method file that you will use from System Control to perform automated injections, recalculations, or print jobs.

Create a new Post-Run Method section by clicking on the Add Post-Run Processing button on the Method Builder toolbar, or by pulling down the File menu.

File	Edit	View	Window	Help	
New					Ctrl+N
Open...					Ctrl+O
Close					
Save					Ctrl+S
Save As...					
Set Password					
✓ Prompt for Action at Startup					
Print...					Ctrl+P
Print Preview					
Print Setup...					
Add Module Control...					
Add Post-run Processing...					
Delete Section...					
Import Section...					
1 Analysis.mth					
2 startup1.mth					
3 C:\LCSTAR\...\cal_1a-b.mth					
4 C:\LCSTAR\...\tox_003-Rear.mth					
Exit					
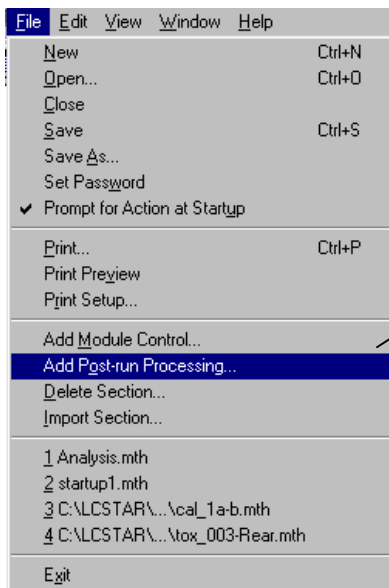
Click on Add Post-Run Processing to create a new section.

The Star Assistant Wizard is displayed.

Select detectors for post-run processing

Select the detector(s) for which you want to add post-run processing to the method. Then click Next to continue.

Detector Modules

☑ ADC Board at address 16

Select the detectors whose data you wish to report.

Select All

< Back   Next >   Cancel
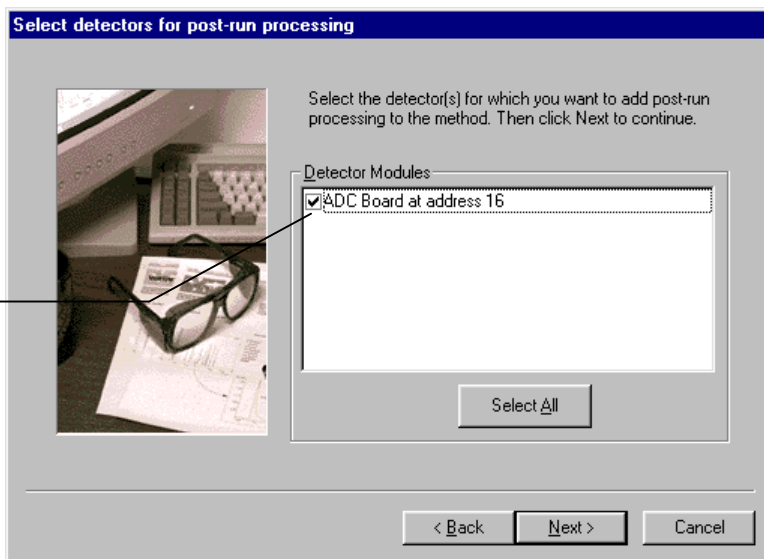
After selecting the detector(s) whose data you wish to report, you will be prompted for the detector channel(s) and post-run actions.

Each channel can be reported separately.

