Column Manager Operating Manual

1 Introduction

With Column Manager, a LabSolutions system (the "System" below) can be used to manage columns used for LC, GC, LCMS, or GCMS analysis.

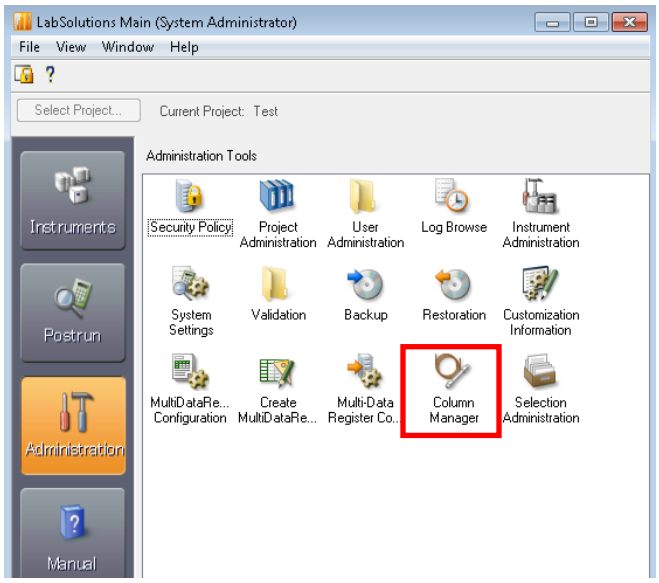
1) Column information (column name, ID, and column specifications, such as internal diameter and length) can be registered and edited. Previously registered column information can be copied and registered.

2) Information such as the last acquired date, total number of injections, and instrument connection status are displayed, so that the column usage status and usage frequency can be checked easily.

3) A summary of analytical results for specified columns can be displayed or printed. The information displayed can be filtered using parameters such as instrument name or data acquired date.

4) You can check the degradation status of the column by displaying the injection time series data.
You can check the transition of numerical values such as the number of theoretical plates, the tailing factor, the resolution of the component peak and the Pressure Immediately Prior to Injection.

To open the [Column Manager] window, double-click the (Column Manager) icon in the [Administration Tools] window.



Note

Columns can be managed strictly by setting security policies. For details, see 2.3 Security Policy Setting.

2 Settings (Preparation)

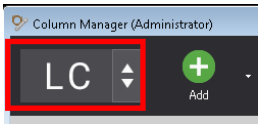
2.1 Registering Column Information

Column information (column name, ID, and column specifications, such as internal diameter and length) can be registered in the System as follows.

1. Select either [LC] or [GC] based on the type of column to register.

   To register a column for use in LCMS analysis, select [LC].

   To register a column for use in GCMS analysis, select [GC].



2. Click [Add]-[New] on the menu.

   To register new column information by copying previously registered column information, select the column row to copy in the column list view and click [Add]-[Copy] on the menu. For more information about the column list view, see the [Help] menu.

3. In the [Column Registration] window, enter the column information and click [OK].

Note

- LC Register the column with CMD in the [CMD Information] window of the analysis program instead of the above procedure.
- If the [Disable] checkbox is selected in the [Column Registration] window, then column information cannot be edited.
- Columns can also be registered in the System using a [Realtime Analysis] program.
- Column information cannot be edited for columns with a status of [In Use]. Close the [Realtime Analysis] program currently running before editing column information. For information about the status, see 3. Confirming and Printing the Column Usage Status.

2.2 Specifying Columns in Instruments

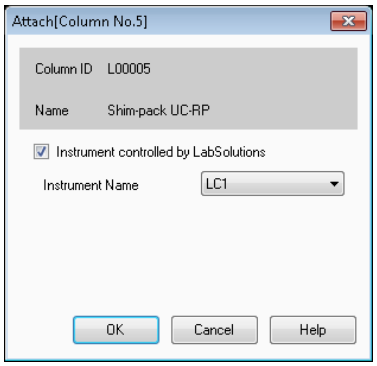
The following describes how to specify columns for chromatographs in the System.

