223-60230H
July 2013

LabSolutions LC/GC

Release Notes

Version 5.57

Read the instruction manual thoroughly before you use the product.
Keep this instruction manual for future reference.

<< Notices >>

1) If the user or usage location changes, be sure this Instruction Manual is always kept together with the product.
2) To ensure safe operation, contact your Shimadzu representative for installation, adjustment, or re-installation after moving the instrument to a different site.
3) The content of this manual is subject, without notice, to modifications for the sake of improvement.
4) Every effort has been made to ensure that the content of this manual was correct at the time of creation. However, in the event that any mistakes or omissions are discovered, it may not be possible to correct them immediately.
5) The contents of the hard disk in a PC can be lost due to an accident. To protect your important data from accidents, be sure to backup your data.
6) Microsoft and Windows are registered trademarks of Microsoft Corporation in the USA and other countries.

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1. Overview

This document provides additional information and notes regarding the specification issues of LabSolutions. (The LC and GC specific issues are marked as [LC] and [GC], respectively.) Please read the release notes before using LabSolutions Chromatography Data System.

2. Installation Notes

2.1 Operating Environment

2.1.1 Windows Version

This software operates on the following Windows version.

Software Name	Windows Version
LabSolutions	Windows 7 Professional English 32bit Windows 7 Professional English 64bit Windows Vista Business English 32bit version SP1 or later Windows XP Professional English 32bit version SP2 or later

2.2 Computer System Issues

2.2.1 Memory Requirements

We recommend a minimum of 2 Gbytes of RAM to use LabSolutions on 32bit Windows, and recommend a minimum of 4 Gbytes of RAM to use LabSolutions on 64bit Windows.

2.2.2 Windows Virtual Memory Settings

When too many applications or Postruns are launched, the following message may be displayed and the operation may be terminated.

“Your system is running low on virtual memory. Please close some applications. “

This is because applications consume RAM and virtual memory allocated to the PC.

When the above message is displayed, it is necessary to limit number of applications concurrently used or add more memory. If not often, this can be avoided by increasing the paging file size of virtual memory on Windows XP/Vista/7. (To increase virtual memory size, select Control Panel>System>Advanced tab, and press [Performance Options] and [Change] button. Then set Initial Size and Maximum Size to increase the paging file size.)

2.2.3 Windows User Account

When using LabSolutions, set the access level to “Standard user” or higher for Windows 7, "Power Users Group" or higher for Windows Vista, and "Users Group" or higher for Windows XP.

2.2.4 Notice for Display Properties Settings

In the Control Panel under the Display Properties Settings, set Colors to "High Color (65536)" or more.

2.2.5 Notice for Free Disk Space

It is recommended that 512 Mbytes free disk space or more be available at all times for the LabSolutions software. Data files may consume more disk space during a batch run. When LabSolutions data files are stored to the same drive as the Window system drive, available disk space may drop below 512 Mbytes. In such a case, long batch runs may not be acquired reliably. If you have multiple hard disk drive, it is recommended to store data files to another drive which is not installed Windows system.

This software shows the following warning message if the available disk space is less than 1Gbyte when the Start button of Single Run or Batch is pressed.

"There is little free disk space. …"

When this message is displayed, please delete unnecessary files on the data drive to extend available disk space.

When the available disk space is less than 512Mbytes on starting acquisition, the batch run is stopped to wait restarting for safety. After extending available disk space, restart the batch.

2.2.6 Keeping Computer System Stable

It is highly recommended to reboot your PC periodically, for example once a week, in order to avoid unexpected Windows incidents because resource leak and memory fragmentation may occur depending on the PC environment.

2.2.7 Number of Systems being controlled with a PC

This software can control a maximum of 4 systems in a computer, where a maximum of 2 PDA detectors can be connected to HPLC systems.

2.2.8 Notice for Windows User Switching

Please be advised that LabSolutions does not work properly on the Windows user switching (which allows several users to log on the Windows and run programs simultaneously).

2.2.9 Notice for Windows Aero in Windows 7/Windows Vista

If you change angle or size of the 3D graph at its properties screen on the Windows Aero environment, the graph is not drawn in the preview screen. Please disable the Windows Aero.

2.2.10 Notice for Taskbar in Windows 7

In Windows 7, to always display [LabSolutions Service] icon on the taskbar, click [Customize] on the taskbar and then change the [LSSServiceMonitor.exe] behavior from [Only show notification] to [Show icon and notification].

