Thermo Scientific

GRAMS Envision

Version 2.1

User Guide

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Notes

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1. Welcome to GRAMS Envision

GRAMS Envision is a multi-format instrument data viewer with the capacity to host plug-in processing and reporting modules.

GRAMS Envision (hereafter referred to as Envision), enhances GRAMS Smart Convert technology to support the GAML (Generalized Analytical Markup Language) open standard XML instrument data format. This format allows capture of comprehensive metadata and simplifies communication with an increasing number of third-party products. For more details about GAML, see the GAML Web site:

http://www.gaml.org

Designed to provide simple integration with external systems, Envision benefits from the Microsoft .NET development environment, using easily configurable menus, flexible screen architecture, and an extensible modular design.

Posting data to the other products of the GRAMS Suite is achieved through basic mouse and menu options.

The integral Web browser allows seamless connectivity with enterprise data management portals and Web-based search tools. A comprehensive command line interface and enhanced Paste Special function allows simple interaction with desktop applications and electronic lab notebooks.

Envision can use report methods created using the XML-based Blaise Inform design tool. Inform provides a comprehensive visual reporting tool for GRAMS Suite data and allows users to apply standardized reports to data originating from multiple instrument vendors.

This manual guides you through the use of Envision.

Instrument Data File Converters

Envision is supplied with a comprehensive set of instrument data file converters (the GRAMS converters) that can translate a wide range of instrument data into the standard GAML format. Supported data types include industry-standard formats (such as ASCII and AnDI/netCDF) as well as vendor-specific formats (for example, Thermo Scientific Atlas CDS and Agilent ChemStation).

File conversion is triggered by opening a data file in Envision. Smart Convert logic identifies the file format and selects the correct file converter.

You must install the file converter package separately from the Envision application itself. For more details, see "Installing the GRAMS Converters" in the *GRAMS Envision Installation Guide*.

Once the file converters are installed, you can find more information about them in the *Instrument Data File Converters* Help. To access this help system, select Instrument Help from the Envision Main menu's Help menu.

Note The list of file converters available on your system depends on the type of license that you have purchased. ▲

Agilent AnIML

In addition to the formats handled by the file converters, Envision can read data in Agilent's Analytical Instrument Markup Language (AnIML) format.

Starting Envision

To start Envision on a typical system:

1. From the Windows Start menu, select
   All Programs > Thermo GRAMS Suite > Envision

2. The next step depends on whether Envision has been set up with a valid license:

   - **A valid license has been installed.**

     The Envision application opens.

   - **A valid license cannot be found.**

     A License Failure message appears:

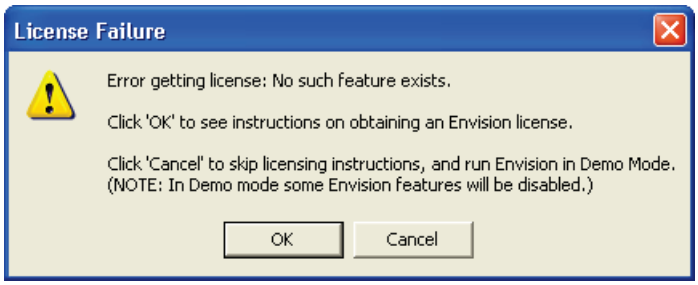


Figure 1-1. License Failure message

   - Click **OK** to view instructions on obtaining an Envision license.

     The Request License window appears, from which you can request a license. For more details about licensing, see the *Licensing Envision* chapter of the *GRAMS Envision Installation Guide*.

     After you request a license, Envision opens in Demo Mode.

   - Click **Cancel** to skip licensing instructions.

     Envision opens in Demo Mode.

Demo Mode

When Envision cannot find a valid license, it starts in Demo Mode. The HTML Viewer opens (as the default module) with the GAML Web site's "Example GAML files" page loaded:

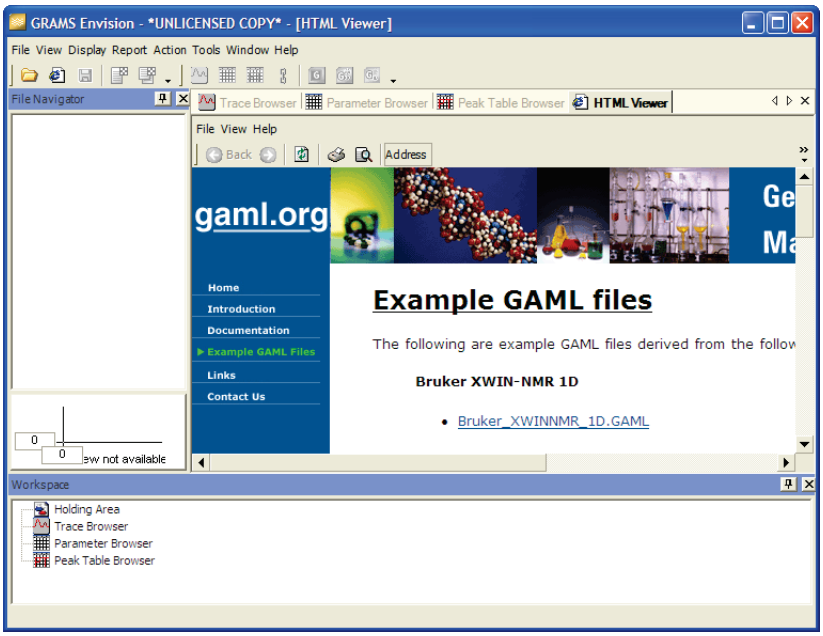


Figure 1-2. Envision in Demo Mode

From this Web page you can download example GAML files derived from a range of common instruments, which you can then view in Envision.

When operating in Demo Mode, Envision only opens GAML, SPC, and AnIML data files, and it does not save GAML data files. All the standard display capabilities remain available.

2. The Envision User Interface

The Envision user interface contains these features:

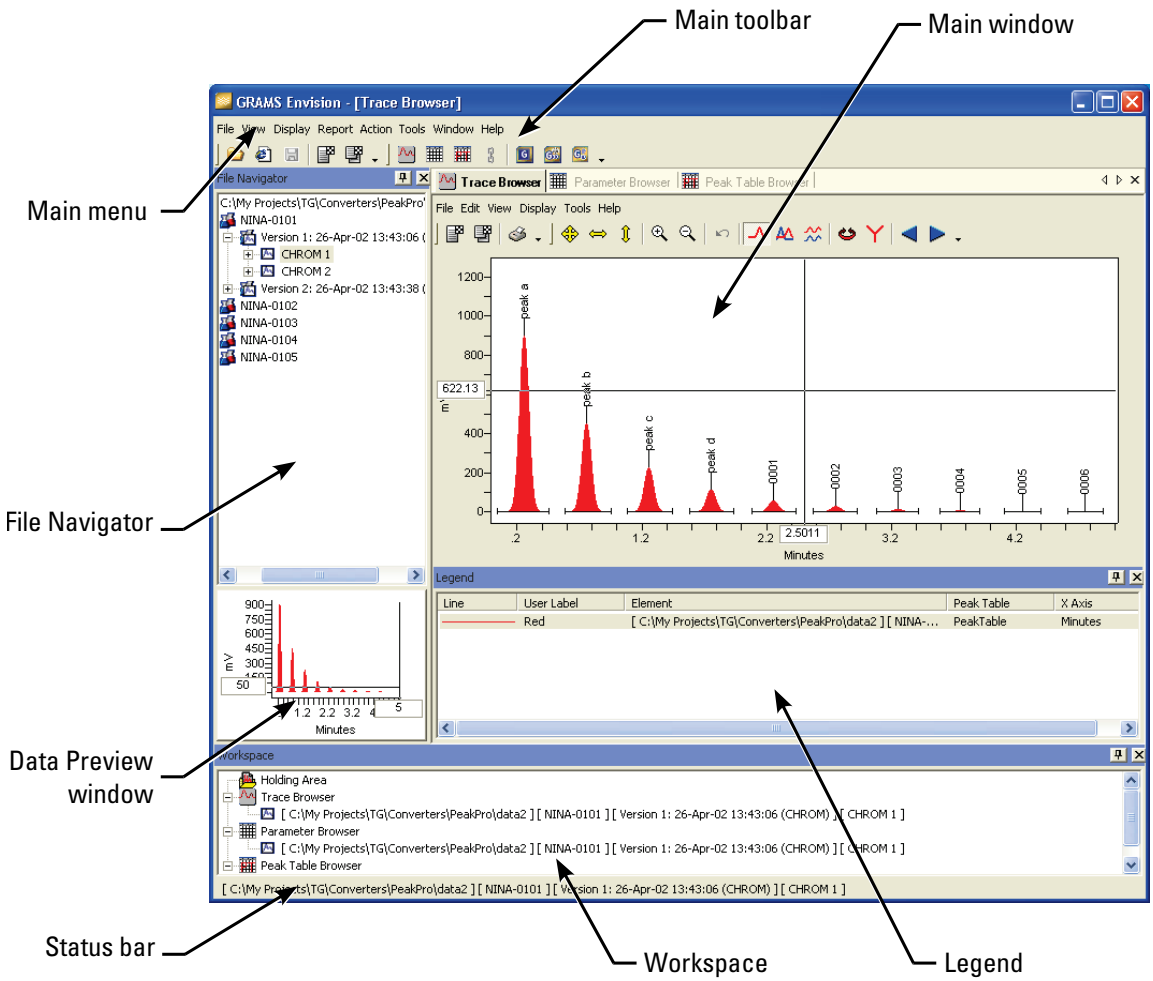


Figure 2-1. Envision User Interface

Feature	Description
Main menu	Provides access to Envision functions. For example, changing how items appear in the interface or accessing the Envision Help. See the Menus section for more details.

Feature	Description
Toolbars	Provide quick access to main Envision functions. See the Toolbars section for more details.
File Navigator	Shows all open GAML files. Items within the files appear in a tree hierarchy format. See the File Navigator section for more details.
Data Preview window	Provides a thumbnail view of the selected data element. See the Data Preview Window section for more details.
Main window	At startup, contains the Trace Browser, Parameter Browser and Peak Table Browser modules. Each of these modules updates when you change the selection in the File Navigator. See the Main Window section for more details.
Legend	Indicates the line style of the spectra currently on display. See the Trace Browser section for more details.
Workspace	Contains a listing of all working data and data held for future use in the Holding Area. See the Workspace Pane section for more details.
Status bar	Shows the path of the currently active data item within its GAML file. This matches the description for that item in the Workspace pane. See the Status Bar section for more details.

Menus

The Envision interface contains two menu bars:

- Main menu (at the top of the overall Envision window)

  This section describes the options in this menu.

- Main Window menu (at the top of the Main Window)

  This menu changes according to the selected view. See the Main Window Menu section.

Main Menu

The Envision Main menu appears at the top of the Envision window. This menu allows you to open files, open additional tabs, hide tabs, modify toolbars and display options, and forward data to other GRAMS Suite applications.

The Main menu contains the following submenus:

Figure 2-2. Envision Main menu

File Menu

The File menu contains the following options:

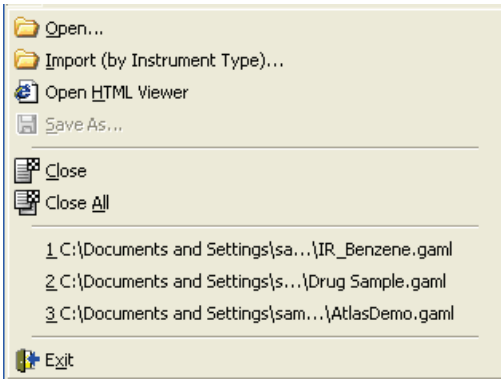


Figure 2-3. File menu

Option	Description
Open	Allows you to open a file using a standard Open window. This option uses Envision's SmartConvert technology to try to identify the instrument the data file is from. If it cannot find it automatically, use the option "Import (by Instrument Type)." If you are running Envision on Windows Vista or later, you can preview data files within the Open window. See the Previewing Data Files section.
Import (by Instrument Type)	If you know what instrument produced your data, you can import data files using this option. See the Using the Import (by Instrument Type) Option section.
Open HTML Viewer	Opens a new HTML Viewer in the Main window. See the HTML Viewer section.

Option	Description
Save As	Save a GAML file. This option is only available if you have first selected a top level or parent node in the File Navigator or Workspace. See the Using the Save As Option section.
Close	Closes the currently active GAML file.
Close All	Closes all open GAML files.
Exit	Closes the Envision application.

Previewing Data Files

In Windows Vista or later, you can preview data files in any Windows Explorer window.

For example, the following screenshot shows the Windows 7 version of the Open window (accessed from Envision's File menu), using Large Icons display and the Preview pane:

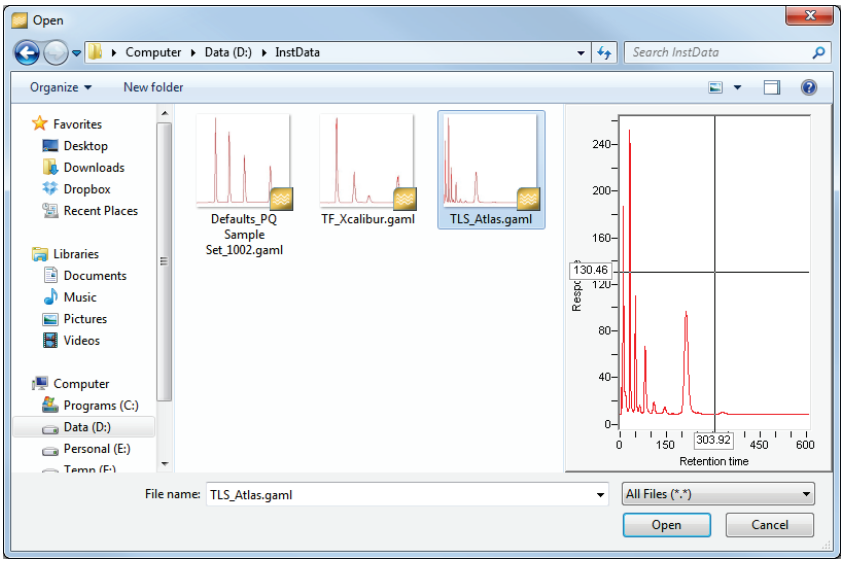


Figure 2-4. Open window showing thumbnail previews and Preview pane

Buttons at the top right of the window control the preview functionality:

- Click  to change the icon view. Options larger than Medium Icons show thumbnail previews of each data file.

- Click  to show a Preview pane, to the right of the Open window. You can:

  - Click on a point within the Preview pane to highlight its coordinates.

  - Click and drag to select an area, and then click within that area to zoom into it.

Using the Import (by Instrument Type) Option

If you know what instrument produced your data, you can import data files using the File menu's "Import (by Instrument Type)" option.

To import a file:

1. Select **File > Import (by Instrument Type)** from the Main menu.

   A window appears that lists all the instruments supported by Envision:

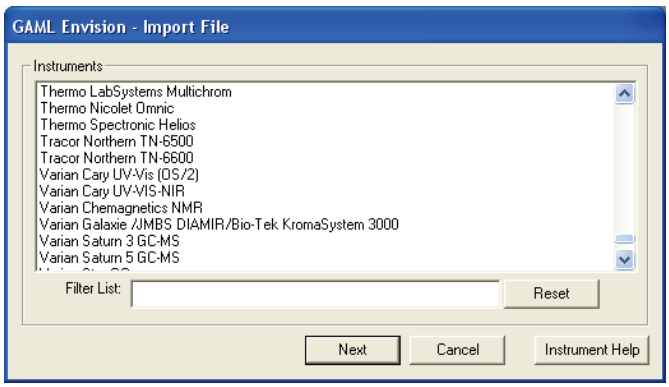


Figure 2-5. Import File window

The Instrument Help button opens the *Instrument Data File Converters Help*.

Note If your copy of Envision is not licensed for data conversion, an error appears when you try to use this option. ▲

2. Locate your instrument in the list, and then click **Next**.

   You can enter the name, or part of the name of the instrument in the Filter List field to aid in finding the instrument. For example, entering "chrom" in the Filter List field shortens the list to only those instruments with names that contain that string.

   The Reset button clears any filters and restores the full instrument list.

   Note Instrument names that have "[Database]" appended to them require you to log on to a database after you click Next. For information on these converters, see the *Instrument Data File Converters Help*. ▲

3. The standard Open window appears. Select your data file and click **Open**.

4. Envision imports the data file and shows its first data trace in the Trace Browser.

Using the Save As Option

You can use the Save As menu option to:

- Save entire GAML files to new locations or with new file names.
- Save GAML files' sub-nodes (that is, items containing traces or trace arrays) as SPC format binary files.

Note The SPC format does not fully support GAML peak tables so, when saving GAML data to SPC format, any peak tables are lost. When you open the resulting SPC files in Envision, the File Navigator and Trace Browser will not show any peak names. ▲

When you select this option, a standard Save As window appears for you to enter a file name and location.

If the Save As feature is enabled for GAML files on your system, the Save As menu option is enabled when you select the top level (GAML file) node in the File Navigator or the Workspace.