1. In the column list view, select the column to attach in the instrument.

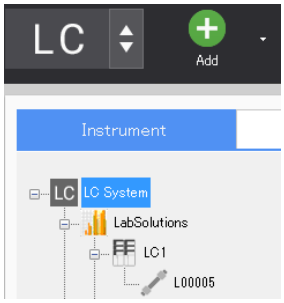
	Name	Column ID	Column No.	Status	Number of In...	Last Acquire...	Last Acquire...
1	Shim-pack UC-RP	L00001	1	Not in Use	18	5/29/2017 6:21:...	System Administr...
2	Shim-pack UC-RP	L00002	2	Not in Use	27	5/29/2017 6:54:...	System Administr...
3	Shim-pack UC-RP	L00003	3	In Use	0		
4	Shim-pack UC-RP	L00004	4	Rent	0		
5	Shim-pack UC-RP	L00005	5	Disposed	20	5/29/2017 6:32:...	System Administr...
6	Shim-pack UC-RP	L00006	6	In Use	0		
7	Shim-pack UC-RP	L00007	7	Not in Use	0		
8	Shim-pack UC-RP	L00008	8	Not in Use	0		
9	Shim-pack UC-RP	L00009	9	Not in Use	0		

2. Click [Edit]-[Attach] on the menu.

3. Select the instrument to which the column is to be attached and then click [OK].



4. In the System, confirm that the column is properly specified in the [Instrument] tree.
   The [Instrument] tree displays the instrument and column connection status in a tree format.



After finishing this procedure, attach the column in the actual instrument.

Note

- LC You cannot set the column with CMD on the device using the above procedure. Click [Read from CMD...] on the [Column Oven] tab of the [Method Editor (Instrument Parameters)] view of the analysis program to register.
- To cancel the column setting for an instrument in the System, click [Edit]-[Detach] on the menu. However, [Detach] is disabled if the column type is [GC].
- [Attach] and [Detach] are disabled if the column status is [In Use]. Close the [Realtime Analysis] program currently running before performing the operation. For information about the status, see 3. Confirming and Printing the Column Usage Status.
- If the column connection setting is changed for an instrument, the changes are automatically applied to configuration settings when the [Realtime Analysis] program that connects to the instrument is started or registered in the batch queue. When the [Realtime Analysis] program is started, confirm that the column specified in configuration settings matches the column actually attached in the instrument.
- Canceling an instrument column setting results in the following changes to the configuration settings for the [Realtime Analysis] program.
  LC The column item is deleted from configuration settings.
  GC The column information is reset to the default value.
- If the column shown connected in the [Instrument] tree is different than the column specified in the [Realtime Analysis] program configuration settings, then either click [Display]-[Refresh] on the

menu in the [Column List] window or press the [F5] key to update the display. The display might not update properly, depending on when the operation is performed. If so, specify the column information again in [Realtime Analysis] program configuration settings. After clicking [OK] in the [System Configuration] window, try updating the display again by either clicking [Display]-[Refresh] on the menu in the [Column List] window or pressing the [F5] key.

2.3 Security Policy Settings

To strictly manage the columns registered in the System, it is recommended that the following checkboxes on the [Security Policy Settings]-[Instrument] tab page be selected.

Policy Setting	Description
Enable audit trail function in Column Manager	This setting records a log in the audit trail whenever a column is registered in the System, column specifications are changed, or an instrument column setting is changed.
Prohibit data acquisition when columns are not set	If an instrument that enables columns to be specified in [System Configuration] is used, this setting prohibits data acquisition if the column registered in the column list is not specified in the method file. Also, columns not registered in the column list cannot be specified in configuration settings.

Note

If both [Enable audit trail function in Column Manager] and [Apply audit trail function for system configuration] checkboxes are selected, then logs are recorded in both audit trails whenever column information is changed using a [Realtime Analysis] program.

3 Confirming and Printing the Column Usage Status

Confirm and print the column usage status as follows.