2.2.11 Notice for Executing the Analysis Program in Windows 7

In Windows 7, if the analysis program for instrument 2 or later is pinned on the taskbar by using [Pin this program to taskbar] function, the analysis program for instrument 1 would be executed. The analysis program should be executed from the LabSolutions launcher.

2.2.12 Precautions regarding hard disk defragmentation

Do not perform hard disk defragmentation during analysis.

If performed, it may cause unexpected problems such asdata buffer over flow and acquisition will be terminated.

Because some PCs are configured to perform hard disk defragmentation automatically, make sure that selecting [Start]Menu-[all programs]-[accessories]-[system tools]-[disk defragmentater], scheduling function is disabled before Data Acquisition.

2.3 PDA Installation Issues

2.3.1 Wavelength Calibration

When a PDA detector is installed, the PDA Calibration program must be run before LabSolutions can acquire data from the detector.

In many cases the actual calibration has already been done at the factory. If the detector is recalibrated and the procedure is not followed accurately, the detector may not function properly. We recommend that you check with your local service person prior to calibrating a PDA detector.

To calibrate a PDA detector, select [Start]>[Programs]>[LabSolutions]>[Instrument Maintenance Tools]. In the [Application] drop-down box select "PDA Utility(SPD-M10Avp/M20A)" or “SPD-M30A Utility”. The PDA detector must be configured with LabSolutions prior to performing the wavelength calibration on PDA Utility. If it is not configured, PDA Utility cannot recognize the PDA detector.

3. LabSolutions Software Notes

3.1 General

3.1.1 LabSolutions File Compatibilities

LabSolutions methods, data, batch, and report format file is upper compatible. Files created in the latest version may not be used in earlier versions.

Please use the same LabSolutions software version in your laboratory.

3.1.2 Area and Height Values Determined with LabSolutions

Area and Height values determined with LabSolutions, for data files acquired with CLASS-LC10/GC10 software will typically differ from the precise values determined by CLASS-LC10/GC10 software.

The Integration Algorithm is identical to CLASS-LC10/GC10. However, R.Time, Area and Height are slightly different (R.Time: about 0.03% Area & Height: about 0.005%) because higher precision arithmetic is used in the internal calculations. Below are examples of CLASS-LC10/GC10 and LabSolutions data. In general, these differences have no effect on the quantitation of results.

R.Time		Area		Height	
CLASS-LC10/ CLASS-GC10	LabSolutions	CLASS-LC10/ CLASS-GC10	LabSolutions	CLASS-LC10/ CLASS-GC10	LabSolutions
1.439	1.439	700645	700645	119239	119239
1.863	1.863	7536053	7536053	882292	882292
3.017	3.018 (0.03%)	685004	685003 (-0.0001%)	85928	85928
5.183	5.183	512516	512517 (0.0002%)	44088	44088
5.714	5.714	1114900	1114901 (0.0001%)	102930	102930

3.1.3 Compatibility with CLASS-LC10/GC10 and CLASS-VP Area and Height Values

To reduce the precision of LabSolutions calculations in order to make them more compatible with CLASS-LC10/GC10, in Windows directory create a text file CRHAKEI.INI by using a text editor like Notepad.exe, containing the following text:

```
[Mode]
PacCompatible=1
```

Although the above area and height become the same values between CLASS-LC10/GC10 and LabSolutions by this setting, it is not always matched for all data files. Please be advised that the function check files included in the LabSolutions installation CD-ROM are not available as the peak integration is performed by the CLASS-LC10/GC10 compatible mode.

The peak-integration algorithm of LabSolutions is identical to CLASS-VP CHROMATOPAC Integration Package. However, concerning chromatograms which are acquired with sampling period of other than 500msec (default setting), the peak integration results may slightly differ between these software because LabSolutions takes into account the sampling period variable with double precision while CLASS-VP does with single precision.

3.1.4 Compatibility of User Administrations Information

User Administration Information is not inherited from LCsolution and GCsolution, if their versions are less than 5. Please register it on LabSolutions Ver. 5. If you use the CLASS-Agent user authentication tool on the MSDE, SQL Server or Oracle database, you can share a database to inherit for user ID and user name. However, please set the user rights again.

3.1.5 Notice for System Log of LCsolution and GCsolution less than version 5

LabSolutions Ver. 5 cannot display System Log of LCsolution and GCsolution, if their versions are less than 5. Please display it with Log Browser of LCsolution and GCsolution or check it as an exported text file.

3.1.6 Notice for System Administration, Log and User Profile Database

LabSolutions manages system administration such as users and security policies, log and user profile information by database.