Note The ability to save GAML files is a separately licensed feature of Envision, which can be obtained by contacting Thermo Fisher Scientific Sales:

sales@gramssuite.com ▲

View Menu The View menu contains the following options:

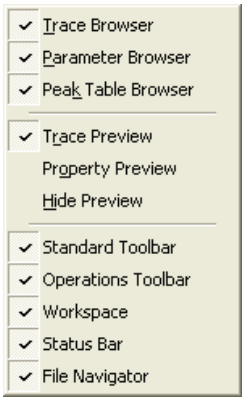


Figure 2-6. View menu

Option	Description
Trace Browser	Shows or hides the Trace Browser. See the Trace Browser section.
Parameter Browser	Shows or hides the Parameter Browser. See the Parameter Browser section.
Peak Table Browser	Shows or hides the Peak Table Browser. See the Peak Table Browser section.
Trace Preview	When selected, the Data Preview window shows the active element's trace. See the Data Preview Window section.
Property Preview	When selected, the Data Preview window shows the active element's properties. See the Data Preview Window section.

Option	Description
Hide Preview	Hides the Data Preview window. A check mark appears beside this option if the Data Preview window is currently hidden. See the Data Preview Window section.
Standard Toolbar	Shows or hides the Standard toolbar. See the Standard Toolbar section.
Operations Toolbar	Shows or hides the Operations toolbar. See the Operations Toolbar section.
Workspace	Shows or hides the Workspace pane. See the Workspace Pane section.
Status Bar	Shows or hides the status bar. See the Status Bar section.
File Navigator	Shows or hides the File Navigator. See the File Navigator section.

Display Menu

The Display menu contains the following options:

Figure 2-7. Display menu

Option	Description
New Trace Viewer	Opens a new instance of the Trace Viewer in the Main window.
New Parameter Viewer	Opens a new instance of the Parameter Viewer in the Main window.
New Peak Table Viewer	Opens a new instance of the Peak Table Viewer in the Main window.
New Link Viewer	Opens a new instance of the Linked Data Viewer in the Main window.
GAML 3D Viewer	Opens a new instance of the GAML 3D Viewer in the Main window.

Report Menu

The Report menu contains the Browse Report Method option. This option accesses the Report Viewer, where you can create reports from GAML data.

See the Report Viewer section.

Action Menu

The Action menu contains the following options:

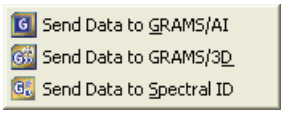


Figure 2-8. Action menu

Use these options to send the active trace array or entire trace to the following applications:

- GRAMS/AI
- GRAMS/3D
- Spectral ID

Note If a product is not installed, an error message appears when you choose the corresponding option. ▲

Envision exports the data to SPC format, and opens it in the specified application:

- If the data is a trace with multiple trace arrays, a multifile is sent to GRAMS/AI or Spectral ID. If the data is a trace array, the single trace array is sent to GRAMS/AI or Spectral ID.
- When sending data to GRAMS/3D, the entire trace (multifile) is sent regardless of whether the current element is a trace or trace array.

Tools Menu

The Tools menu contains an option for accessing the Options window, where you can set a number of program options.

See the Setting Envision Options section.

Window Menu

The Window menu contains options to control how browsers and viewers appear in the Main window:

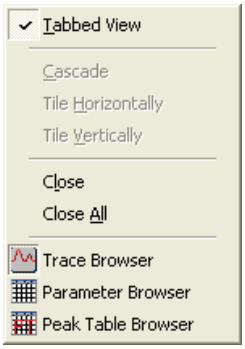


Figure 2-9. Window menu

Option	Description
Tabbed View	Displays open viewers and browsers as separate tabbed pages. This is the default view, as indicated by a check mark. When disabled, open viewers and browsers are shown as separate windows, which can then be cascaded or tiled.
Cascade	Displays open viewers and browsers using a cascaded arrangement. This option is only available when Tabbed View is disabled.
Tile Horizontally	Displays open viewers and browsers using a horizontally tiled arrangement. This option is only available when Tabbed View is disabled.

Option	Description
Tile Vertically	Displays open viewers and browsers using a vertically tiled arrangement. This option is only available when Tabbed View is disabled.
Close Current Window	Closes the currently active viewer or browser.
Close All Windows	Closes all viewers and browsers.

The bottom of the Window menu contains a list of the viewers and browsers that are currently open. Select an item from the list to make it the active window.

Help Menu

The Help menu contains the following options:

Option	Description
GRAMS Envision Help	Opens the Envision Help.
Instrument Help	Opens the *Instrument Data File Converters Help*. This option only works if the GRAMS Converters Package is installed on your system.
About GRAMS Envision	Displays the installed version and licensing details for Envision. This option also allows you to select another license, or request a new license. For more details on licensing, see the chapter *Licensing Envision* chapter of the *GRAMS Envision Installation Guide*.

Toolbars

The Envision user interface includes the following toolbars:

- Standard toolbar
- Operations toolbar
- Browser toolbars

This section includes descriptions of the Standard and Operations toolbars, as well as how to add or remove toolbar buttons.

For descriptions of the individual browser toolbars, see the Trace Browser, Parameter Browser and Peak Table Browser sections.

Standard Toolbar

The Standard toolbar contains the following buttons by default:

Button		Description
	Open File	Opens a GAML or SPC file.
	Open New HTML Viewer	Opens a new HTML Viewer window. See the HTML Viewer section.
	Save As	Save the selected GAML file. This button is only active if you have first selected a top-level or parent node in the File Navigator or Workspace. See the Using the Save As Option section.
	Close Current File	Closes the currently active GAML file.
	Close All Files	Closes all open GAML files.

Operations Toolbar

The Operations toolbar contains the following buttons:

Button		Description
	Open in new Trace Viewer window	Opens a new instance of the Trace Viewer. See the Trace Browser section.
	Open in new Parameter viewer window	Opens a new instance of the Parameter Viewer. See the Parameter Browser section.
	Open in new Peak Table viewer window	Opens a new instance of the Peak Table Viewer. See the Peak Table Browser section.
	Open in new Link viewer window	Opens a new instance of the Linked Data Viewer. See the Linked Data Viewer section.
	Send Data to GRAMS/AI	Sends the current trace or trace array to GRAMS/AI (as an SPC file).
	Send Data to GRAMS/3D	Sends the current trace to GRAMS/3D (as an SPC file).
	Send Data to Spectral ID	Sends the current trace or trace array to Spectral ID (as an SPC file).
	Options	Opens the Options window, in which you can set a number of program options. See the Customizing the User Interface section.
	GRAMS Envision Help	Opens the Envision Help.

Adding or Removing Toolbar Buttons

You can customize the Envision toolbars by adding or removing toolbar buttons.

To add or remove toolbar buttons:

1. On the toolbar you want to modify, click and choose **Add or Remove Buttons**.

   A list appears, containing the default buttons for that toolbar. Buttons currently shown on the toolbar have check marks:

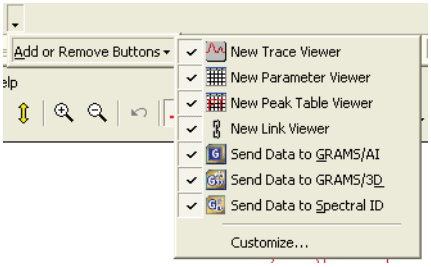


Figure 2-10. Add or Remove Buttons options

2. Click a button name to toggle its inclusion on the toolbar. The button is added or removed immediately.

3. If you need to edit the toolbars further, click **Customize** to open the Customize window:

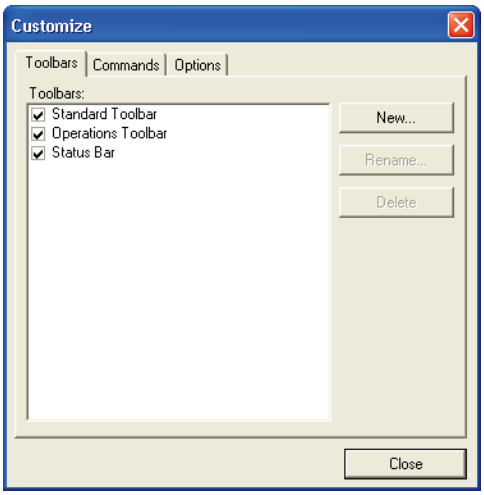


Figure 2-11. Customize window

The tabs on this window allow you to:

- Add, rename or delete entire toolbars.
- Drag menu options (commands) on to or out of toolbars.
- Specify toolbar and menu options across Envision.

Status Bar

The status bar appears at the bottom of the Envision interface. It shows the path of the currently active data item within its GAML file. This matches the description for that item in the Workspace pane.

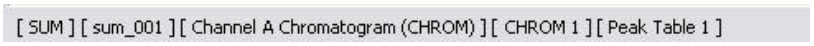


Figure 2-12. Status Bar

To toggle the status bar on or off, select **View > Status Bar** from the main menu.

The status bar indicates whether the Parameter Viewer is in Filter or Browse mode by listing the number of parameters displayed as X of Y rows.

File Navigator

The File Navigator appears at the left side of the Envision user interface. All open files appear here for ease of navigation and access.

The File Navigator uses a tree view to represent each level of the GAML hierarchy. Each level in the hierarchy has a unique icon associated with it and indicates if the data is linked.

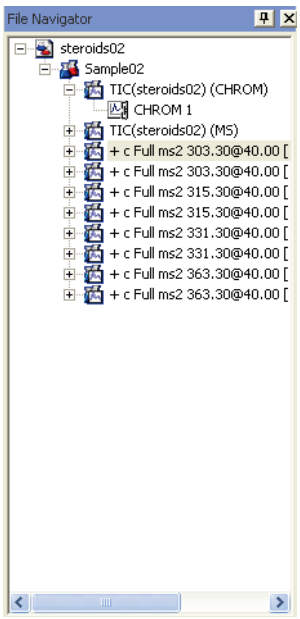


Figure 2-13. File Navigator

You can pin, unpin, resize or close the File Navigator. See the Customizing the User Interface section.

Click the Expand or Collapse buttons ⊞ ⊟ at each level to expand or collapse the tree, or double-click an element that has child elements to toggle its expansion.

You can also use the arrow keys to navigate through the tree.

When you click on an element, that element becomes active. Browsers in the Main window update to reflect the relevant data for the element, and its details appear in the status bar. For an introduction to the browsers, see the Main Window section.

Viewing the File Navigator Hierarchy

The following icons represent elements in the File Navigator pane:

Icon		Description
	Root node of GAML file	This node is always present. The Parameter Browser shows information associated with the entire file. The root node always contains at least one experiment node.
	Experiment node	A single analyzed item containing at least one trace node. The Parameter Browser shows information associated with the selected item.
	Trace node	Data taken from a single detector or from several sources is indicated by a single or multiple traces for the experiment. The Parameter Browser shows information associated with the data.
	Trace array node	Represents a single 2D X,Y profile.
	Peak table node	Acts as the parent for the individual peaks in a trace array. Displays as a child to the trace array and can contain more than one peak. The Peak Table Browser shows information about each identifiable peak in the trace array.
	Peak node	Represents an individual peak in a trace array. The Parameter Browser shows information associated with the peak.
	Linked view node	A 3D display available when data produced by an instrument and the converter create a link between the two trace array types.

File Navigator Shortcut Menu

When you right-click an item in the File Navigator, a shortcut menu appears that contains many of the options available in the Main menu:

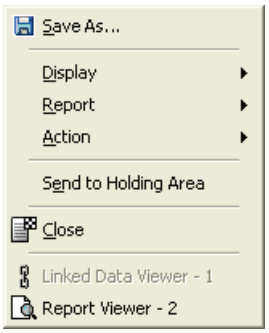


Figure 2-14. File Navigator menu

The Send to Holding Area option is unique to this menu. For information on this feature, see the Holding Area section.

Data Preview Window

The Data Preview window appears below the File Navigator:

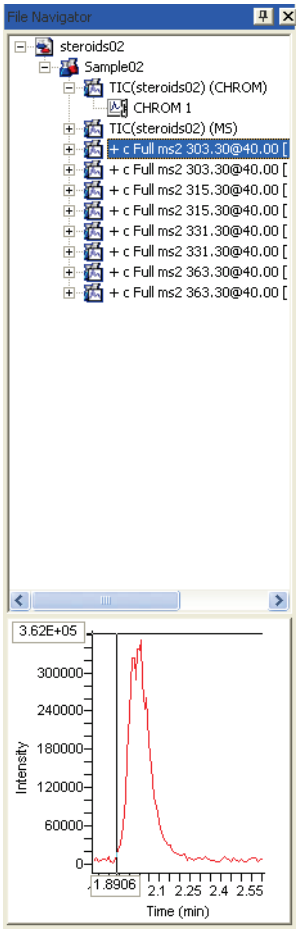


Figure 2-15. File Navigator with Data Preview window

The Data Preview window provides a preview of the item that is currently selected in the File Navigator pane.

Information can be viewed in two ways:

- Trace Preview (default)
- Property Preview

To change the display mode, you can:

- Right-click the Data Preview window and choose a viewing option from the shortcut menu. A check mark indicates the current mode.

- Choose **View** from the Main menu, and then choose a viewing option. A check mark indicates the current mode.

Trace Preview Display

The Trace Preview shows the active element:

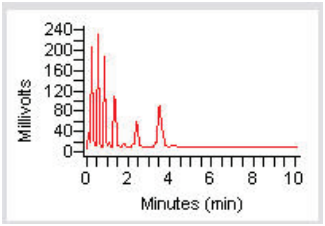


Figure 2-16. Trace Preview mode

The information in the Trace Preview depends on the item that is currently selected in the File Navigator:

- When a GAML file or experiment is selected, the Data Preview window contains the message "<Preview not available>."
- When a trace is selected, the Data Preview window contains the first trace of the trace array.
- When a trace array is selected, the Data Preview window contains the trace array data as a 2D trace (either continuous or discrete pulses).
- When a peak table is selected, the display window contains the peak table's trace array data as a 2D trace. The peak is labeled as it is in the File Navigator.
- When a peak is selected, the display window shows the peak's trace array data as a 2D trace. Only that peak is displayed and is labeled as it is in the File Navigator.
- When a linked view is selected, the display window shows the parent trace data as a 2D trace (either continuous or discrete pulses).

Property Preview Display

The Property Preview shows the properties of the item that is currently selected in the File Navigator:

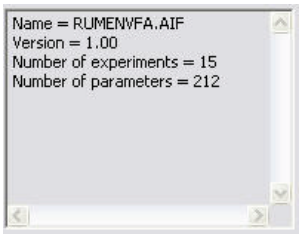


Figure 2-17. Property Preview mode

Information can include the specific values of elements and attributes, as well as some derived properties. The information differs according to the element type. If an element, attribute, or other property does not apply, it is not displayed.

Note You can also view this information when viewing the Parameter Browser by selecting File > Element Properties from the Main menu. See the Parameter Browser section. ▲

Hiding the Data Preview Window

To hide the Data Preview window, you can:

- Right-click the Data Preview window and select **Hide Preview** from the shortcut menu.
- Select **View > Hide Preview** from the Main menu.

To redisplay the Data Preview window, select a preview mode from the View menu.

Main Window

The Main window contains pages that allow you to view, approve and report data. These pages fall into two categories:

- Browsers

  These update each time you select new GAML data in the File Navigator.

- Viewers

  These only update when you "send" new GAML data to them. See the Sending Data to a Viewer section.

When Envision opens, the Main window contains three browsers:

- Trace Browser

  This is a modified version of the Trace Viewer that contains the trace of the item selected in the File Navigator. This window cannot contain more than one trace.

  See the Trace Browser section.

- Parameter Browser

  This is a modified version of the Parameter Viewer that contains the parameters, derived properties, and element and attribute values of the selected item in the File Navigator.

  See the Parameter Browser section.

- Peak Table Browser

  This is a modified version of the Peak Table Viewer that contains peak table elements and attributes as well as peak parameters of the selected item in the File Navigator.

  See the Peak Table Browser section.

You can use the navigation icons  in the top right corner of the Main window to navigate through the tabs or close views.

You can view a list of all windows that are currently open in the Main window by choosing Window from the Main menu. Open windows are listed at the bottom of the Window menu:

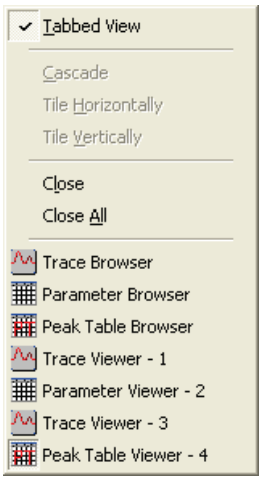


Figure 2-18. Window menu with example list of open windows

Open browsers appear at the top of the list. Open viewers are suffixed with a number indicating the order in which they were opened.

Note An exception is the HTML Viewer, where the initial view opens without a numeric suffix. Subsequent HTML Viewers open with numeric suffix. ▲

Selecting an item from this list changes the display in the Main window to the selected view.

Individual tabs can be closed or opened by choosing View from the Main menu, then selecting or clearing the item of interest.

Viewing Modes

There are several viewing modes for the Main window:

- Tabbed View – The default view for the Main window. Click on a tab to make the corresponding module active and bring it into focus.
- Cascade – Arranges the windows in a cascading, stacked view.
- Tile Horizontally – Arranges the windows in a horizontal array.
- Tile Vertically – Arranges the windows in a vertical array.

Note If Tabbed View is enabled, all other viewing options are disabled. ▲

When in Tabbed View mode, click one of the tabs in the Main window to bring that item to the foreground.

To close a window in Tabbed View mode, click a window's tab to make sure it is the current window, and then click the close button  in the top-right corner of the Main window.