All post-run actions are listed. Make sure Star Custom Report Writer is selected.
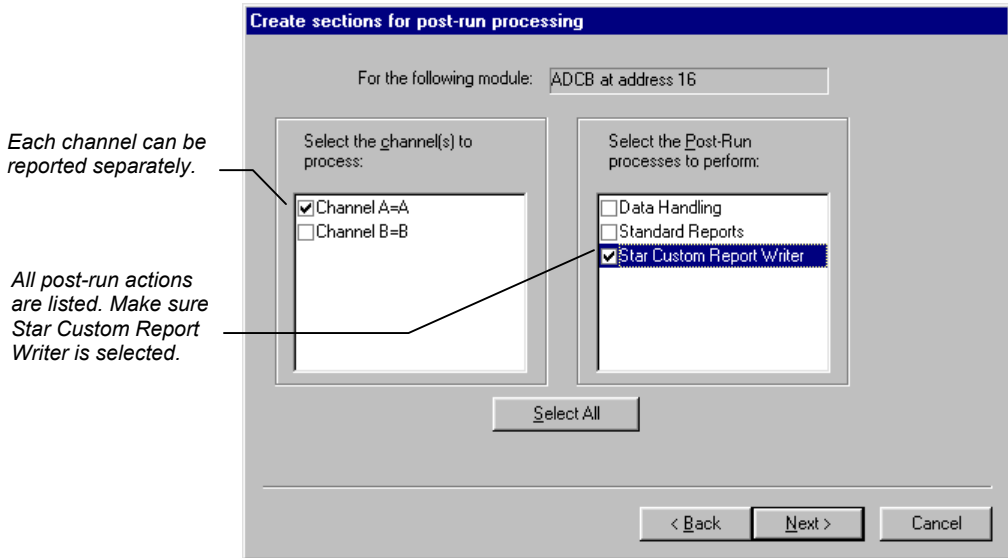
A Star Report Writer section is created corresponding to the selected detector(s) and channel(s).

The Star Report Writer Method section window is displayed on the right panel of the Method Builder window when you click on the corresponding entry in the left panel.

Templates associated with each run type are listed here.
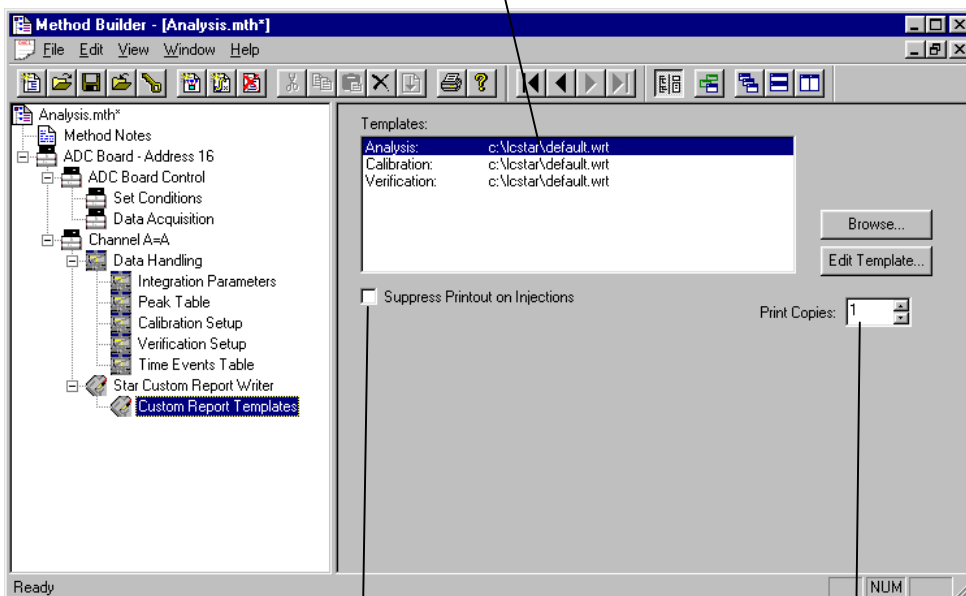
Check here if you only want reports generated after recalc and print actions (not injections) in System Control.

You can print multiple copies of the report.