By default, the following Microsoft database files are used.

C:\LabSolutions\System\ShimadzuAttest.mdb

C:\LabSolutions\Log\LSSLog.mdb

C:\LabSolutions\System\ LSSProfile.mdb

Please be advised that they cannot be shared on the network, though the above MDB files are specified by the following MDB Setting Tool.

C:\Program Files\LabSolutions\LSSSetMdbForm.exe

To share system administration, log and user profile information on the network, please use the SQLServer(MSDE) or Oracle database by referring "2.5 Link with CLASS-Agent in 223- 60092 LabSolutions System Users Guide".

When the MDB file is destroyed, it can be repaired by clicking the Optimize/Repair database button in the MDB Setting Tool. However, please backup the above MDB files into another folder or onto another media.

3.1.7 Notice when multiple programs are performed concurrently

When you perform many programs(Realtime Analysis, Analysis Editor, Postrun, Browser, etc) the functions might be unstable due to lack of available memory. As the upper limit of total 8 programs, please close unnecessary programs if you have performed too many programs.

3.1.8 Notice for File Naming

File in Windows can be created with file name longer than 259 bytes, but LabSolutions cannot handle the file with file name longer than 259 bytes.

In addition, this software limits the file name to 63 characters or less in the "Save As" dialog. Please name it shorter than the above limitation.

3.1.9 Notice for Saving Method

When a method file is saved several times, the file size may increase due to compound file fragmentation. In such a case, please save the method in a new file using the Save Method File As command from the File menu. The file size will be optimized.

3.1.10 Restriction in multiple files selection

When you can select multiple files in the "File Open" dialog, there is a limit to the number of files that can be selected.*

If you see the following message, it is exceeded the maximum number of files to open, please reduce the number of selected files.

"(Filename) File not found. Please verify the correct name was given."

* "Check Raw Data" > "Open Data Files" dialog, "Report" window > Summary Report Items > "Open File(s)" dialog etc.

3.1.11 Restriction in handling multiple data files

In application windows like Quant Browser and Calibration Curve, you may not be able to read more data files because of Insufficient memory error with large amount of data handling.

3.1.12 Assistant Bar Customization

In Assistant Bar Customization, LabSolutions gets the information from its corresponding child window. When no detector is configured in System Configuration, the Calibration Curve child window cannot be opened. Therefore the information of Calibration sub-bar is not displayed. If you want to customize the Calibration sub-bar, please configure one or more detectors in System Configuration.

3.1.13 Maximum Number of Detectors Supported by an HPLC System[LC]

Each system in LabSolutions is limited to a maximum of 5 LC detectors, including a PDA detector, with the exception of CBM-20Alite in which a PC-55 Single Channel A/D board cannot be used. Other detector types are supported in the following way: a maximum of 2 digital detectors such as SPD-20AV, RF-20AXS and RID-10A, and a maximum of 2 PC-55 Single Channel A/D boards.

LabSolutions is limited to an integrated UV detector and a PDA detector for LC-2010. A PDA detector should be configured after the 2D normal detectors.

3.1.14 Notice of Displaying Channel name

In the label of chromatogram shown in data acquisition and data analysis, or in the line name of the chromatogram in report, if only one detector channel exists, channel name (Ch1) is not displayed. For detectors which output multi-channel data such as SPD dual mode, channel names (Ch1, Ch2 and so on) will be added.

3.1.15 Notice for System Check Result Output[LC]

When instrument type is not LC-2010, the output format of the system check results, though LCsolution Ver. 1 had an output of instrument list on it, was changed to remove the list because of duplicate contents.

3.1.16 Notice for absorbance range of PDA Contour plots[LC]

Absorbance range of the contour (the legend of colors) shows up to 4 digits.

3.1.17 Notice for the Graph Comment of the Magnification Intensity

When the factor is set to the chromatogram, it cannot be reflected in the intensity value of the graph comment. Please select the check of the "Display Y axis value at intensity" in the "Graph Property" and set the mouse position on the chromatogram if you display magnification intensity.

3.1.18 Notice for opened child windows at starting the program

When the program starts, only the child window, which was active at the last ending of the program, will be opened by default.

You can open multiple child windows by the settings shown below. However, more child windows are opened, it takes longer time to start the program.

To change the mode of opening child windows, execute the following files that are included in LabSolutions\Supplement folder of the installation CD-ROM.