Changing the Display Mode

To change the display mode:

1. Choose **Window** from the Main menu.
2. Select a display mode from the Window menu.

Sending Data to a Viewer

There are several ways to send GAML data to one of Envision's viewer panes:

- Select an element in the File Navigator, and then choose one of the Display menu's New Viewer options.
- Select an element in the File Navigator, and then click one of the Operations toolbar's "Open in new viewer" buttons.
- Open a viewer pane, and then drag an element from the File Navigator into it.
- Right-click an element in the File Navigator, and then select an open viewer from the shortcut menu.

In each case, data can only be sent to a viewer that supports that type of data. For example, when you select an injection, the Display menu's New Trace Viewer option is unavailable.

Main Window Menu

The Main Window menu options appear across the top of the Main window. The functions in this menu are specific to the currently selected browser or viewer.

For example, the Trace Browser has the following options on its Main Window menu:

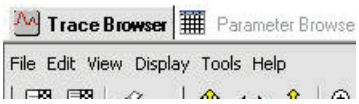


Figure 2-19. Main Window menu for the Trace Browser

For descriptions of the available functions, see the individual browser and viewer sections of this chapter.

Main Window Toolbar

The toolbar at the top of the Main window is specific to the currently selected browser or viewer. For descriptions of the available functions, see the individual browser and viewer sections of this chapter.

Trace Browser and Viewer

The Trace Browser is a viewing window that displays 2D views of a trace. It appears when you open a new GAML file, and is also available from the shortcut menu for Trace and Trace Array elements in the File Navigator.

The Trace Viewer is an extended version of the Trace Browser, including functionality for showing multiple traces.

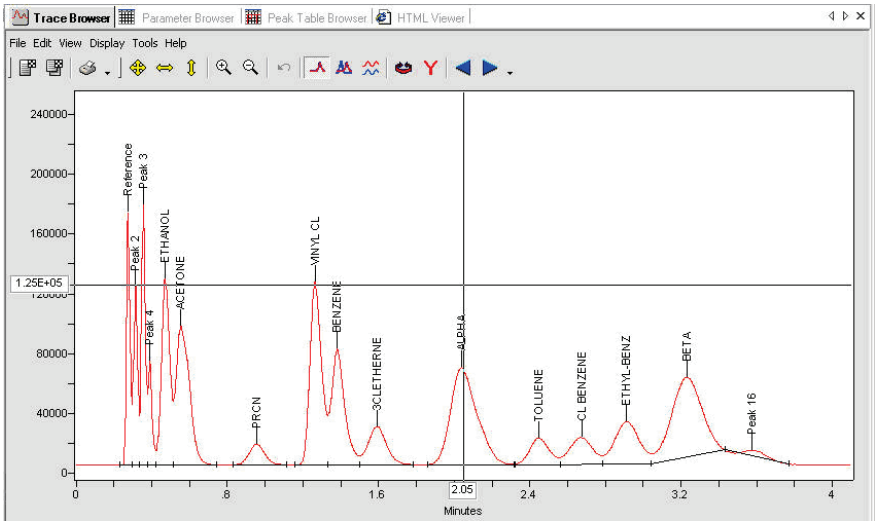


Figure 2-20. Trace Browser

The functionality described in this section, while labeled for the Trace Browser, also applies to the Trace Viewer. Any differences between the two are highlighted.

Legend

The Legend is located below the Trace Browser pane. It describes all trace arrays that are currently loaded. As long as there is a trace array in use, there will always be one and only one active trace array.

You can right-click a trace array in the Legend to open a menu of functions for selecting and manipulating traces.

Note The Legend can be pinned, unpinned, resized or closed as needed. See the Customizing the User Interface section. ▲

Trace Browser Menus

This section describes the menu options at the top of the Trace Browser and Trace Viewer panes.

File Menu

The File menu for the Trace Browser contains the following options:

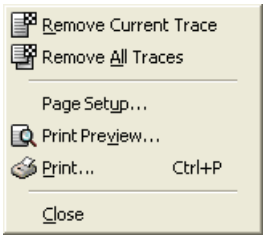


Figure 2-21. Trace Browser – File menu

Option	Description
Remove Current Trace	Removes the selected trace from the Trace Browser pane and the Legend. This option is designed for the Trace Viewer, which can show multiple traces.
Remove All Traces	Removes all traces from the Trace Browser pane and the Legend.
Page Setup	Opens a standard Page Setup dialog box, which allows you to adjust page settings prior to printing.
Print Preview	Opens a standard Print Preview pane, which allows you to preview a trace prior to printing.
Print	Sends the current trace to the printer. A standard Print dialog box appears, from which you can select the printer.
Close	Closes the Trace Browser.

Edit Menu

The Edit menu for the Trace Browser contains the following options:

Figure 2-22. Trace Browser – Edit menu

Option	Description
Undo Last Zoom	Undoes the last zoom or autoscale operation.
Copy	Copies the currently selected data to the clipboard.

View Menu

The View menu for the Trace Browser contains standard options to hide or display toolbars and the Legend pane:

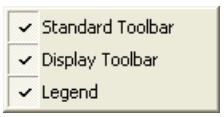


Figure 2-23. Trace Browser – View menu

Display Menu

The Display menu for the Trace Browser contains the following options:

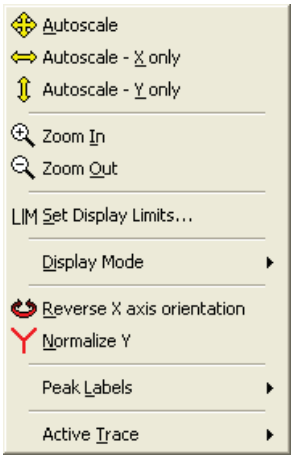
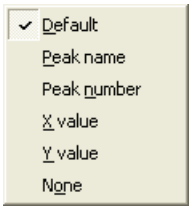
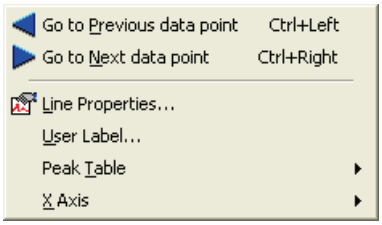


Figure 2-24. Trace Browser – Display menu

Note The Zoom and Autoscale features affect the display of all loaded data if the display is set to either the Stacked or Overlaid mode. ▲

Option	Description
Autoscale	Rescales the display such that the data points and peak labels fit into the display completely.
Autoscale – X only	Rescales the display such that the x-axis fits into the display completely.
Autoscale – Y only	Rescales the display such that the y-axis and peak labels fit into the display completely.
Zoom In	Rescales the display to zoom in 10% around the current position of the crosshairs (whether or not they are actually visible).
Zoom Out	Rescales the display to zoom out 10% around the current position of the crosshairs (whether or not they are actually visible).

Option	Description
Set Display Limits	Opens the Set Limits dialog box, in which you can specify the display limits for the X and Y axes. See the Setting the Trace Display Limits section.
Display Mode	Selects the display mode. This option is designed for the Trace Viewer, which can show multiple traces. The following options are available: • Paged – Shows only one trace array in the Trace Viewer. • Overlaid – Overlays all open trace arrays in the Trace Viewer. • Stacked – Shows all open trace arrays stacked in the Trace Viewer. See the Viewing Multiple Traces in a Window section.
Reverse X axis orientation	Flips (reverses) the X axis orientation. By default, all low values display to the left, with high values to the right.
Normalize Y	Normalizes the Y data points from 0 to 1. When you select this option, a warning message appears to advise you that peak label information cannot be shown in normalized display. If you choose to continue, peak labeling is turned off.

Option	Description
Peak Labels	Opens a menu with the following options:  **Figure 2-25.** Peak Labels menu Choose an option to change the peak labels. The default option labels peaks using the same text as their elements in the File Navigator. See the Trace View Peak Labeling section.
Active Trace	Opens a menu with the following options:  **Figure 2-26.** Active Trace menu You can use the options on this menu to navigate to another data point, change the properties of the active trace, or add user-defined labels to the active trace.

Tools Menu

The Tools menu for the Trace Browser contains the following options:

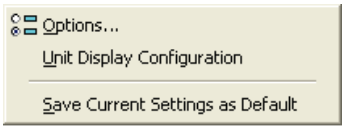


Figure 2-27. Trace Viewer – Tools menu

Option	Description
Options	Opens the Trace Viewer Options window. See the Setting the Trace Display Options section.
Unit Display Configuration	Use this option to change the units of data so that multiple traces can be compared on the same unit scale. This option is only available in the Trace Viewer, which can show multiple traces. See the Applying Unit Conversions for Comparing Traces section.
Save Current Settings as Default	Saves the current settings so that they are applied whenever you open a new Trace Browser or Viewer .

Help Menu

The Help menu for the Trace Browser contains the following options:

Figure 2-28. Trace Browser – Help menu

Option	Description
Trace Viewer Help	Opens Envision Help to the Trace Browser and Viewer page.
About Trace Viewer	Displays the version number of your Envision installation.

Trace Browser Toolbars

The Trace Browser and Trace Viewer panes contain two toolbars:

- Standard toolbar
- Display toolbar

The buttons on these toolbars provide standard navigation features and easy access to the Trace Browser and Trace Viewer menu options.

To show or hide these toolbars, right-click in the toolbar area at the top of the Trace Browser pane, and then choose the required toolbar.

Standard Toolbar

The Standard toolbar contains the following buttons by default:

Button		Description
	Remove Current Trace	Removes the selected trace from the display and the Legend. This option is designed for the Trace Viewer, which can show multiple traces.
	Remove All Traces	Removes all traces from the Trace Browser pane and the Legend.
	Print	Opens a standard Print dialog box, allowing you to select the printer to which the trace will be sent.

Display Toolbar

The Display toolbar contains the following buttons by default:

Button		Description
	Autoscale	Rescales the display so that the data points and peak labels fit into the display completely.
	Autoscale – X only	Rescales the display such that the X axis fits into the display completely.
	Autoscale – Y only	Rescales the display such that the Y axis and peak labels fit into the display completely.
	Zoom In	Rescales the display to zoom in 10% around the current position of the crosshairs (whether or not they are actually visible).
	Zoom Out	Rescales the display to zoom out 10% around the current position of the crosshairs (whether or not they are actually visible).
	Undo last zoom	Returns to the previous screen. This action may be repeated to go back several screens.
	Paged (display mode)	Shows only one trace array in the Trace Browser. See the Viewing Multiple Traces in a Window section.
	Overlaid (display mode)	Overlays all open trace arrays in the Trace Browser. See the Viewing Multiple Traces in a Window section.

Button		Description
	Stacked (display mode)	Shows all open trace arrays stacked in the Trace Browser. See the Viewing Multiple Traces in a Window section.
	Reverse X axis orientation	Flips (reverses) the X axis orientation. By default, all low values display to the left, with high values to the right.
	Normalize Y	Normalizes the Y data points from 0 to 1. When you select this option, a warning message appears to advise you that peak label information cannot be shown in normalized display. If you choose to continue, peak labeling is turned off.
	Go to the next data point	Navigates to the next data point, to the right of the current position of the crosshairs.
	Go to the Previous data point	Navigates to the previous data point, to the left of the current position of the crosshairs.

Note The Zoom and Autoscale features affect the display of all loaded data if the display is set to either the stacked or overlaid mode. ▲

Trace Browser Shortcut Menu

When you right-click in the Trace Browser pane, the shortcut menu that appears contains commonly-used options from the Trace Browser's menu and toolbar:

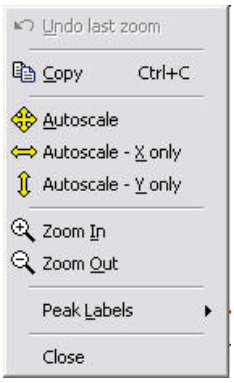


Figure 2-29. Trace Browser shortcut menu

See the Trace Browser Menus and Trace Browser Toolbars sections.

Setting the Trace Display Limits

You can set the trace display limits manually.

To set the trace display limits manually:

1. Select **Display > Set Display Limits** from the Trace Browser menu.

   The Set Limits dialog box appears:

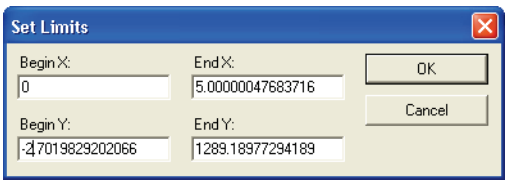


   Figure 2-30. Set Limits dialog box

2. Enter the start and end points for the X and Y display limits, and then click **OK** to save them.

Viewing Multiple Traces in a Window

The display modes available from the Display menu allow you to view multiple traces in one Trace Viewer. Envision automatically assigns a line color to each trace in the display.

This functionality is designed for the Trace Viewer which, unlike the Trace Browser, can show multiple traces.

The following options are available:

- Paged display mode  shows only one trace array in the trace display at a time, even if multiple traces are open. You can page through all traces sequentially using the arrow keys.
- Overlaid display mode  overlays all open trace arrays in the trace box. Some traces may not be seen if they are outside the currently set X and Y limits.
- Stacked display mode  shows all open trace arrays stacked in the trace box. The trace box is divided vertically into equally sized regions with each trace array in a separate region.

Trace View Peak Labeling

By default, the Trace Browser labels peaks using the same text as their elements in the File Navigator:

- Peaks are marked with a label and an indicator line connecting the label to the peak position.
- Peak labels are displayed with vertical orientation.
- Peak baselines are displayed as black lines with small vertical bars at each endpoint.

If there are multiple peak tables for a single trace array, the first table is used by default to mark peaks.

To change the peak labels, select a new label type from the Display menu's Peak Labels sub-menu:

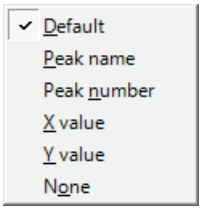


Figure 2-31. Peak Labels menu

This menu is also available from the Trace Browser's shortcut menu. A check mark indicates the current peak labeling option.

Note The Peak Labels menu updates when you switch between trace arrays. ▲

Setting the Trace Display Options

You can set trace display options, such as showing crosshairs and partition lines, and active trace settings such as line properties.

To change the trace display options, select **Tools > Options** from the Trace Browser menu. The Trace Viewer Options window appears:

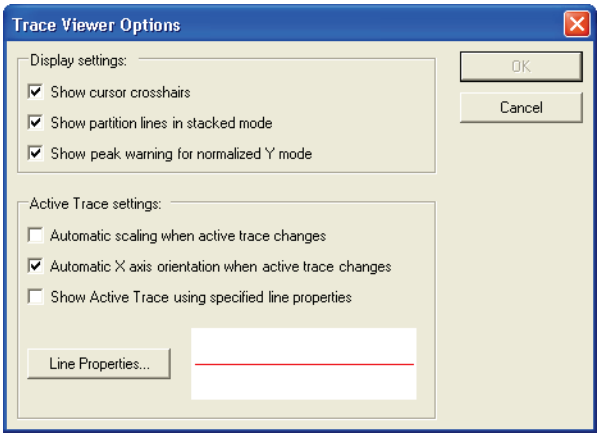


Figure 2-32. Trace Viewer Options window

The Display Settings section contains the following options:

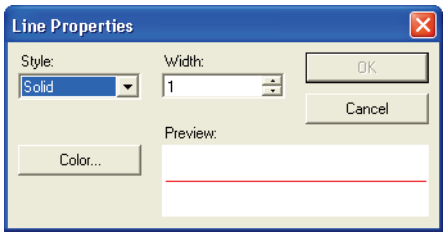
Option	Description
Show cursor crosshairs	Shows crosshairs on the trace display at the position of the last mouse click. The X and Y values of the mouse click position are indicated by the intersection of the crosshairs, and are labeled on the appropriate axis. You can double-click in the trace display to move the cursor crosshairs to the data point closest to the mouse click.
Show partition lines in stacked mode	Shows a black partition line at the lowest Y value in each trace array's section in the stack.

Option	Description
Show peak warning for normalized Y mode	When in normalized Y mode, shows a warning dialog indicating that peak labels and indicators are not displayed.

Note The Display Settings options are selected by default. Clear the check boxes to turn the settings off. ▲

The Active Trace Settings section contains the following options:

Option	Description
Automatic scaling when the active trace changes	Autoscales the trace display in the X and Y directions each time the active trace changes. This option is deselected by default.
Automatic X axis orientation when the active trace changes	Automatically orients the trace display based on the axis unit of the active trace. This option is deselected by default.
Show Active Trace using specified line properties	Shows the active trace array using the line color, style, and width specified using the Line Properties button. Envision applies the specified line properties to whichever trace is currently active; when you select a new trace, its line changes to use the specified color, style and width. **Note** This overrides the line properties set for each trace using the Trace Browser's Display > Active Trace > Line Properties menu option. See Changing a Trace's Line Properties. ▲

Option	Description
Line Properties button	Opens the Line Properties dialog box:  **Figure 2-33.** Line Properties dialog box You can change the line color, style, and width used for the active trace. Click OK to save changes and return to the Trace Viewer Options window. Envision selects the "Show Active Trace using specified line properties" check box automatically.

Changing a Trace's Line Properties

You can change the line color, style, and width used for a trace in the current Trace Browser or Trace Viewer window.