1. On the [Column Search] tab page, enter column filtering conditions and then click [Search]. To confirm the column currently attached in the instrument, click the instrument in the [Instrument] tree.

2. Confirm the column usage status in the column list view.

	Name	Column ID	Column No.	Status	Number of In...	Last Acquire...	Last Acquire...
1	Shim-pack UC-RP	L00001	1	Not in Use	18	5/29/2017 6:21:...	System Administr...
2	Shim-pack UC-RP	L00002	2	Not in Use	27	5/29/2017 6:54:...	System Administr...
3	Shim-pack UC-RP	L00003	3	In Use	0		
4	Shim-pack UC-RP	L00004	4	Rent	0		
5	Shim-pack UC-RP	L00005	5	Disposed	20	5/29/2017 6:32:...	System Administr...
6	Shim-pack UC-RP	L00006	6	In Use	0		
7	Shim-pack UC-RP	L00007	7	Not in Use	0		
8	Shim-pack UC-RP	L00008	8	Not in Use	0		
9	Shim-pack UC-RP	L00009	9	Not in Use	0		

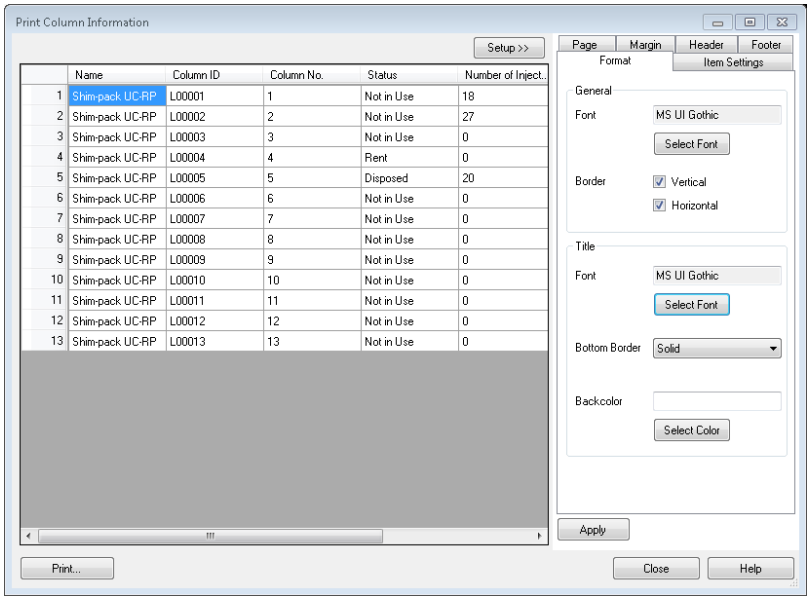
Note

- For a description of the information displayed in the column list view, see the [Help] menu.
- The status can be changed by clicking [Edit]-[Change Status] on the menu. The following types of column status are available.

Status	Description
Not in Use	Column information can be edited and the column can be specified for an instrument.
In Use	This status indicates that the column is specified in configuration settings for a [Realtime Analysis] program currently running. (The column status cannot be changed to [In Use] from Column Manager.) **Column information cannot be edited and the column cannot be specified for an instrument.**
Rent	This status is specified when the column is on loan to another system. **Column information can be edited, but the column cannot be specified for an instrument.**
Disposed	This status is specified when the column has been discarded. **Column information can be edited, but the column cannot be specified for an instrument.**