ChildDispModeAnalysis_AlwaysDefault.reg

The Realtime Analysis program will open the following child windows: "Data Acquisition", "Realtime Batch", "Calibration Curve", "Report", "Method Editor" and "Batch Editor".

ChildDispModeAnalysis_LastActive.reg

The Realtime Analysis program will open only the child window, which was active at the last ending. (Default)

ChildDispModeAnalysis_LastOpenAll.reg

The Realtime Analysis program will open all the child windows, which were opened at the last ending.

ChildDispModePostrun_AlwaysDefault.reg

The Postrun Analysis program will open the following child windows: "Data Analysis", "PDA Data Analysis", "Calibration Curve", "Postrun Batch", "Data Comparison", "Report" and "UV Library Editor".

The Browser program will open the following child windows: "Quant Browser", "Data Browser" and "Report".

ChildDispModePostrun_LastActive.reg

The Postrun Analysis or Browser program will open only the child window, which was active at the last ending. (Default)

ChildDispModePostrun_LastOpenAll.reg

The Postrun Analysis or Browser program will open all the child windows, which were opened at the last ending. (If both the Quant Browser and Calibration Curve child windows were opened and the Quant Browser was active in Browser program at the last ending, the Calibration Curve child will not be opened at the next start.)

3.1.19 Notice for the Complexity of User's Password

When "Password must meet complexity requirements" is selected in Security Policy, it is necessary for LabSolutions to use three kinds of characters (alphabet, number and mark) as password for the secure user management.

(For CLASS-Agent, it is required to use two kinds of characters (alphabet and number) as password.)

Therefore, when the LabSolutions user authentication database links up with the CLASS-Agent user authentication database, it is required to use three kinds of characters (alphabet, number and mark) as password on changing user passwords and adding users though the user created in the CLASS-Agent can log in LabSolutions using the current password.

3.1.20 Notice for Screen Lock on the Multi-User Login Mode

Automatic screen lock time is applied to all users when multiple uses are logged in the LabSolutions software. When the lock time is expired for a user because of no operation, all user's windows are locked.

For example, suppose the automatic screen lock time set to 3 minutes and 1 minute is expired after User A logs in the LabSolutions software with no operation. When User B logs in the LabSolutions software all windows are locked after 2 minutes if User A does not operate it.

3.1.21 Notice when Analysis program is hung up by an unexpected error

When the analysis program is hung up by an unexpected error, there is a case the PC cannot be shutdown. In such a case, terminate the analysis program by the following procedure.

[Procedure]

1) Run the following program from the Start menu.
   C:\Program Files\LabSolutions\LSSEndProcess.exe
2) Select the instrument name from the list box.
   Windows XP
   When the Windows login user has Administrator right, select "Current user" and check off "Protect my computer and data from unauthorized program activity".
   Then click [OK].
   When the user does not have Administrator right, select "The following user" and set a user name having Administrator right and password (required), and then click [OK].
   Window Vista
   When the Windows login user has Administrator right, the following message is displayed.
   "Windows needs your permission to continue"
   "If you started this action, continue."
   Then click [Continue].
   When the user does not have Administrator right, set a user name having Administrator right and password (required), and then click [OK].
   Window 7
   When the Windows login user has Administrator right, the following message is displayed.
   "Do you want to allow the following program to make changes to this computer?"
   Then click [Yes].
   When the user does not have Administrator right, set a user name having Administrator right and password (required), and then click [OK].

Note. When a different user having Administrator right is specified, the user password except for blank is required.

Note. Though the analysis window is closed, there is a case a background process is resident. The process can be terminated by the above procedure, too.

3.1.22 Notice when printing a log from the Shimadzu User Authentication Tool

When in cooperation with the Shimadzu user authentication tool, the log about user management can be displayed as a log of the Shimdazu user authentication tool, but a character piece may be generated if it prints. In case printing the log about user management, please print from the log browser of LabSolutions.

3.1.23 Notice for Screen Lock on the [Login by Windows account] mode

Be advised that you cannot use the LabSolutions Screen Lock function when [Login by Windows account] is checked in the Security Policy Settings. Please use the Screen Lock function supported by Windows.

3.1.24 Notice for peak integration by setting minimum area/height

When the minor peaks in the tailing/leading peak are deleted by setting the minimum area or height in the integration parameters, the peak area of the deleted peaks is not added to the area of the main peak.

Please note the boundary between the tailing/leading peak and the minor peaks is not shown in the display and report.