To change a trace's line properties:

1. Select the trace in the Legend pane.

2. Select **Display > Active Trace > Line Properties** from the Trace Browser's menu.

   The Line Properties dialog box appears:

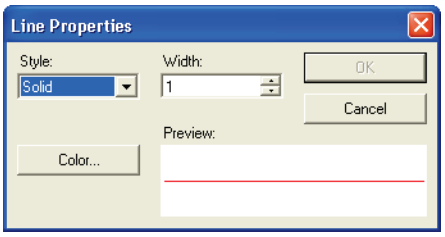


Figure 2-34. Line Properties dialog box

Note You can also access the Line Properties option from the shortcut menu that appears when you right-click the trace in the Trace Browser's Legend. ▲

3. Specify the line color, style, and width for the selected trace.

4. Click **OK** to save the changes.

   The specified line properties are used for the selected trace in the current Trace Browser or Trace Viewer window:

   - If you open the trace in another window, its default line properties will be used.

   - When the trace is active, its line properties may be overridden by those specified in the Trace Viewer Options window's Active Trace Settings. See Setting the Trace Display Options.

Changing a Trace's Display Label

You can change the label applied to a trace using the Edit User Label dialog box.

To change a trace's display label:

1. Select the trace in the Legend pane.

2. Select **Display > Active Trace > User Label** from the Trace Browser's menu.

   The Edit User Label dialog box appears:

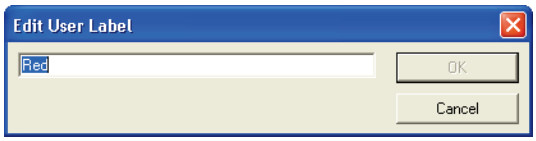


Figure 2-35. Edit User Label dialog box

Note You can also access the User Label option from the shortcut menu that appears when you right-click the trace in the Trace Browser's Legend. ▲

3. Enter the name to appear in the Legend for the selected trace.

4. Click **OK** to save the changes.

Applying Unit Conversions for Comparing Traces

When comparing traces from different sources and the traces have different units, you can apply a unit conversion to compare traces on the same scale.

This functionality is not available in the Trace Browser, which cannot show multiple traces.

In the following example, we demonstrate this functionality by applying it to the X-axis units to compare two traces:

1. In the Trace Viewer, open a trace.

   In the following example trace, the units on the X and Y axes are Arbitrary, common for ASCII data.

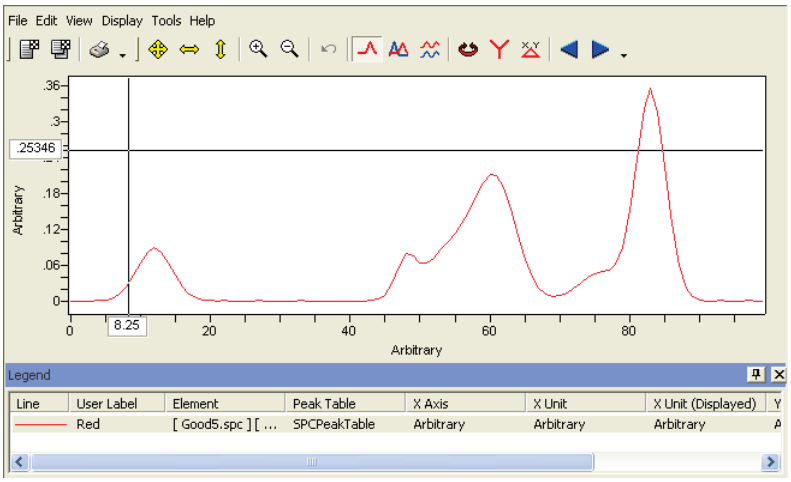


Figure 2-36. Trace Viewer containing trace with Arbitrary units

2. You can set Arbitrary units to any available units:

   a. Right-click on the trace entry in the Legend.

   b. Select **Arbitrary X Unit**, and select a unit from the list.

   Alternatively, you use the Unit Display Configuration window, by selecting **Tools > Unit Display Configuration** from the Trace Viewer menu bar.

For this example, set the X Axis unit to **Seconds**. If the **Apply default unit conversions** button is off, click to turn it on to see the change in the label on the X axis.

3. To compare the current trace with another trace, open another trace file and drag it from the File Navigator into the Trace Viewer.

4. To see the traces together, click **Overlay Traces** or **Stack Traces**.

   For this example, overlay the traces.

5. If there is a difference in Y units, click the **Normalize the Y data points** button .

   In this example, the new trace has X units in Minutes. Note that the overlaid traces have a "Unit Mismatch" noted on the X-axis. This mismatch causes the second trace (blue line) to be compressed at the left edge of the Trace Viewer.

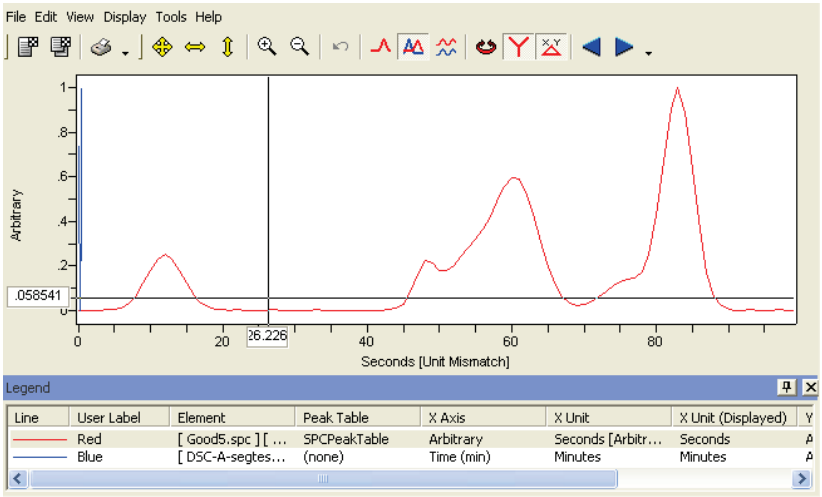


Figure 2-37. Trace Viewer containing two traces with normalized Y units

6. To compare the mismatched traces on the same X scale:

   a. Open the Unit Display Configuration window (**Tools > Unit Display Configuration**)

   b. Set the Time units to **Seconds**, and click **Apply**.

   Both traces are now using the same scale. Note that the legend contains columns for both **X Unit** (this is the original unit), and **X Unit (Displayed)**, so that you can easily check the original units against the converted units.

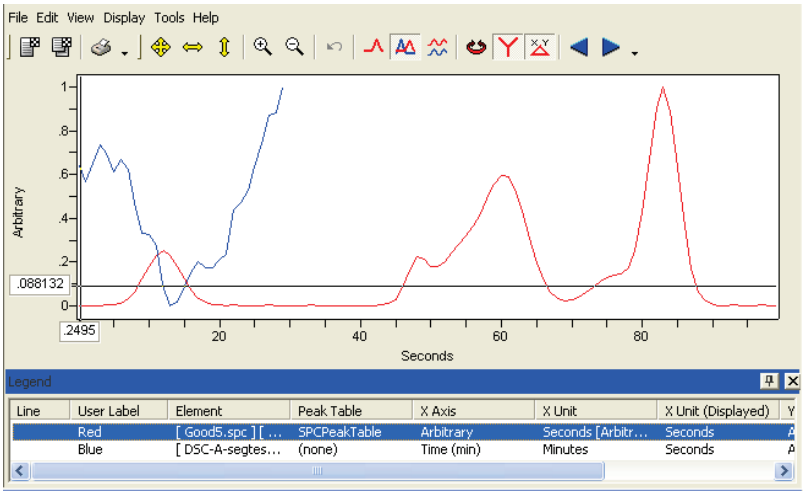


Figure 2-38. Trace Viewer with both traces converted to display in seconds on the X axis

Unit Display Configuration

When working in a Trace Viewer, you can select Tools > Unit Display Configuration to open the Unit Display Configuration window. This window controls the units used for traces open in the viewer:

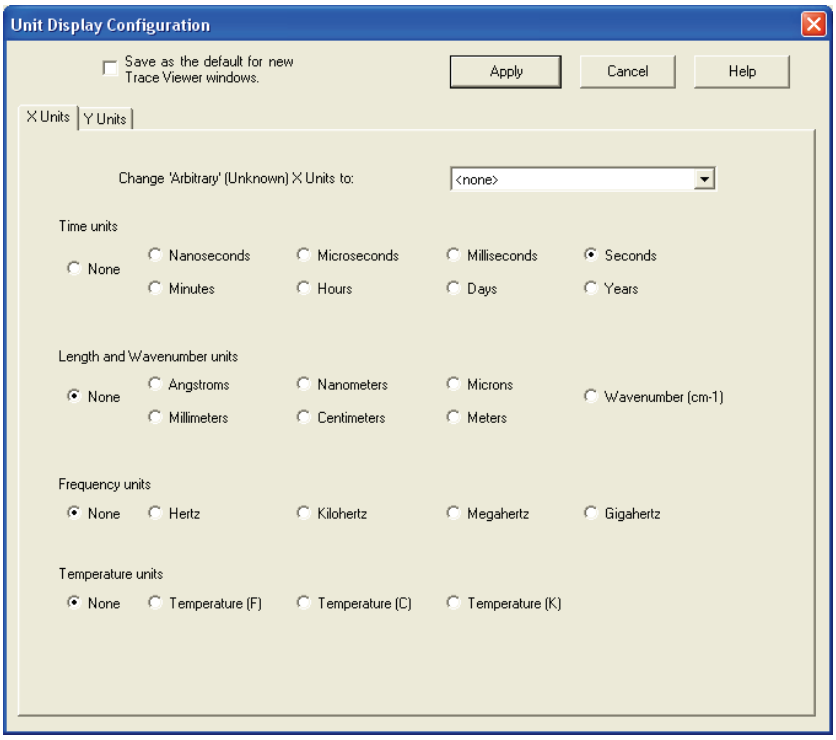


Figure 2-39. Unit Display Configuration window

You can use the Unit Display Configuration window to:

- Change the unit display on the X axis, the Y axis, or both axes.

  On the X-axis, you can select the units used for time, length and wavenumber, frequency, and temperature.

  On the Y-axis, you can select the units used for voltage, temperature, and mass, as well as spectroscopic units such as transmission and reflectance.

- Select a unit for Arbitrary or Unknown units.

  Many traces do not have units assigned and appear as "Unknown." In these cases, select a unit from the list to be used instead.

- Save the selected unit as the default unit.

  The settings you make here are saved and used when you open new Trace Browser windows.

Click Apply to save any changes you make in the Unit Display Configuration window.

For an example that uses the features of this window, see the Applying Unit Conversions for Comparing Traces section.

Parameter Browser and Viewer

The Parameter Browser displays parameters, derived properties, and element and attribute values for any element in the GAML hierarchy.

The Parameter Viewer shares the same functionality as the Parameter Browser, but only updates when you send parameters to it.

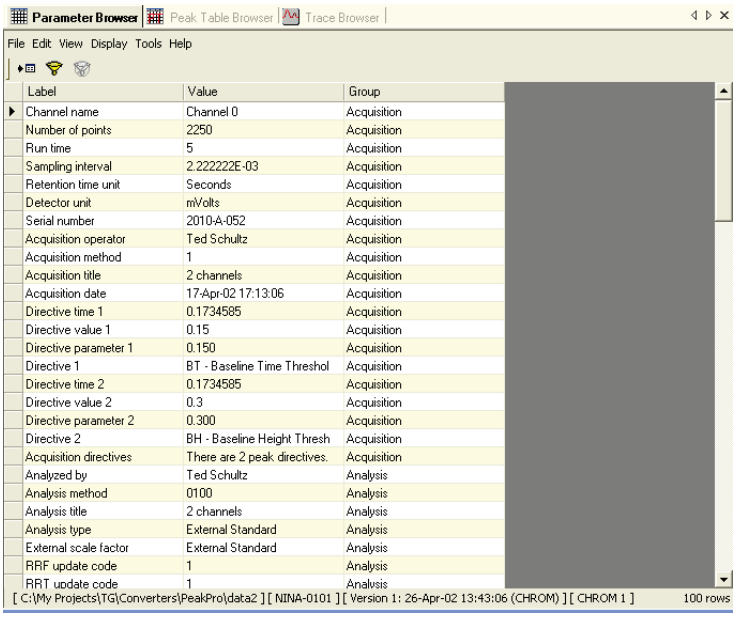


Figure 2-40. Parameter Browser

The data grid shows data in the following columns:

- Name (hidden by default)
- Alias (hidden by default)
- Label
- Value
- Group

Note The Parameter Browser's grid clears whenever new data is loaded. When the active element has no parameters, the Parameter Browser appears blank. ▲

Each column in the grid can be toggled on or off by selecting the corresponding item in the Parameter Browser's View menu.

You can also toggle columns from the Parameter Browser's shortcut menu, which appears when you right-click within the data grid. The shortcut menu also includes a Close option, which closes the Parameter Browser.

The functionality described in this section, while labeled for the Parameter Browser, also applies to the Parameter Viewer.

Parameter Browser Menu

This section describes the menu options at the top of the Parameter Browser and Parameter Viewer panes.

File Menu

The File menu for the Parameter Browser contains the following options:

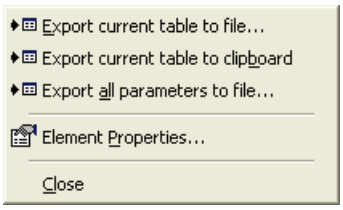


Figure 2-41. Parameter Browser – File menu

Option	Description
Export current table to file	Exports the currently displayed table (including hidden columns) to a tab-delimited text file. A standard Save dialog box appears.
Export current table to clipboard	Exports the currently displayed table (including hidden columns) to a tab-delimited text file. A standard Save dialog box appears.

Option	Description
Export all parameters to file	Exports all parameters (including hidden columns) to a tab-delimited text file. A standard Save dialog box appears.
Element Properties	Displays the properties of the current elements. These properties include the specific values of elements and attributes as well as some derived properties.
Close	Closes the Parameter Browser.

Edit Menu

The Edit menu for the Parameter Browser contains the following option:

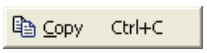


Figure 2-42. Parameter Browser – Edit menu

Option	Description
Copy	Copies the currently selected data to the clipboard.

View Menu

The View menu for the Parameter Browser contains standard options to hide or display columns and toolbars:

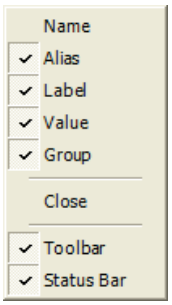


Figure 2-43. Parameter Browser – View menu

Display Menu

The Display menu for the Parameter Browser contains the following options:

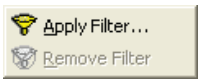


Figure 2-44. Parameter Browser – Display menu

Option	Description
Apply Filter	Sets parameter filters to display specified data points. See the Filtering Data section for more information.
Remove Filter	Removes the applied filter.

Tools Menu

The Tools menu for the Parameter Browser contains the following option:

Figure 2-45. Parameter Browser – Tools menu

Option	Description
Save Current Settings as Default	Saves the current settings so that they are applied to each new Linked Data Viewer window.

Help Menu

The Help menu for the Parameter Browser contains the following options:

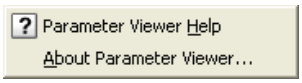


Figure 2-46. Parameter Browser – Help menu

Option	Description
Parameter Viewer Help	Opens the Parameter Viewer section of the Envision Help.
About Parameter Viewer	Displays the installed version of the Parameter Viewer.

Parameter Browser Toolbar

The Parameter Browser and Parameter Viewer toolbars contain the following buttons:

Button		Description
	Export current table to specified file	Exports the currently displayed table (including hidden columns) to a tab-delimited text file. A standard Save As dialog box appears.
	Apply Filter	Sets parameter filters to display specified data points. See the Filtering Data section for more information.
	Remove Filter	Removes the applied filter.

Filtering Data

When viewing items in the Parameter and Peak Table Browsers you can apply filters to display specific data points.

To apply a filter:

1. Click the **Apply Filter** button  on the Parameter Browser toolbar, or select **Display > Apply Filter** from the Parameter Browser menu.

   The Filter dialog box appears:

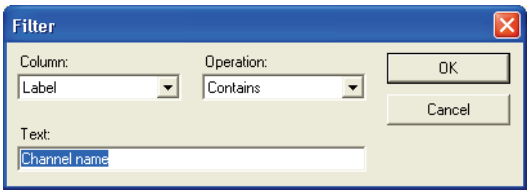


Figure 2-47. Filter dialog box

   The Filter dialog box contains information about the currently active cell.

2. Select a table column for filtering from the Column list.

3. Select an operator from the Operation list:

   - Contains (default)
   - Equals
   - Does not contain
   - Does not equal

4. Enter a value in the Text field. Any text string can be entered in this field.

5. Click **OK** to apply the filter.

Note After you apply a filter, the number of rows matching the filter is indicated at the bottom-right of the browser. For

example, if the table contains 10 rows, and 4 rows match the filter criteria, “4 of 10 rows” appears. ▲

Removing a Filter

When you apply a filter, the Display > Remove Filter menu item and the Remove Filter button  become available.

To remove the filter and return the display to browse mode, either select the Remove Filter menu option or click the Remove Filter button.