Specifying Report Templates for Analysis, Calibration and Verification Runs

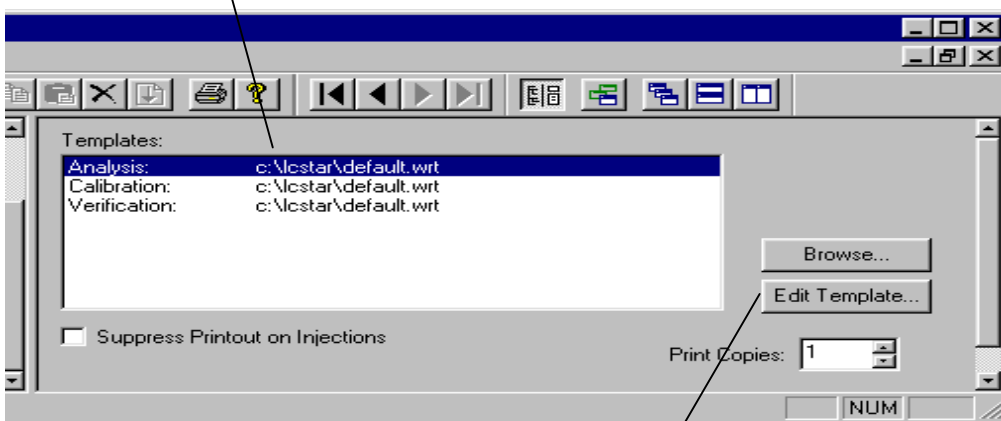You are able to specify different templates for each type of run: Analysis, Calibration or Verification. This allows you to have custom reports specific to the sample type. For example, you may wish to include different information in your report for a calibration sample versus an unknown.

Select the run type.

Select the corresponding template by browsing.

Make sure that the templates that you specify in the Method are accessible from the computer running System Control. If you are referring to report templates located on a network server, make sure the computer running System Control has access to the network directory and that the drive mappings are the same.

Editing the Report Template from the Method Builder

You may wish to review or edit the templates that you specify in the Method Builder. To do so, select the template you wish to edit.

Click on Edit Template to invoke Star Report Writer with the specified template.
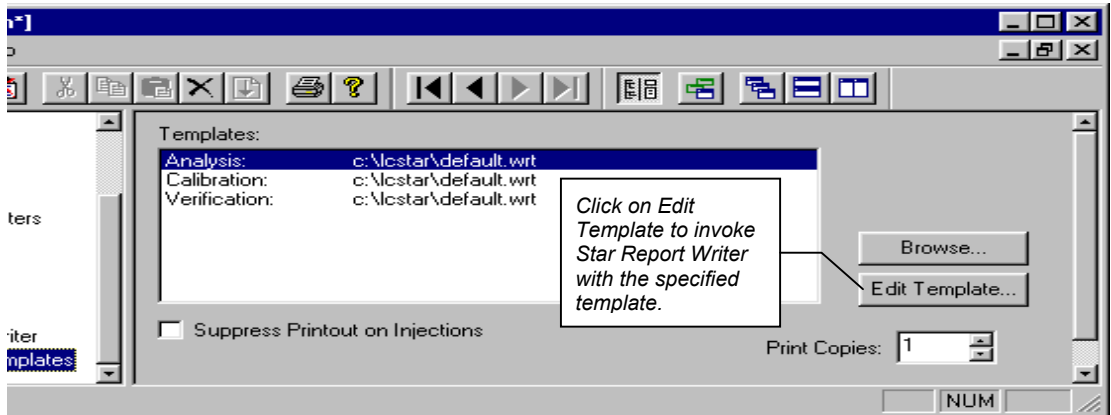
Star Report Writer will be opened showing the template you specified. You may change the template, select a Data File to view, and save the template if you wish. The Method only refers to the template by name (it does not include the contents of the template in the Method file), so changes made to the template in Star Report Writer will be used during automated report printing.

Automatically Generating Reports

Printing Reports from System Control

When Star Report Writer is installed, report generation occurs automatically after each injection, recalculation or print action in System Control. Make sure that the Method you are using contains Star Report Writer sections corresponding to the detectors in your instrument (see page 63).

Disabling Printing During Automation

If you wish to stop report printing during automation, disable automated printing from System Control.