3.2 Instrument Configuration

3.2.1 Notice for Changing Instrument Configuration

Once an instrument is configured with LabSolutions, the Instrument Configuration should remain unchanged. On starting the Realtime Analysis window, if "Modules Used for Analysis" set to LabSolutions is different from the actual system configuration, LabSolutions fails to connect, the method cannot be downloaded, or you cannot start acquisition. In such cases, please reconfigure the system.

3.2.2 Notice for Changing Configuration

When modules used for analysis, configuration parameters including system check criteria, ROM version and serial number are changed, and the following message is displayed when the method is opened.

[241a] The system configuration for this method is different from the current instrument configuration. The configuration in the method is adapted to the current instrument configuration.

Save the method file to update the configuration information in the method.

The common instrument parameters in the method are taken over to the new configuration if the range check is valid. For example, when a method created on the configuration with SIL-30AC loop injection mode is opened on the configuration with SIL-30AC direct injection mode, the Air Gap setting is taken over. Thus, air is inserted on sample injection, which may affect acquisition data. Please confirm the method settings to avoid such an unexpected problem.

3.2.3 Notice for LC-2010 Unit ID[LC]

For LCsolution Ver. 1, Unit ID could be set to each unit of system controller, pump, autosampler, oven and detector(s) in the LC-2010 configuration,. LabSolutions Ver. 5 has been modified to deal it with only the system controller as it means the managed information for one device.
When the LC-2010 method file created in LCsolution Ver. 1 is opened in LabSolutions Ver. 5, the Unit IDs except for the system controller potion are cleared.
When Unit ID is set to the other units of system controller for LCsolution Ver. 1, please use the comment area of Communication Settings for LabSolutions Ver. 5.
In the system configuration report, Unit ID will be printed out for the LC-2010 system controller. However, for data files created by LCsolution Ver. 1, Unit ID will be printed out in each unit.

3.2.4 Notice when configured instrument does not exist

When one instrument, for example, LC or PDA is failed to connect, the status of other instruments becomes "Not Connected", too. The instrument failed to connect is displayed in the message window under the analysis window.

3.2.5 Supporting Fast LC Control Mode[LC]

LabSolutions can set the Control Mode (Fast LC mode*) of system controller. The current Control Mode is displayed on the Instrument Monitor.

* Control Mode is the feature added in CBM-20A/lite ROM version 1.11 or later. And Fast LC mode is valid for Prominence UFLC/UFLCXR and Nexera series.

3.3 Instrument Operation

3.3.1 Notice for Turning Power Off the Instrument

If the instrument must be shut down due to a hardware error or other reasons, please be sure to terminate LabSolutions first. If any modules like an HPLC detector unit were shut down and restarted while LabSolutions was active, LabSolutions may become unable to control the instrument correctly. In such a case, please close LabSolutions, restart the system controller, and then start LabSolutions.

3.3.2 Notice for the ROM version up

When you update the unit ROM version, please press the Auto Configuration button on the System Configuration window to update the current configuration information. Otherwise, you may not be able to use the latest features as LabSolutions does not know the update.

3.3.3 Notice for LC-2010 On Time Injection[LC]

When the analysis is performed using the LC-2010 on time injection mode, data acquisition starts after the mobile phase set in the delay volume starts flowing. In this case, if the LC Stop Time (stop time of time program) and the End Time (stop time of data acquisition) are set to the same value, the time program stops before data acquisition stops.

3.3.4 Notice for Performing Baseline Check after Auto Purge in LC instrument[LC]

As baseline is not always stable just after the Auto Purge, Baseline Check may fail in the first test. In such a case, please specify long enough period between equilibration time and the Start time, or longer Maximum Time in order to wait until baseline becomes stable.

3.3.5 Notice for System Check to LC instrument[LC]

Please fill the mobile phase (ex. H2O) in the detector cell before performing the LC system check with the LC detector in a detailed mode.

3.3.6 Notice for the download of the Instruments Parameters[LC]

When the parameters are transmitted with the [Download] button to the LC units, which are being stopped, the LC components such as the pump and oven do not start running. Please activate those devices with the [activate] button in the toolbar.

3.3.7 Notice for Reading the Method File when the Auto Purge is running[LC]

When another method file is read while executing the auto purge, the Data Acquisition window cannot be closed occasionally. Please open the file after it is stopped or ended.

3.3.8 Notice for changing the Instrument Monitor in the "Fast LC" mode[LC]

When the [Fast LC] mode is selected in the Control Mode of the system controller, the [B.Conc] value cannot be changed from the instrument monitor during analyzing.