Sorting Data

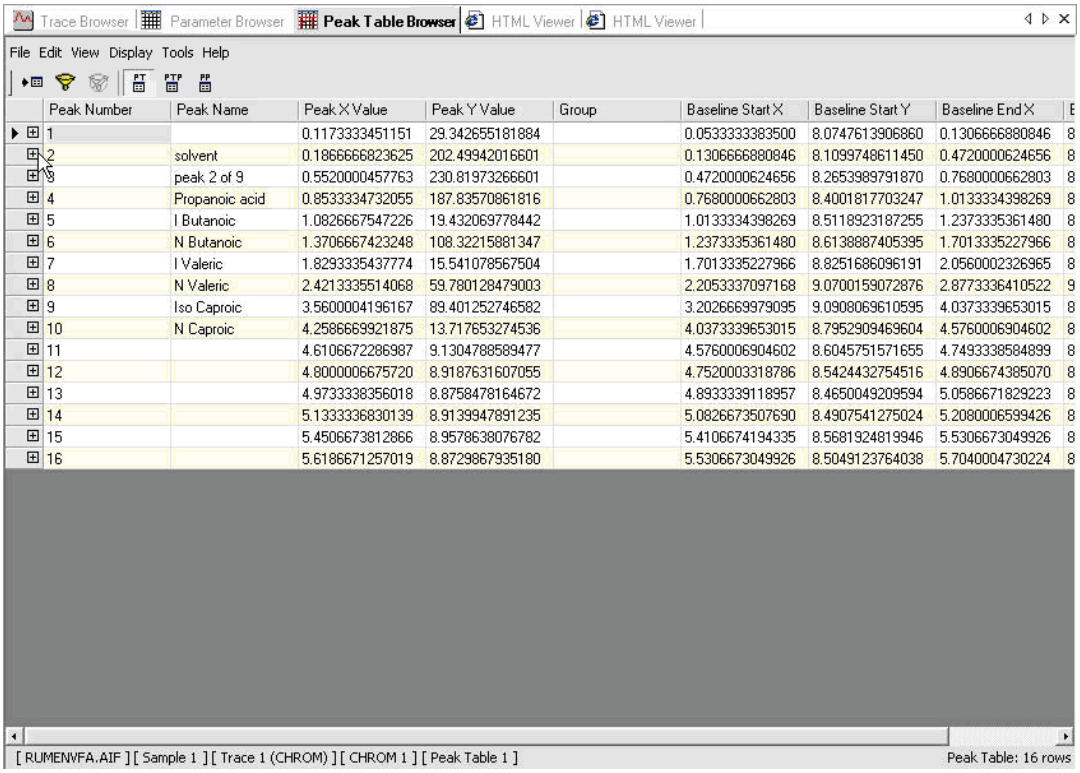
You can sort the data in the Parameter Browser and Peak Table Browser grids into ascending or descending order by clicking on the column headings. An arrow located to the right of a column heading indicates the column used for the sort, and the order of the sort.

Figure 2-48. Sorted column heading example

Peak Table Browser and Viewer

The Peak Table Browser contains information about the peaks in a trace. It appears when you open a new GAML file, and is also available from the shortcut menu for elements in the File Navigator.

The Peak Table Viewer shares the same functionality as the Peak Table Browser, but only updates when you send data to it.



Peak Number	Peak Name	Peak X Value	Peak Y Value	Group	Baseline Start X	Baseline Start Y	Baseline End X	E
1		0.1173333451151	29.342655181884		0.0533333383500	8.0747613906860	0.1306666880846	8
2	solvent	0.1866666823625	202.49942016601		0.1306666880846	8.1099748611450	0.4720000624656	8
3	peak 2 of 9	0.5520000457763	230.81973266601		0.4720000624656	8.2653989791870	0.7680000662803	8
4	Propanoic acid	0.8533334732055	187.83570861816		0.7680000662803	8.4001817703247	1.0133334398269	8
5	I Butanoic	1.0826667547226	19.432069778442		1.0133334398269	8.5118923187255	1.2373335361480	8
6	N Butanoic	1.3706667423248	108.32215881347		1.2373335361480	8.6138887405395	1.7013335227966	8
7	I Valeric	1.8293335437774	15.541078567504		1.7013335227966	8.8251686096191	2.0560002326965	8
8	N Valeric	2.4213335514068	59.780128479003		2.2053337097168	9.0700159072876	2.8773336410522	9
9	Iso Caproic	3.5600004196167	89.401252746582		3.2026669979095	9.0908069610595	4.0373339653015	8
10	N Caproic	4.2586669921875	13.717653274536		4.0373339653015	8.7952909469604	4.5760006904602	8
11		4.6106672286987	9.1304788589477		4.5760006904602	8.6045751571655	4.7493338584899	8
12		4.8000006675720	8.9187631607055		4.7520003318786	8.5424432754516	4.8906674385070	8
13		4.9733338356018	8.8758478164672		4.8933339118957	8.4650049209594	5.0586671829223	8
14		5.1333336830139	8.9139947891235		5.0826673507690	8.4907541275024	5.2080006599426	8
15		5.4506673812866	8.9578638076782		5.4106674194335	8.5681924819946	5.5306673049926	8
16		5.6186671257019	8.8729867935180		5.5306673049926	8.5049123764038	5.7040004730224	8

Figure 2-49. Peak Table Browser – Peak Table view

The data grid can be displayed in the following ways:

- Peak Table view (default)
- Peak Parameters view
- Peak Table Parameters view

You can use the  icon to track a row through the three views.

See the Peak Table Browser Display Options section for more information.

To show or hide columns in the Peak Table Browser grid, select column names in the View menu. See the View Menu section for more information.

Alternatively, you can right-click the grid to open a menu showing the available columns, with check marks beside those that are displayed. Click a column name to toggle its display.

Note The default setting for the Peak Table Browser is to show all rows in the Peak Table view, and to show all columns except Name in the Peak Parameter and Peak Table Parameter Views. ▲

The functionality described in this section, while labeled for the Parameter Browser, also applies to the Parameter Viewer.

Peak Table Browser Menu

This section describes the menu options at the top of the Peak Table Browser and Peak Table Viewer panes.

File Menu

The File menu for the Peak Table Browser contains the following options:

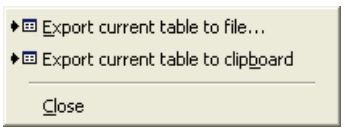


Figure 2-50. Peak Table Browser – File menu

Option	Description
Export current table to file	Exports the currently displayed table (including hidden columns) to a tab-delimited text file. A standard Save As dialog box appears.

Option	Description
Export current table to clipboard	Copies the currently displayed table (including hidden columns) to the clipboard. Once copied, you can paste the table data to another application, such as a word processor, spreadsheet, or text editor.
Close	Closes the Peak Table Browser.

Edit Menu

The Edit menu for the Peak Table Browser has a single Copy option:

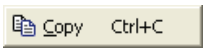


Figure 2-51. Peak Table Browser – Edit menu

Option	Description
Copy	Copies the active trace box, together with the trace array data, to the clipboard. You can also perform the Copy function by using CTRL+C from your keyboard.

View Menu

The View menu for the Peak Table Browser contains the following options:

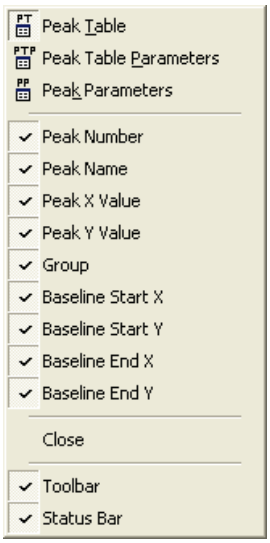


Figure 2-52. Peak Table Browser – View menu

The first three options control the overall display mode for the Peak Table Browser:

Option	Description
Peak Table	This is the default mode for the Peak Table Browser. The grid contains element and attribute values for each peak in the peak table. All available columns are shown. See the Peak Table Browser Display Options section for more information.
Peak Table Parameters	In Peak Table Parameter view, the grid contains the following columns: • Name (hidden by default) • Label • Value • Group

Option	Description
	Parameters from the peak table element are displayed. See the Peak Table Browser Display Options section for more information.
Peak Parameters	In Peak Parameter view, the grid can show peak parameters from a single peak or from all peaks. The grid contains the following columns: • Peak Number • Name (hidden by default) • Label • Value • Group See the Peak Table Browser Display Options section for more information.

The rest of the View menu contains options to show or hide columns for each display mode, close the Peak Parameters View, and show or hide its toolbar and status bar.

Display Menu

The Display menu for the Peak Table Browser contains the following options:

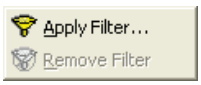


Figure 2-53. Peak Table Browser – Display menu

Option	Description
Apply Filter	Sets parameter filters to display specified data points. See the Filtering Data section for more information.
Remove Filter	Removes the applied filter.

Tools Menu

The Tools menu for the Peak Table Browser contains the following option:

Figure 2-54. Peak Table Browser – Tools menu

Option	Description
Save Current Settings as Default	Saves the current settings so that they are applied to each new Linked Data Viewer window.

Help Menu

The Help menu for the Peak Table Browser contains the following options:

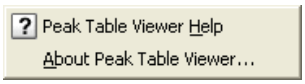


Figure 2-55. Peak Table Browser – Help menu

Option	Description
Peak Table Viewer Help	Accesses the Peak Table Viewer section of the Envision Help.
About Peak Table Viewer	Displays the installed version of the Peak Table Viewer.

Peak Table Browser Toolbar

The Peak Table Browser and Peak Table Viewer toolbars contain the following buttons:

Button		Description
	Export current table to specified file	Exports the currently displayed table (including hidden columns) to a tab-delimited text file. A standard Save As dialog box appears.
	Apply Filter…	Set parameter filters to display specified data points. See the Filtering Data section.
	Remove Filter	Removes the applied filter.
	Peak Table	Displays the Peak Table view. See the Peak Table View section.
	Peak Table Parameters	Displays the Peak Table Parameters view. See the Peak Table Parameters View section.
	Peak Parameters	Displays the Peak Parameters view. See the Peak Parameters View section.

Peak Table Browser Display Options

The Peak Table Browser and Peak Table Viewer have three different display modes:

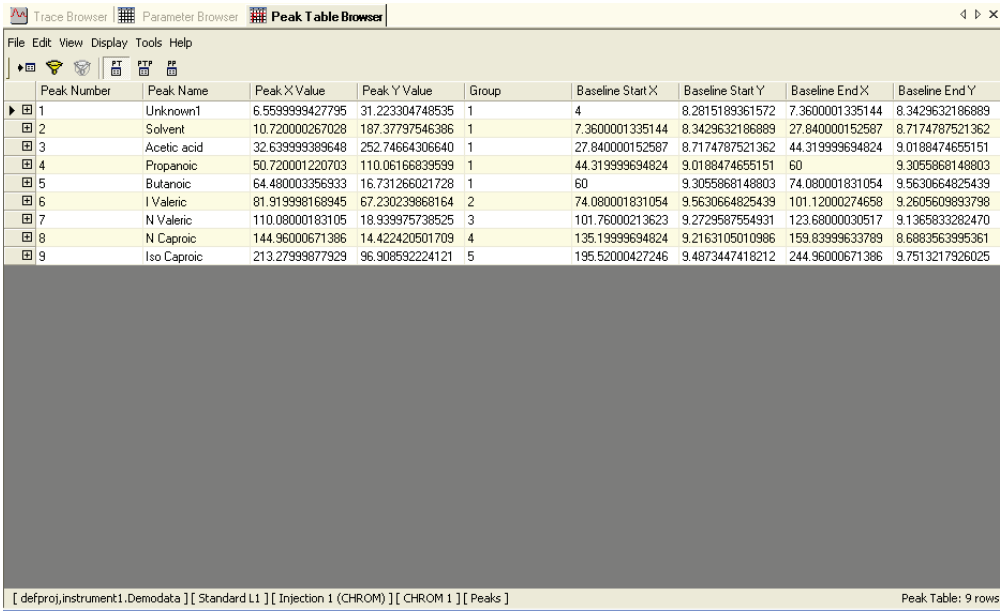
- Peak Table
- Peak Table Parameters
- Peak Parameters

A description of each of these options follows.

Peak Table View

Peak Table view is the default mode for the Peak Table Browser. The table contains element and attribute values for each peak, using the following columns:

- Peak Number
- Peak Name
- Peak X Value
- Peak Y Value
- Group
- Baseline Start X
- Baseline Start Y
- Baseline End X
- Baseline End Y



Peak Number	Peak Name	Peak X Value	Peak Y Value	Group	Baseline Start X	Baseline Start Y	Baseline End X	Baseline End Y
1	Unknown1	6.5599999427795	31.223304748535	1	4	8.2815189361572	7.3600001335144	8.3429632186889
2	Solvent	10.720000267028	187.37797546386	1	7.3600001335144	8.3429632186889	27.840000152587	8.7174787521362
3	Acetic acid	32.639999389648	252.74664306640	1	27.840000152587	8.7174787521362	44.319999694824	9.0188474655151
4	Propanoic	50.720001220703	110.06166839599	1	44.319999694824	9.0188474655151	60	9.3055868148803
5	Butanoic	64.480003356933	16.731266021728	1	60	9.3055868148803	74.080001831054	9.5630664825439
6	I Valeric	81.919998168945	67.230239868164	2	74.080001831054	9.5630664825439	101.12000274658	9.2605609893798
7	N Valeric	110.08000183105	18.939975738525	3	101.76000213623	9.2729587554931	123.68000030517	9.1365833282470
8	N Caproic	144.96000671386	14.422420501709	4	135.19999694824	9.2163105010986	159.83999633789	8.6883563995361
9	Iso Caproic	213.27999877929	96.908592224121	5	195.52000427246	9.4873447418212	244.96000671386	9.7513217926025

Figure 2-56. Peak Table Browser – Peak Table view

You can click the ⊞ or ⊟ icon, to the left of each row, to expand or collapse each peak's details, providing a hyperlink to its parameters:

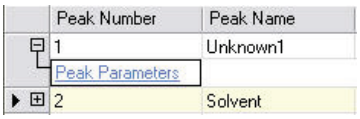


Figure 2-57. Expanded peak in the Peak Table view

The hyperlink opens the Peak Parameters view for that peak:

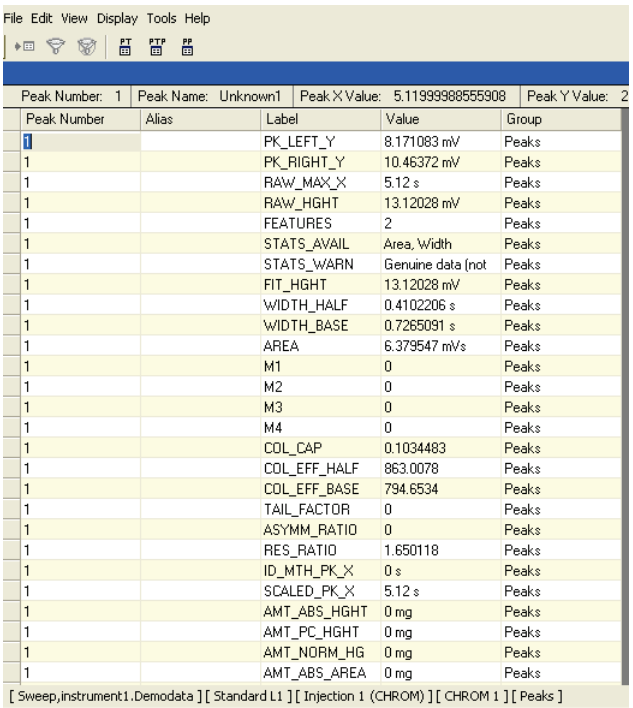


Figure 2-58. Peak Parameters for an individual peak

The top row contains the information from that peak's row in the peak table. Below is a table of all the parameters for that peak and their values. You can click the Back button ← to return to the Peak Table view.

You can sort the data in the grid in ascending or descending order, as well as applying filters. See Sorting Data and Filtering Data.

Peak Table Parameters View

In Peak Table Parameters view, the grid contains the following columns:

- Name (hidden by default): The name of the parameter.
- Alias: The alias of the parameter (if one exists).
- Label: The label of the parameter. This is usually similar to the Name.
- Value: The value for the parameter as given in the data file.
- Group: An identifier to help with organizing data.

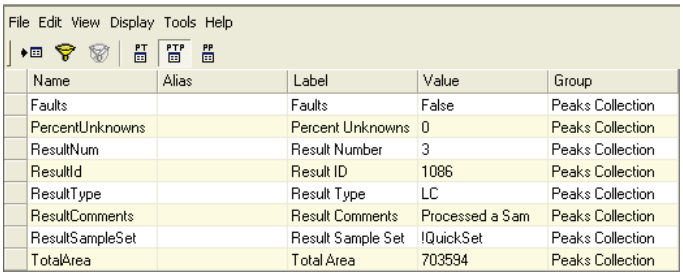


Figure 2-59. Peak Table Viewer – Peak Table Parameters view

Right-click within the Peak Table Parameters view to open a shortcut menu from which you can select columns to be seen or hidden. Visible columns are indicated by checkmarks:

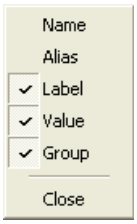


Figure 2-60. Column selection menu in the Peak Table Viewer

You can sort the data in the grid in ascending or descending order, as well as applying filters. See Sorting Data and Filtering Data.

Peak Parameters View

In Peak Parameters view, the grid can show peak parameters from a single peak or all peaks. The column names in this view are the same as those found in the Peak Table Parameters View, with the additional column, Peak Number. Peaks in a trace are generally numbered sequentially from left to right.