3. In the column list view, select the column information to print.

4. Click [Print]-[Print Setup] on the menu to specify print settings.



5. Click the [Print] button.

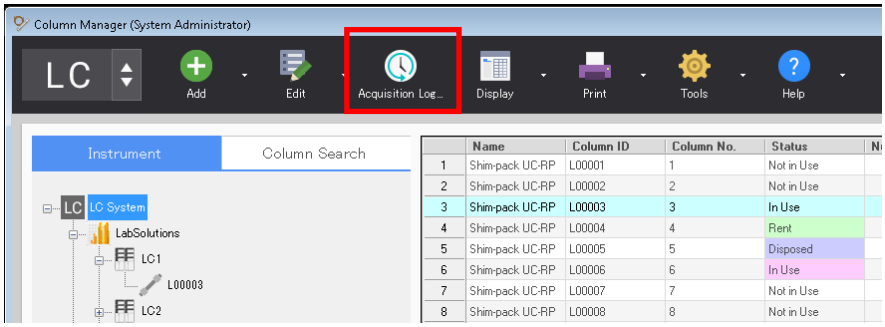
Note

If the [Enable audit trail function in Column Manager] policy checkbox is selected, then a history of changes to column information and instrument connection settings can be checked by clicking [Edit]-[Show audit trail log] on the menu.

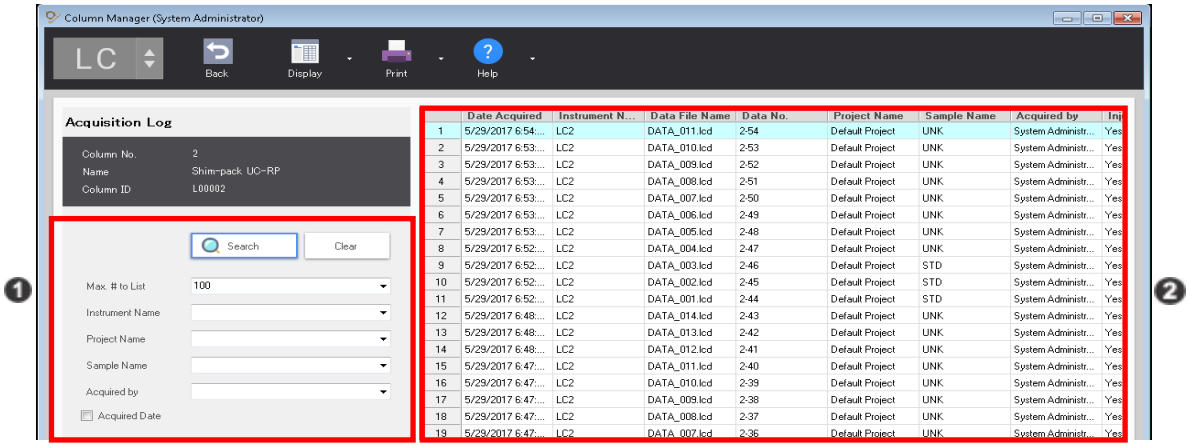
4 Confirming and Printing Analytical Results Obtained Using the Column

Analytical results of data acquisition can be checked and printed for each column. This is applicable for all analytical results from data acquired using LabSolutions version 6.81 or later.

1. Select the column in the column list view and then click [Acquisition Log] on the menu.



2. Check the log history of analytical results for the selected column.



❶	Specify filtering conditions for analytical results.
❷	Displays analytical results based on filtering conditions. For a description of the information displayed, see the [Help] menu.

3. Click [Print]-[Print Setup] on the menu to specify print settings.

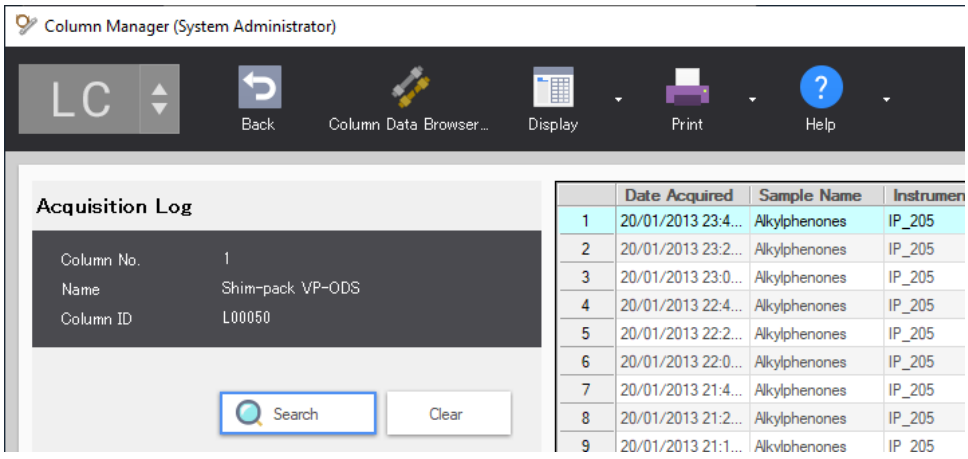
4. Click the [Print] button.