A checkmark here indicates that automated report printing is enabled.
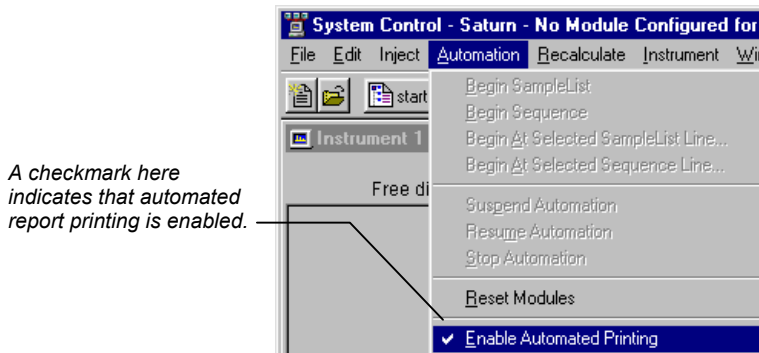
Suppressing Printouts on Injections

If you wish to only print reports during recalculations and print actions (and not injections), edit the Star Report Writer Method section. This feature is useful if you wish to run a few replicates of your sample, select the most suitable run, and then modify the template to create a custom report.
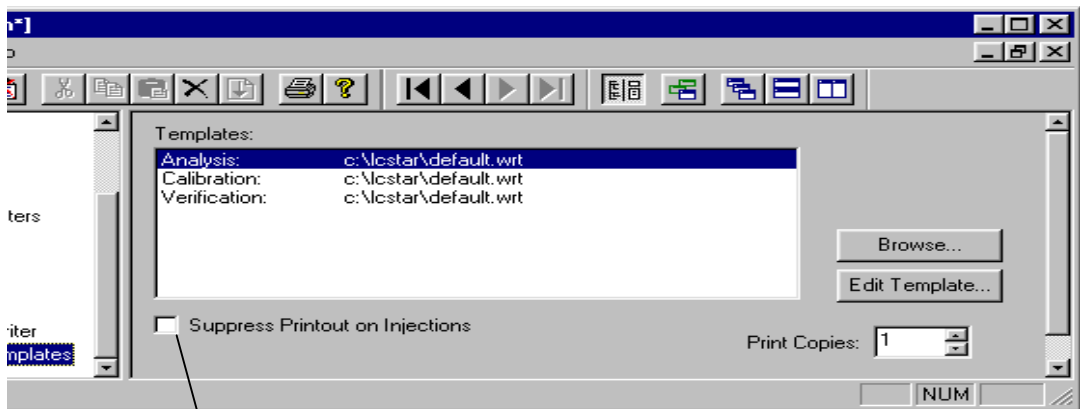
A checkmark here indicates reports are only to be printed for recalc and print actions.

Troubleshooting

Error Messages

When encountering error messages in the Star Custom Report Writer or in the Sequence Log in System Control/Automation, refer to the following tables. The messages are listed in alphabetical order.

Error Message	A template must be selected to open a report.
Location	Message Box displayed in Star Report Writer.
Description	You have used the Open Report dialog box to select a Data File, but you have not selected a report template.
Corrective Action	Select both a template file and a Data File in the Open Report dialog box, or, if you just want to apply a Data File to the template on the screen, use the File:Select Data File menu item.

Error Message	Attempted to open corrupt or missing Data File.
Location	Message Box displayed in Star Report Writer.
Description	The Data File that was opened cannot be read by Star Report Writer.
Corrective Action	Verify that the Data File exists and can be read by other Star Workstation applications.

Error Message	Error updating runfile.
Location	Message Box displayed in Star Report Writer.
Description	You attempted to link a template to a Data File and Star Report Writer failed to copy the necessary information.
Corrective Action	Check that both the template file and the Data File exist and you have write access to them.

Error Message	Failed establishing DDE link!
Location	System Control Sequence Log during automation.
Description	System Control and Star Report Writer could not communicate via AutoLink.
Corrective Action	Close any additional applications that are running. If the problem persists, restart Windows and try again.