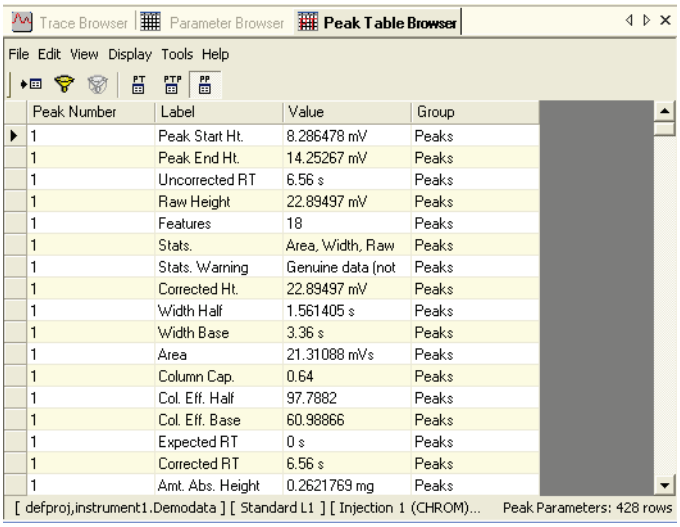


Figure 2-61. Peak Table Viewer – Peak Parameters view

When the Peak Parameter view is opened from the View menu or the toolbar button, parameter information for all peaks appears, allowing data comparison of multiple peaks. When opened via the Peak Parameters hyperlink (see Figure 2-57), only parameters from that single peak are shown.

You can sort the data in the grid in ascending or descending order, as well as applying filters. See Sorting Data and Filtering Data.

Opening Additional Views

The Main window opens with three browser windows:

- Trace Browser
- Parameter Browser
- Peak Table Browser

In addition to these, you can open corresponding viewers:

- Trace Viewer
- Parameter Viewer
- Peak Table Viewer

Browsers and viewers differ in that when you scroll through the File Navigator, a browser updates to show the information for that trace. In a viewer, you must drag a different trace from the File Navigator in order to update the view.

When opening a viewer, the name on its tab is suffixed with a number indicating the order in which it was opened.

Note The exception is the HTML Viewer, which does not use a numeric suffix. ▲

To open a new viewer:

1. Select a trace in the File Navigator.
2. Right-click and select **Display** from the shortcut menu that appears.
3. Select a viewer from the Display menu.

Alternatively, select Display from the main menu, and then select a viewer from the Display menu options.

Note Some menu options may be unavailable, depending on the data that the selected trace contains. ▲

HTML Viewer

The HTML Viewer allows you to open URLs and retrieve files from a Web-based application or search tool.

There are two ways to open the HTML Viewer:

- Click on the **HTML Viewer** button on the Main toolbar at the top of the Envision interface.
- Select **File > Open HTML Viewer** from the main menu.

The HTML Viewer also appears when Envision starts in Demo Mode.

The HTML Viewer window opens with the default home page:

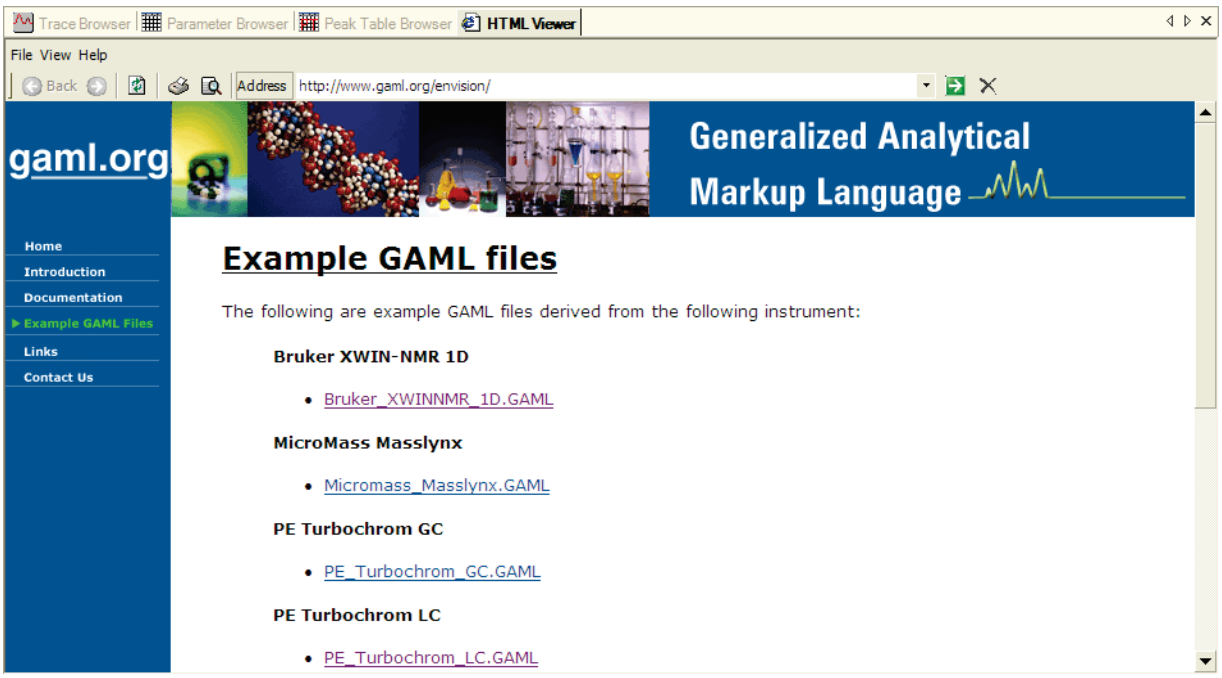


Figure 2-62. HTML Viewer

Note For information about specifying the default home page, see the Setting Envision Options section. ▲

You can enter URLs into the HTML Viewer's Address field:

Figure 2-63. HTML Viewer – Address field

You can use Envision's command line syntax to automate opening URLs in the HTML Viewer. This allows a program, such as a LIMS system, to open a URL and pass parameters to a Web application, which can in turn provide a link to a file that can be selected, downloaded and viewed directly in Envision.

For more details see Appendix A, *Command Line Syntax*.

HTML Viewer Menu

This section describes the menu options at the top of the HTML Viewer.

File Menu

The File menu for the HTML Viewer has the following options:

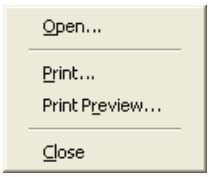


Figure 2-64. HTML Viewer – File menu

Option	Description
Open	Opens the Enter URL dialog box, in which you can enter a URL.
Print	Sends the web page to the printer. A standard Print dialog box appears.

Option	Description
Print Preview	Opens a standard Print Preview window, where you can modify page properties prior to printing.
Close	Closes the HTML Viewer.

View Menu

The View menu for the HTML Viewer contains a single Toolbar menu option. Use this option to hide or show the HTML Viewer toolbar.

Help Menu

The Help menu for the HTML Viewer has the following options:

Figure 2-65. HTML Viewer – Help menu

Option	Description
HTML Viewer Help	Opens the HTML Viewer section of the Envision Help in a new window.
About HTML Viewer	Displays the installed version of the HTML Viewer.

HTML Viewer Toolbar

In addition to the Address field, the HTML Viewer toolbar contains the following buttons:

Button		Description
	Back	Navigates to the previous Web page.
	Forward	Advances to the next Web page.
	Refresh	Refreshes the current Web page.
	Print	Sends the Web page to the printer. A standard Print dialog box appears.
	Print preview document	Opens a standard Print Preview window, where you can modify page properties prior to printing.
	Go	Navigates to the URL specified in the Address field.
	Close	Closes the HTML Viewer.

Linked Data Viewer

The Linked Data Viewer uses the link element within a GAML file to show related (linked) traces in a meaningful way. The viewer supports data such as GC-MS, LC-MS, and GC-IR:

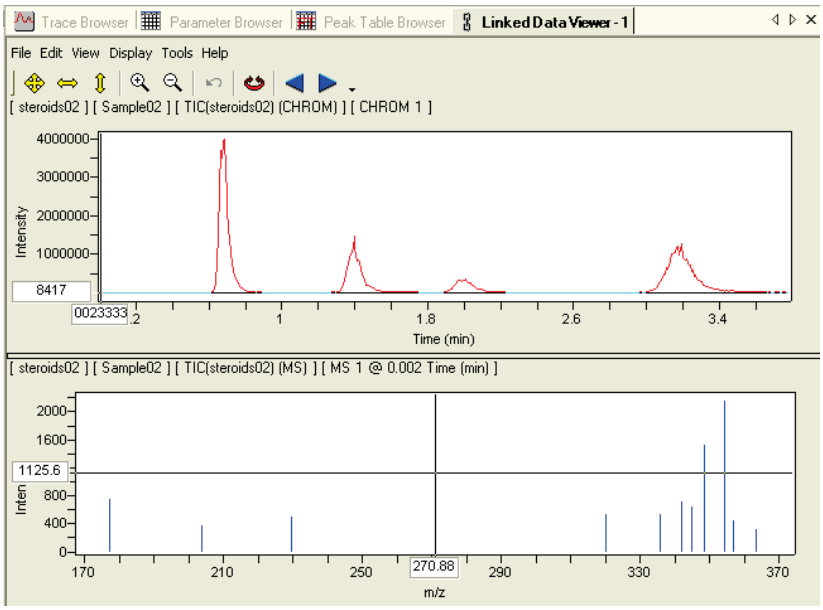


Figure 2-66. Linked Data Viewer

To display the Linked Data Viewer, select **Display > New Link Viewer** from the Main menu.

The linked data module receives a parent trace and then looks for a child trace with a corresponding link indicator. This data appears in two trace boxes:

- The parent trace is displayed in the top trace box.
- The child trace is displayed in the lower trace box.

Only one trace box can be considered the active trace box at any given time. Any actions performed apply to this trace box.

Note The child trace must be within the same experiment as the parent trace. ▲

Each trace box is labeled with text indicating the trace array that is displayed, and matches the text from the Workspace pane. The traces are autoscaled independently when loaded.

To resize the trace boxes vertically, click and drag the splitter bar between them. The pointer changes to a splitter ↕ when it is over this bar.

You can double-click on any part of the parent trace box to display the trace array of the child trace. The axis labels correspond to the X and Y data label attributes for the displayed traces. If a label does not exist, the unit attribute is used.

Linked Data Viewer Menu

This section describes the menu options at the top of the Linked Data Viewer.

File Menu

The File menu for the Linked Data Viewer contains the following options:

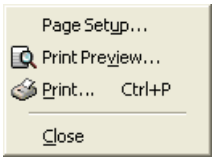


Figure 2-67. Linked Data Viewer – File menu

Option	Description
Page Setup	Opens a standard Page Setup dialog box, which can be used to adjust the page settings prior to printing.
Print Preview	Opens a standard Print Preview window, where you can modify page properties prior to printing.
Print	Sends the current data to the printer. A standard Print dialog box appears.
Close	Closes the Linked Data Viewer.

Edit Menu

The Edit menu for the Linked Data Viewer displays the following options:

Figure 2-68. Linked Data Viewer – Edit menu

Option	Description
Undo Last Zoom	Undoes the last zoom or autoscale operation.
Copy	Copies the currently selected data to the clipboard.

View Menu

The View menu for the Linked Data Viewer displays a single Toolbar option that toggles the display of the Linked Data Viewer toolbar.

Display Menu

The Display menu for the Linked Data Viewer has the following options:

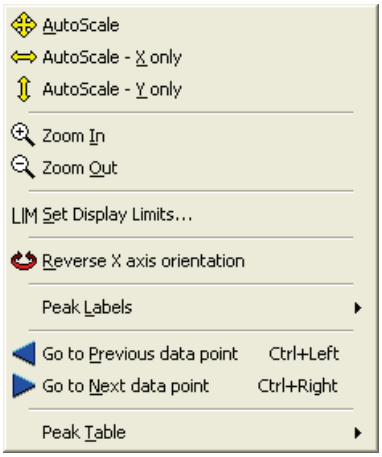


Figure 2-69. Linked Data Viewer – Display menu

Option	Description
Autoscale	Rescales the display such that the data points and peak labels fit into the display completely.
Autoscale – X only	Rescales the display such that the X axis fits into the display completely.
Autoscale – Y only	Rescales the display such that the Y axis and peak labels fit into the display completely.
Zoom In	Rescales the display to zoom in 10% around the current position of the crosshairs (whether or not they are actually visible).
Zoom Out	Rescales the display to zoom out 10% around the current position of the crosshairs (whether or not they are actually visible).
Set Display Limits	Opens the Set Limits dialog box, in which you specify the limits for the X and Y axes. See the Setting the Trace Display Limits section for more information.
Reverse X axis orientation	Flips (reverses) the X axis orientation. Low values are displayed to the left, with high values to the right. This orientation can be saved as the default.
Peak Labels	Opens a submenu with the following options:

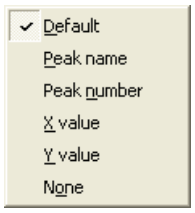


Figure 2-70. Peak Labels menu

Option	Description
	Select an option to change the peak labels. Refer to the Linked Data View Peak Labeling section for more information.
Go to Previous data point	Navigates to the previous data point of the active trace. The function is the same as double-clicking near the data point to the immediate left of the current position of the crosshairs.
Go to Next data point	Navigates to the next data point of the active trace. The function is the same as double-clicking near the data point to the immediate right of the current position of the crosshairs.
Peak Table	Choose from available peak tables for a trace array. Each peak table is listed with its name attribute (or the default string used in the File Navigator). A check mark indicates the selection made. By default, the first peak table is selected. This menu item changes for each active trace array and may be unavailable if there are no peak tables associated with the active trace array.

Tools Menu

The Tools menu for the Linked Data Viewer contains the following options:

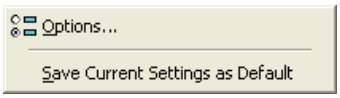


Figure 2-71. Linked Data Viewer – Tools menu

Option	Description
Options	Opens the Linked Data Viewer Options window. See the Setting the Linked Data Viewer Options section.
Save Current Settings as Default	Saves the current settings so that they are applied to each new Linked Data Viewer window.

Help Menu

The Help menu for the Linked Data Viewer contains the following options:

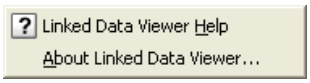


Figure 2-72. Linked Data Viewer – Help menu

Option	Description
Linked Data Viewer Help	Accesses the Linked Data Viewer section of the Envision Help.
About Linked Data Viewer	Displays the installed version of the Linked Data Viewer.

Linked Data Viewer Toolbar

The Linked Data Viewer toolbar contains the following buttons:

Button		Description
	Autoscale	Rescales the display such that the data points and peak labels fit into the display completely.
	Autoscale – X only	Rescales the display such that the X axis fits into the display completely.
	Autoscale – Y only	Rescales the display such that the Y axis and peak labels fit into the display completely.
	Zoom In	Rescales the display to zoom in 10% around the current position of the crosshairs (whether or not they are actually visible).
	Zoom Out	Rescales the display to zoom out 10% around the current position of the crosshairs (whether or not they are actually visible).
	Undo last zoom	Returns to the previous screen. This action may be repeated to go back several screens.
	Reverse X axis orientation	Flips (reverses) the X axis orientation. All low values are displayed to the left, with high values to the right. This orientation can be saved as the default.
	Go to the next data point	Navigates to the next data point, to the right of the current position of the crosshairs.
	Go to the Previous data point	Navigates to the previous data point, to the left of the current position of the crosshairs.

Linked Data View Peak Labeling

By default, the Linked Data Viewer labels peaks using the same text as their elements in the File Navigator:

- Peaks are marked with a label and an indicator line connecting the label to the peak position.
- Peak labels are displayed with vertical orientation.
- Peak baselines are displayed as black lines with small vertical bars at each endpoint.

If there are multiple peak tables for a single trace array, the first table is used by default to mark peaks.

To change the peak labels, select a new label type from the Display menu's Peak Labels submenu:

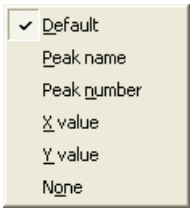


Figure 2-73. Peak Labels menu

This menu is also available from the Linked Data Viewer's shortcut menu. A check mark indicates the current peak labeling option.

Note The Peak Labels menu updates when you switch between trace arrays. ▲

Setting the Linked Data Viewer Options

The display options for the Linked Data Viewer can be changed if required.

To set the display options select **Tools > Options** from the Linked Data Viewer menu. The Linked Data Viewer Options dialog box appears:

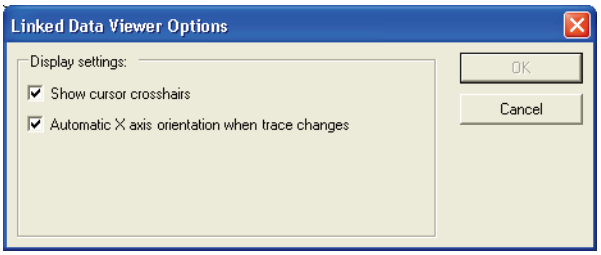


Figure 2-74. Linked Data Viewer Options dialog box

The following options are available, and are selected by default:

Option	Description
Show cursor crosshairs	When selected, crosshairs appear at the position of the last mouse click for the trace. The X and Y values label the appropriate axis. Double-click on any point in the trace to move the crosshairs to the data point closest to the mouse click.
Automatic X axis orientation when trace changes	When selected, the trace box orients the X axis based on the default orientation of the axis unit of the active trace.

Report Viewer

The Report Viewer can invoke report methods created using the XML-based Blaise Inform reporting system.