5 Check the column degradation status

You can check the degradation status of the column by displaying the injection time series data. You can check the transition of numerical values such as the number of theoretical plates, the tailing factor, the resolution of the component peak and the Pressure Immediately Prior to Injection.

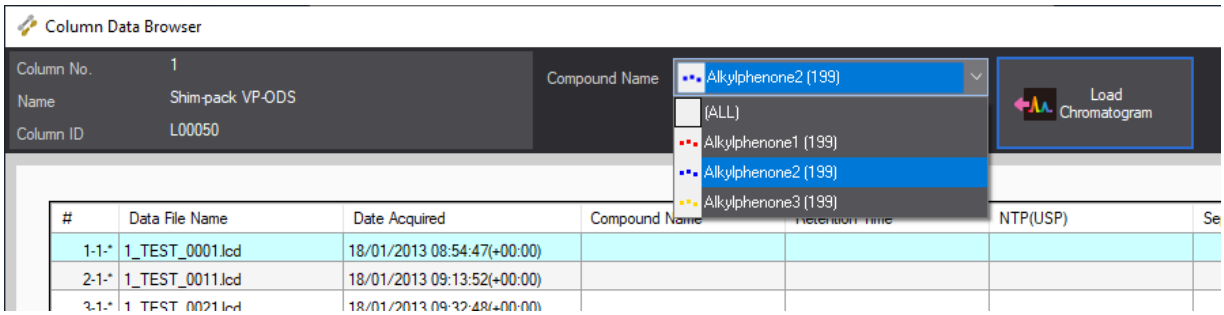
5.1 Confirm changes in index values

1. With the column analysis result history displayed, click the [Column Data Browser] menu.

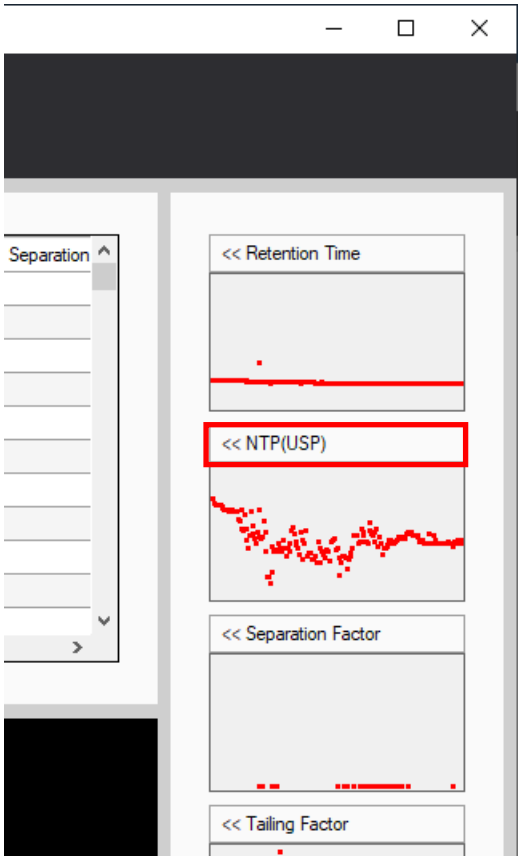


2. Select the compound name of the component peak you want to focus on.

   * A series of analytical data must be identified by the compound name. Results are displayed for identified data.