Error Message	Failed opening Data File.
Location	System Control Sequence Log during automation.
Description	While attempting to automatically print the report for the current Data File, the Data File specified in the RecalcList could not be read by Star Report Writer.
Corrective Action	Verify that the Data File being processed exists and can be read by other Star Workstation applications.

Error Message	Failed opening runfile or template.
Location	System Control Sequence Log during automation.
Description	While attempting to automatically print the report for the current Data File, either the template specified in the active Method or the Data File specified in the RecalcList could not be read by Star Report Writer.
Corrective Action	Verify that the template specified in the active Method exists in the directory shown in the Star Report Writer Method Section. Verify that the Data File being processed exists and can be read by other Star Workstation applications.

Error Message	Incorrect template file or pathname.
Location	Message Box displayed in Method Builder.
Description	Attempted to edit a missing or corrupt template from the Method Builder.
Corrective Action	Verify that the template specified in the Method exists in the directory shown. Use Browse to locate the template file.

Error Message	Insufficient memory to complete copy to clipboard.
Location	Message Box displayed in Star Report Writer.
Description	Attempted to copy an object into the clipboard and failed due to lack of memory.
Corrective Action	Close any other applications that are running. If message persists, restart Windows and try again.

Error Message	StarWriter method section not found in Data File.
Location	Message Box displayed in Star Report Writer.
Description	Star Report Writer failed to link a template to a Data File.
Corrective Action	Check that both the template file and the Data File exist and you have write access to them.

Error Message	You must save a locked file to another name.
Location	Message Box displayed in Star Report Writer.
Description	You attempted to save a template that has been locked with a password using the same file name.
Corrective Action	Once you have locked a template using a password, either save it with a new name (which removes the lock on the newly saved file), or unlock the file before saving it.

Other Problem Symptoms

Some problems do not result in an error message. Refer to the following table for symptoms and recommendations for recovery.

Symptom	When rotating multi-line text, the text is collapsed into a single line.
Corrective Action	Multi-line text cannot be rotated without being turned into a single line. If you wish to rotate multi-line text, create multiple single-line text objects and rotate them individually.

Symptom	Changing the decimal point separator in the Windows Control Panel affects all numbers except for the Chromatogram retention times and time axes.
Corrective Action	The Chromatogram display cannot change the decimal point separator.

Symptom	Copying items to the clipboard results in an insufficient memory error.
Corrective Action	This error occurs primarily with bitmaps. Try reducing the size of your bitmap before copying it to the clipboard.

Symptom	When multiple objects are rotated, they change position.
Corrective Action	When you rotate multiple objects at once, each object is rotated independently. This may result in the unexpected placement of the objects and some objects may appear on top of each other. Either rotate each object separately, or rearrange the objects after rotating them.

Symptom	A "#" sign is shown in the Standard Deviation column of the Calibration Replicate Statistics object.
Corrective Action	The "#" sign indicates that there are too few points to calculate the standard deviation.

Symptom	Information in an object appears blank even though a Data File has been selected.
Corrective Action	Check the data source for the object that contains blank fields. If the data source has been fixed to a Data File that cannot be found, or if the channel has been fixed to one that does not exist in the selected Data File, the object will contain blank fields.

Symptom	Templates developed on one computer do not look the same when printed on another computer.
Corrective Action	The page size displayed in Star Report Writer is based on the currently selected printer (see the Printer Setup dialog box). If you place objects near the edge of the page and print them on a printer with a smaller printable page size, these objects may be omitted from the printout.

Symptom	Printing takes a long time on dot matrix printers.
Corrective Action	All Star Report Writer objects, including text objects, are sent to the printer driver as graphics. Try decreasing the graphics resolution setting of the printer.

Symptom	Fonts in templates developed on one computer do not look the same when printed on another computer.
Corrective Action	The font selected for the template is not available on the computer and Windows has substituted another font. Verify that all computers that will print the report have the proper fonts available.