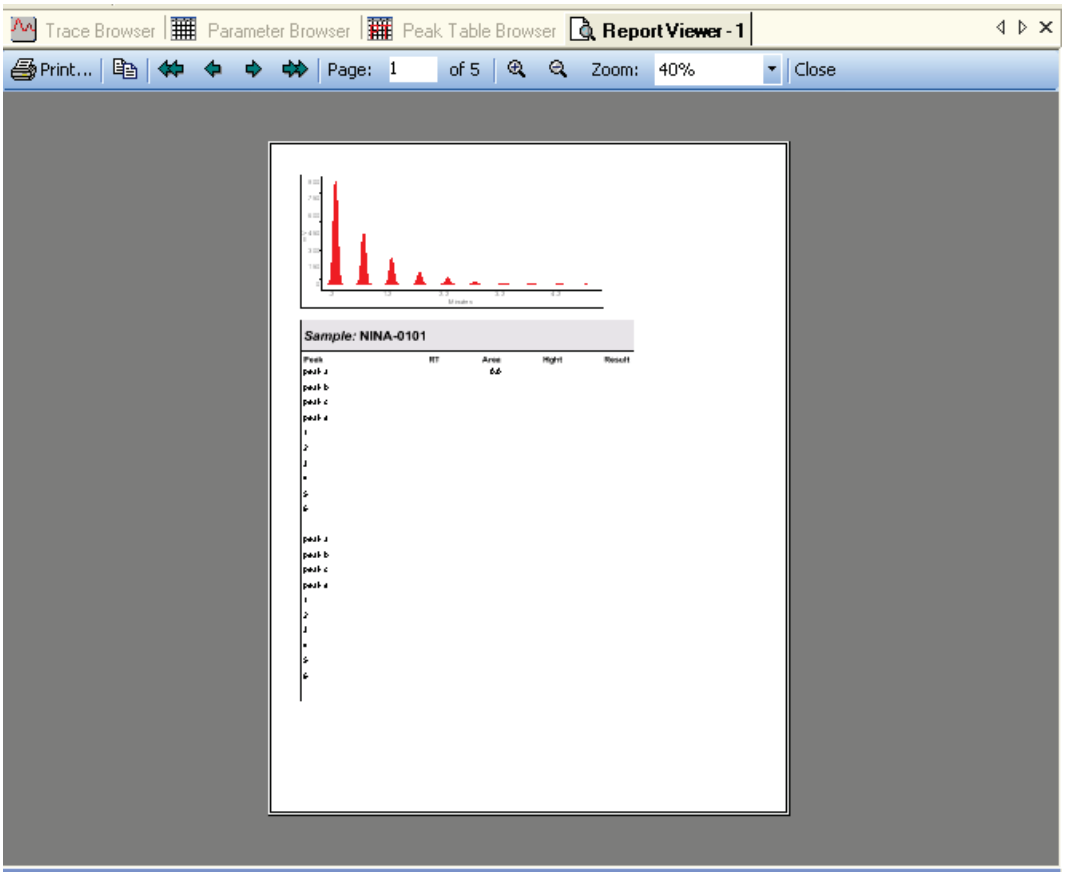


Figure 2-75. Report Viewer

Blaise Inform is a drag-and-drop reporting system that can be used with GRAMS Suite data. Coupled with the Smart Convert facility of Envision, you can apply standardized reports to data originating from multiple instrument vendors.

Blaise Inform Report Designer is a visual tool for setting up these reports, which can be purchased separately. For details see:

http://www.thermoscientific.com/grams

To access the Report Viewer:

1. Do one of the following:

   - Select **Report > Browse Report Method** from the Main menu.

   - Right-click in the File Navigator and select **Report > Browse Report Method** from the shortcut menu.

   - Right-click the **Holding Area** icon, or an individual item in the Holding Area, and select **Browse Report Method** from the shortcut menu. This option can be used to send multiple GAML files to a single report template. See the Holding Area section for more details.

2. A standard Open dialog box appears, containing a list of available template .irm (Inform Report Method) files.

3. Select a report method and click **Open**.

You can also select method files from the Most Recently Used list, which appears when you select **Report** from the Main menu.

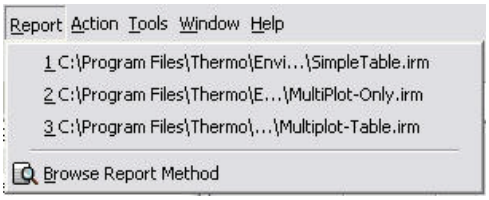
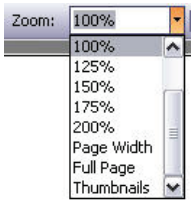


Figure 2-76. Report menu – Most Recently Used list

To add a report to this list you must open it once.

Report Viewer Toolbar

The Report Viewer toolbar contains the following buttons and features:

Feature	Description
Print	Opens a standard Print dialog box.
 Copy	Copies the current page of the report to the Windows clipboard.
 First page	Navigates to the first page of the report.
 Previous page	Navigates to the previous page of the report.
 Next page	Navigates to the next page of the report.
 Last page	Navigates to the last page of the report.
	Shows the current page number and the total number of pages in the report.
 Zoom In	Increases the size of the display. You can also zoom in by double-clicking within the Report Viewer.
 Zoom Out	Reduces the size of the display.
	Controls the display size.
Close	Closes the Report Viewer.

Viewing New Data

You can drag a new GAML file onto the Report Viewer window to re-execute the report method with new data.

The following images show examples of different Report Viewer displays:

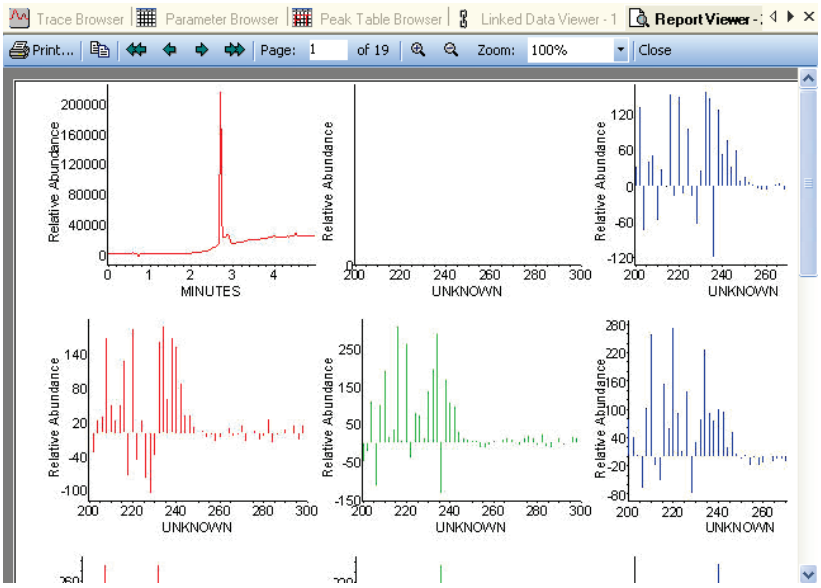


Figure 2-77. Report Viewer example – Multiplot

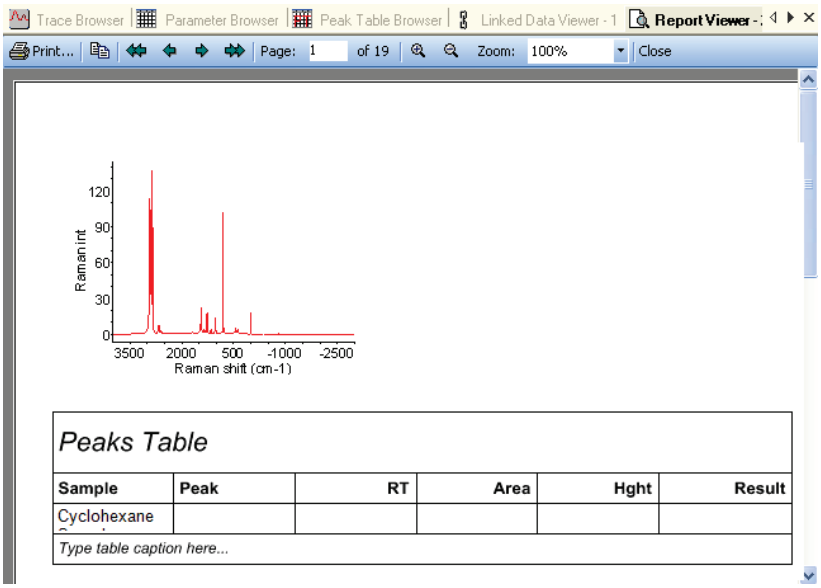


Figure 2-78. Report Viewer example – Raman

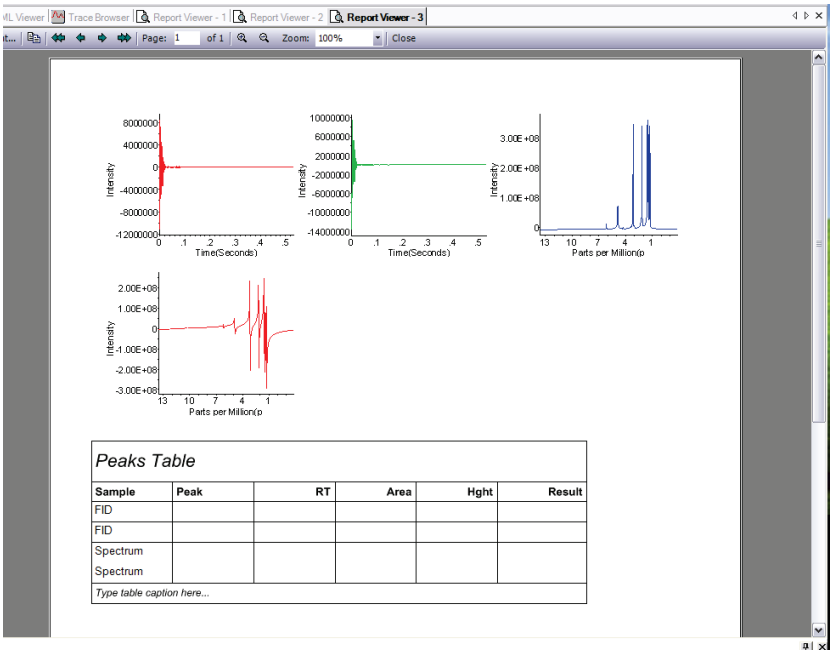


Figure 2-79. Report Viewer example – NMR Data

GAML 3D Viewer

The GAML 3D Viewer provides a 3-dimensional view of a 3D trace. You can choose different display and surface styles.

To open the GAML 3D Viewer, select **Display > GAML 3D Viewer** from the Main menu. In order for this option to be available, you must have a trace node that contains 3D data selected in the File Navigator.

The initial view in the GAML 3D Viewer is a surface plot of the selected data:

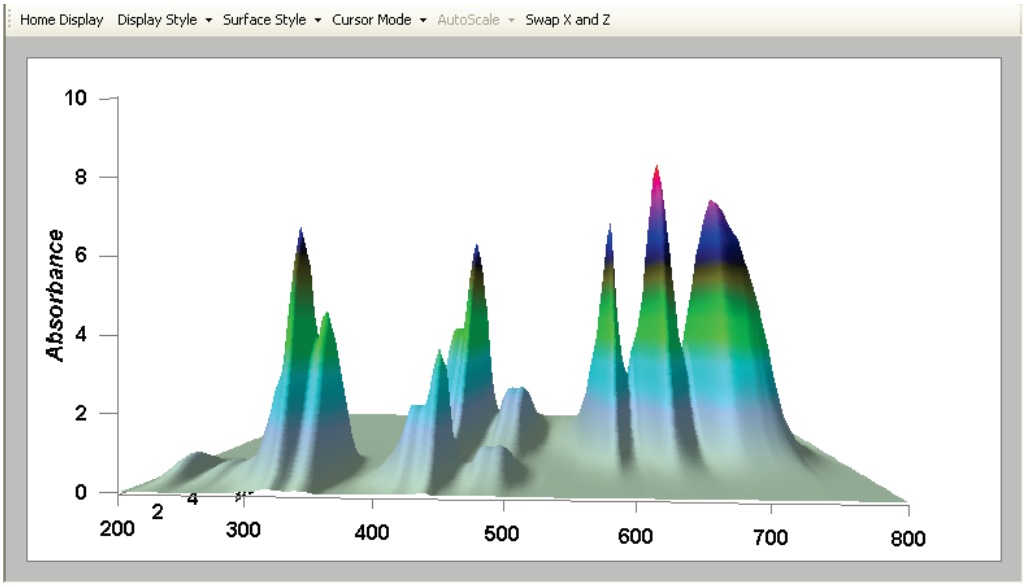


Figure 2-80. GAML 3D Viewer

Note This viewer is an example of Envision's extensibility. It is a plug-in that hosts an OCX control, which is capable of receiving data as defined in [Envision installation folder]\plugins\plugins.xml. A Software Developer Kit for the definition of Envision plug-ins is available by request to Thermo Fisher Scientific. ▲

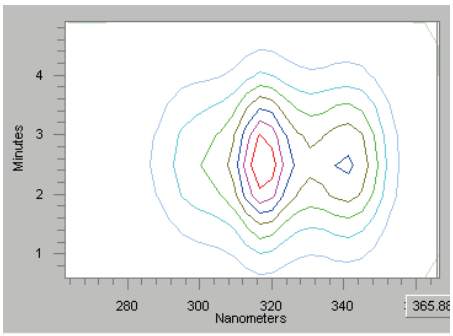
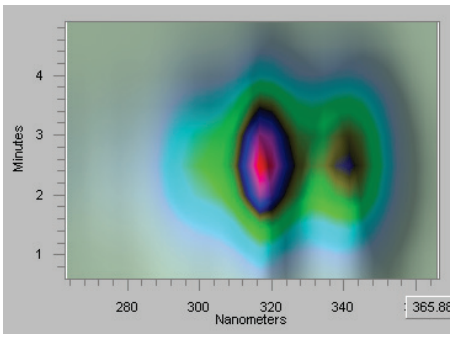
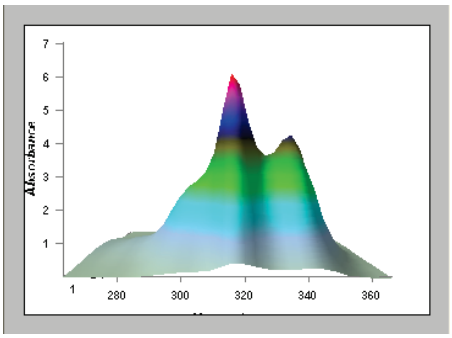
GAML 3D Viewer Menu Options

Across the top of the GAML 3D Viewer is a set of menu options:

- Home Display – Returns to the initial display (undoes previous zoom or rescaling actions).
- Display Style – Selects from contour and surface map options.
- Surface Style – Selects from the several options available for viewing surface plots.
- Cursor Mode – Determines the behavior of the mouse when viewing plots.
- AutoScale – Determines the plot scaling for the axes you choose. This option is only available when viewing 3D data as contour plots.
- Swap X and Z – Plots X data on the Z-axis and Z data on the X-axis. The resulting image is similar to rotating the plot 90 degrees clockwise. This function can be useful when using AutoScale options.

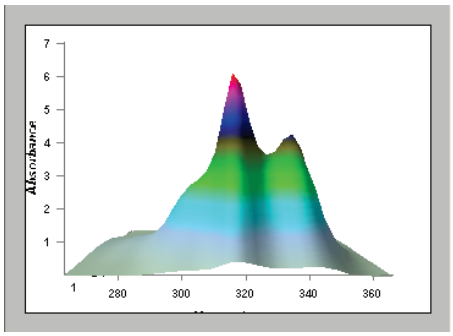
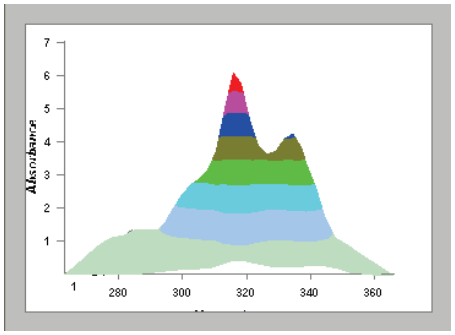
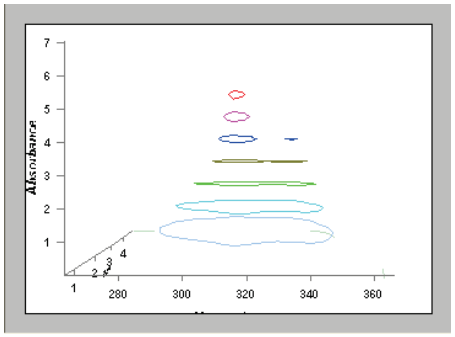
Display Style

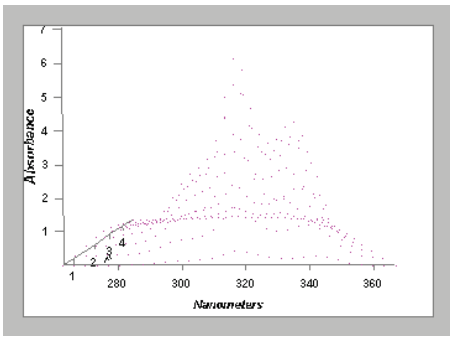
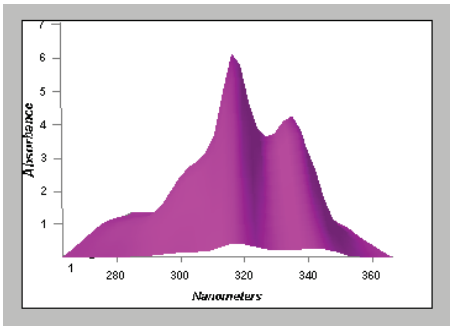
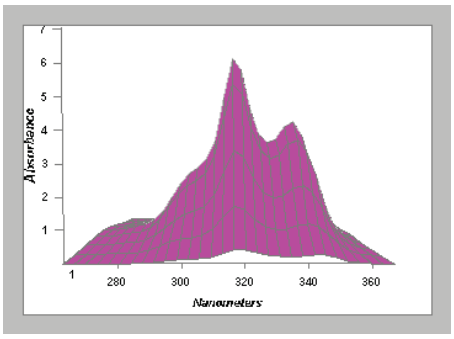
Use the Display Style options for selecting a plot type for 3D data.