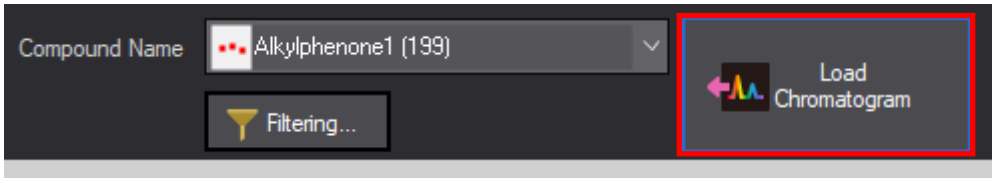


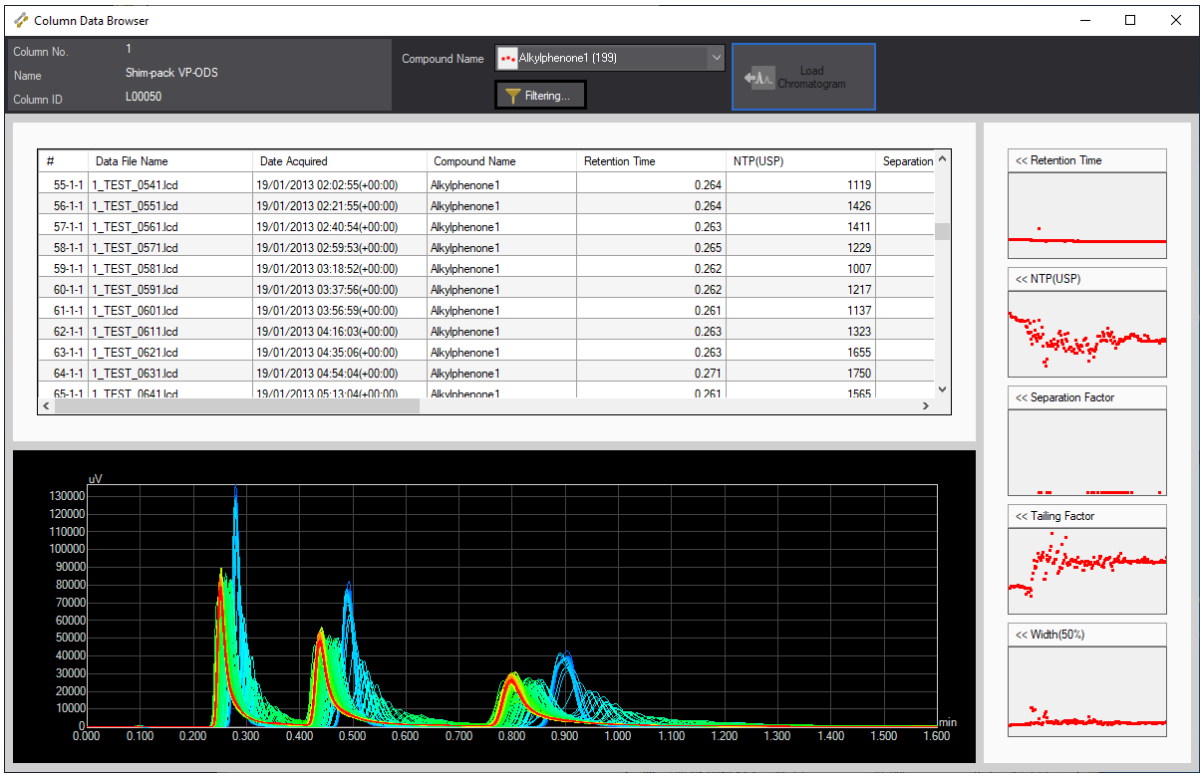
3. Click the column parameter you want to view. The injection time series transition of the corresponding parameter is displayed at the bottom of the screen.



5.2 Confirm the chromatograms

1. Click [Load Chromatogram] to overlay the chromatograms of the data displayed in the table.





If there is a large amount of data and it takes a long time to process, the data can be thinned out and displayed by executing [Filtering].