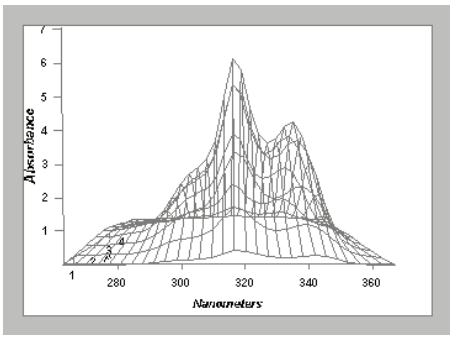
Option	Description
Contour Map as Lines	Plots 3D data with contours as discrete lines: 
Contour Map Filled Colors	Plots 3D data with contours as a continuous color gradient: 
3D Surface Plot	Plots 3D data as a three-dimensional surface plot:  The default rendering uses a color gradient. See the Surface Style section for more display options.

Surface Style

Use the Surface Style options to change the appearance of 3D surface plots.

Option	Description
Shows contour-level color gradient	Displays surface plots using color gradient contours:  This is the default surface style.
Shows contour-level color bands	Displays surface plots using discrete color bands: 
Draws isometric contour lines	Uses colored lines to indicate individual contours on the surface plot: 

Option	Description
Draws only vertex points	Plots only individual data points for the surface plot: 
Draws a solid surface	Displays surface plots without any contours: 
Draws polygon outlines (Wirefilled)	Displays surface plots without any contours, overlaid with a grid to enhance the display of the surface shape: 

Option	Description
Draws polygon outlines (Wireframe)	Displays surface plots using only a grid outline: 

Note When you zoom in on a surface plot, you can move the plot through the viewer by moving the mouse pointer close to the plot edge. The pointer changes to an arrow, such as ▷. Click the arrow to scroll through the plot. ▲

Cursor Mode

To view 3D data most effectively, Envision provides several options to control position, rotation, and level of zoom using the mouse.

Option	Description
Fly	Click and hold down the mouse button to continuously zoom in on the plot. Move the mouse left, right, up, and down to modify the plot orientation while zooming.
Move	Use the mouse to adjust the horizontal and vertical position of the plot within the 3D viewer.
Rotate	Click the plot to establish an axis of rotation, and move the mouse around to change the plot orientation in three dimensions.

Option	Description
Zoom	Move the mouse up and down to zoom the plot in and out, respectively. Move the mouse from side to side to rotate the plot around the Z axis.

AutoScale

When viewing 3D data as a contour plot, the AutoScale menu becomes available. Use the options on this menu to control scaling in any axis or combination of axes.

For example, if you have zoomed in on an area of a plot, but would like to see the range of data in X and Z, while keeping the current Y scale fixed, select “XZ only” from the menu.

The following AutoScale options are available:

- All (XYZ)
- X only
- Y only
- Z only
- XY only
- XZ only
- YZ only

Workspace Pane

The Workspace pane is located at the bottom of the Envision user interface. It contains the currently active data. Elements or sub-elements may be visible in the Workspace pane depending on the browser or viewer to which the data has been sent.

Each open browser or viewer has a separate entry in the Workspace list. When new data is added, the list expands to reflect any changes.

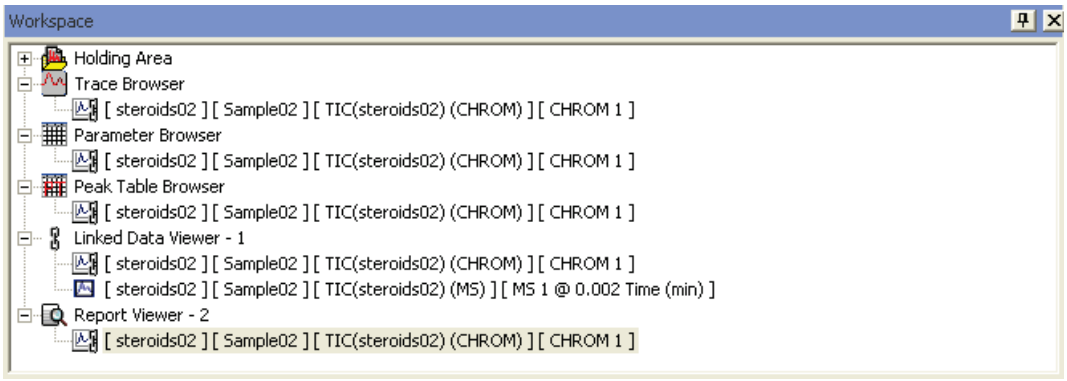


Figure 2-81. Workspace pane

The icon preceding an element's description indicates that element's type. The description matches the text in the File Navigator for the element.

Data appears in the Workspace pane after it has been opened in a viewer, processor, reporting tool, or dragged to the Holding Area.

Holding Area

The Holding Area is a reservoir of data for future use and always appears as the first entry in the Workspace list.

To populate the Holding Area:

- Drag items from the File Navigator pane by highlighting them and then holding down the left mouse button.
- Right-click items in the File Navigator pane and select **Send to Holding Area** from the shortcut menu.

- Close a window, such as a Parameter Viewer, in which case the contained node is moved to the Holding Area.

  This behavior is controlled by the Workspace Settings on the Options window. See the Setting Envision Options section.

The Holding Area can be used to group items together for reporting purposes. This enables you to send multiple GAML files to a single report template.

To send multiple items to a report template:

1. Move the items to the Holding Area, using one of the methods described above.

2. Right-click the Holding Area icon in the Workspace pane, and select **Report > Browse Report Method** from the shortcut menu.

3. Select the report method from the list.

For more information about reporting, see the Report Viewer section.

Workspace Menu Options

Right-click on an item in the Workspace to open a shortcut menu:

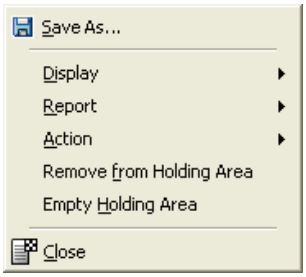


Figure 2-82. Workspace shortcut menu

The options available from this menu vary according to the item that is currently selected in the Workspace pane.

Option	Description
Save As	Saves a node of a GAML file. For more information, see the Using the Save As Option section.
Display	Accesses the Display menu options. For more information, see the Display Menu section.
Report	Accesses the Report menu options. For more information, see the Report Menu section.
Action	Accesses the Action menu options. For more information, see the Action Menu section.
Remove from Holding Area	Remove a single item from the Holding Area. **Note** Closing a GAML file also removes it from the Holding Area. ▲
Empty Holding Area	Empties the Holding Area. All items that are currently displayed in the Holding Area are removed.
Close	Closes the file that is currently selected in the Workspace pane.

You can pin, unpin, resize or close the Workspace pane as needed. See the Customizing the User Interface section.

Customizing the User Interface

This section describes how you can customize the Envision user interface to suit your individual needs.

Hiding and Displaying Features

You can show or hide any of the features that are currently displayed:

- Select or clear an item from the View option on the Main menu. Features currently in view are indicated by checkmarks.
- Click the button, in the top right corner of a pane, to close that pane.

Resizing Panes

To resize a pane in the Envision interface, you can click and drag any of its edges. The pointer changes to or .

Maximizing the Viewing Area

You can float, dock, or unpin the following elements of the Envision application:

- File Navigator
- Data Preview pane
- Workspace pane
- Legend

Click the button to unpin an interface element. The unpinned item is replaced by a tab on the application window, as shown in the following example:

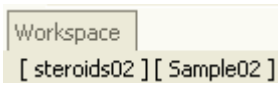


Figure 2-83. Workspace pane – unpinned

Click the mouse pointer on the tab to open the interface element for viewing. While open, click the element's button to re-pin

that element to its original location in the Envision application window.

Click-and-drag the title bar of a pane to “float” it above the main window. The window can remain floating or it can be dragged to a new position indicated by the blue and white docking icons, as shown in the following example:

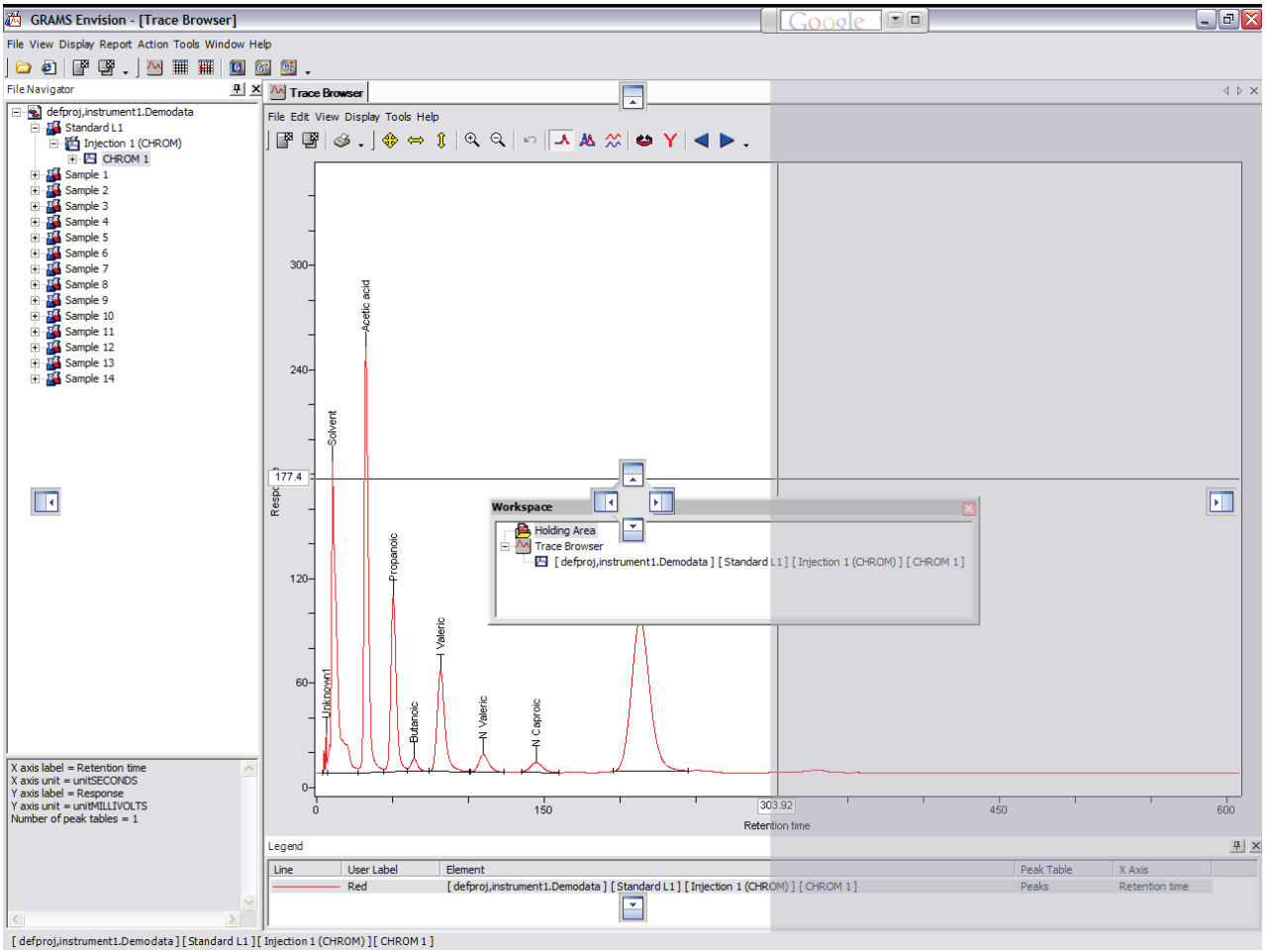


Figure 2-84. Workspace pane – floating

Setting Envision Options

You can set a number of different options for Envision. These options are accessed from the Options window.

To open the Options window, select **Tools > Options** from the Main menu.

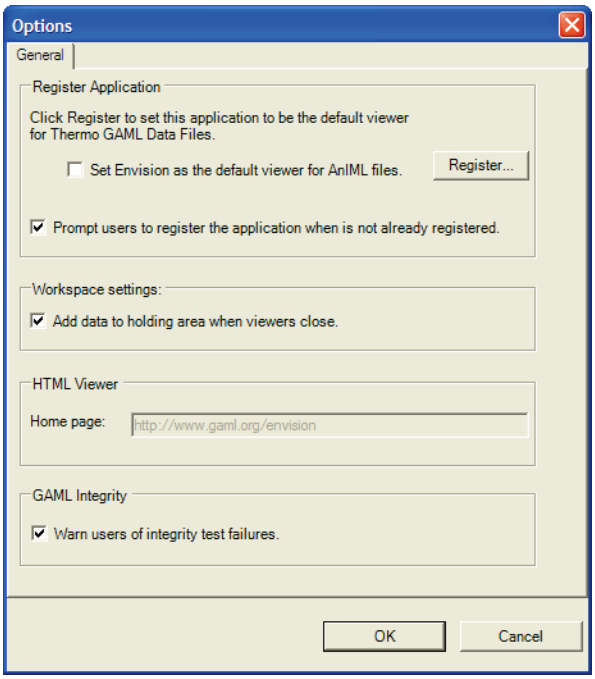


Figure 2-85. Options window

The Options window is divided into four areas:

- Register Application
- Workspace Settings
- HTML Viewer
- GAML Integrity

Register Application

The options in this area of the Options window control allow you to make Envision the default viewer for its supported file types.

Option	Description
Set Envision as the default viewer for AnIML files	Select this check box to make Envision your default viewer for AnIML data files, when you click Register.
Register	Click this button to register Envision as your default viewer for GAML files. If the "Set Envision…" check box is selected, Envision will also become your default viewer for AnIML files.
Prompt users to register the application when it is not already registered	Select this check box to determine, when Envision starts, whether it is the default viewer for GAML files. If it is not, the user will be prompted to register Envision as their default GAML file viewer.

Workspace Settings

This area of the Options window contains a single check box:

Option	Description
Add data to holding area when viewers close	Select this check box to retain references to GAML entities in the Workspace pane's Holding Area when windows containing those GAML entities are closed.

Note Closing a GAML entity entirely removes its details from the Holding Area. ▲

HTML Viewer

This area of the Options window contains a single field:

Option	Description
Home page	Enter the default URL for the HTML Viewer. This page is opened every time you open an HTML Viewer window.

Note When Envision is running in Demo Mode, the home page is restricted to the GAML website's "Example GAML Files" page. ▲

GAML Integrity

This area of the Options window contains a single check box:

Option	Description
Warn users of integrity test failures	Select this check box to warn users when files do not match their internal checksums. A GAML file not matching its internal checksums can indicate unauthorized alteration to that file.

Notes

A. Command Line Syntax

The following commands provide a basic automation interface for Envision to interact with external programs and Web services. A more comprehensive plug-in SDK (Software Development Kit) is available from Thermo Fisher Scientific.

Command Line Arguments	Description
`-wType <window type>`	The window type to open. Valid window types are: • GamlView2D • GamlParam • GamlPeakParm • GamlViewLink • GamlReportViewer • HtmlViewer
`-wNew`	Flag that indicates to create a new window. If flag is absent, Envision attempts to use an existing window. If a window of the appropriate window type is not already open, Envision opens a new window.
`-wName <window name>`	The name for the window. Cannot be used to change the names of the three browser windows.

Command Line Arguments	Description
`-r <report method>`	For the GamlReportViewer window type option only. This flag indicates the Inform method report to use. For example: `-r "c:\report1.irm"` The **–r** command argument is required for the GamlReportViewer window type. It is ignored by any other window type. When generating reports, if multiple GAML files (or RAW files) are provided, the report method is executed on each of the provided GAML files. Each of these reports appears in its own Report Viewer window.
`-f <file>`	The GAML or RAW file to open. For example: `-f "c:\data1.gaml"`
`-c <converter name>`	The name of the converter to be used when a RAW data file is opened. Consult the *Instrument Data File Converters* help for the converter name. For example: `-c AIA_CGM -f "c:\Sample.cdf"`

Command Line Arguments	Description
-u <URL>	URL to open. For example: **-u** "http://www.gaml.org" The –**u** command argument is required for the HTMLViewer window type.

Examples

The following are some command line examples.

To open a single GAML file in the 2D viewer:

```
Envision.exe -wType GamlView2D -wNew -wName "My Trace" -f
"C:\data1.gaml"
```

To open another GAML file in the same 2D viewer as above:

```
Envision.exe -wType GamlView2D -wNew -wName "My Trace" -f
"C:\data2.gaml"
```

To create a report in a new window:

```
Envision.exe -wType GamlReportViewer -wNew -wName "My Report"
-r "c:\methods\mymethod.irm" -f "c:\data\file1.gaml"
```

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