3.3.9 Notice for System Check to GC instrument[GC]

While performing the GC-2010/2014 system check, if System Check is terminated by key operation on the GC, incomplete check results will be displayed on the PC. Please operate on the PC to stop System Check.

3.4 Data Acquisition

3.4.1 Notice for Multiple Channel Data Plot

When multiple channel data are plotted on the real time chromatogram window, the plot time is slightly shifted between channels. This timing issue occurs because the data is acquired asynchronously in the background thread for each detector channel.

As the detector data is temporarily buffered in the system controller with the retention time information, the actual acquired data is never shifted for each detector channel.

3.4.2 Notice for changing parameters on Instrument Monitor

When you change the parameters on the Instrument Monitor, they may come back to the original values for a while. However the change will come after a while. This is because it takes time for a few seconds to send and change settings at the instrument side and to reflect the new settings to the screen.

3.4.3 Acquisition Time for Status Log

The acquisition time for Status log is set to the maximum acquisition time of the detectors. If all detector acquisition channels are disabled, the acquisition time for Status log is set to Stop Time of the time program. In this case, Status Log is not displayed on the Data Analysis window as no detector data exists. You can confirm it by report output with the Chromatogram report item.

3.4.4 Retention Time Information of LC Instrument Operational Log[LC]

Retention time information added to operational logs during data acquisition and error logs is created based on the detector's acquisition data. Therefore, when no LC detector is used, retention time information of operational logs for the pump and autosampler and error logs become 0.00 after LC detector data acquisition. Retention time information of operational logs and error logs for the PDA also become 0.00 when the time exceeds the data acquisition time of each detector.

Check the actual time added to the message.

3.4.5 Notice for Acquiring Data from Other Vendor Instrument

When acquiring data from other vendor instruments, start analysis after LabSolutions becomes ready to acquire data. When acquiring multiple sample data continuously with a batch table, set longer analysis time to the instrument than LabSolutions acquisition time so that LabSolutions becomes ready before the next analysis starts.

3.4.6 Notice for Sharing Method File

A method file is shared as read only if it is used in the real time analysis, analysis editor or postrun analysis at the same time. If calibration run is performed in real time analysis or the postrun analysis while the method is shared, it can fail because the calibration information cannot be updated.

It is recommended that a method currently being used for data acquisition should not be used in the analysis editor or postrun analysis.

3.4.7 Notice for Performing Background Subtraction

When the Agent registration setting of "Delete after acquisition" is used in LabSolutions, acquired data files are deleted after each single or batch run. When you perform background subtraction in a batch run, background data files should be acquired in the same batch run as the samples or the background data files should be restored in the folder specified in the batch table.

3.4.8 Notice for Starting LC Analysis with No Injection Mode[LC]

When starting LC analysis from LabSolutions with Oven Off in No Injection Mode (Vial# = -1) the time program (gradient program) starts immediately without waiting for temperature equilibration. To avoid this, set oven temperature control to on before starting analysis with No Injection Mode.

3.4.9 Notice for Extending Data Acquisition

[Edit Method (Instrument Parameters)] right is necessary for extending the data acquisition.

3.4.10 Notice for the Method File when the Analysis is stopped.

When the analysis is started and then immediately stopped, the method file becomes "Untitled" occasionally. For this case, please read the method file and download the instrument parameters again.

3.4.11 Notice for Starting Analysis in Analysis Editor

In the Analysis Editor window, if the method file to open does not match the System Configuration settings, you can choose whether to match the configuration settings in System Configuration. If the configuration does not match between method and system, it will not be able to register a single run or priority run.

3.4.12 Notice for using Dilution Factor

If the selection (Apply/Not Used) of Dilution Factor is changed in the System Settings/Data Processing Settings window during operation, the initial value of Sample Amount in the Single Run window will not be changed as the previous value is memorized.

To reset the initial value of Sample Amount, please press the Initialize button on the Customizing Information window if the selection of Dilution Factor is changed.

3.4.13 Restriction after changing Sampling Rate

The chromatogram of 2D detector is always plotting, if it's during analysis or not. However if you change and download the sampling rate, the chromatogram up to that point is cleared.

3.4.14 Display Settings after PDA data acquisition[LC]

When you change the display settings after PDA data acquisition, the chromatogram, contour, UV spectrum, which are shown in the Data acquisition window, are cleared.

3.4.15 Detectors Intensity Unit Issues[LC]

When the intensity unit is set to [AU] in the instrument parameters (in case of UV detector) and downloaded, the unit of intensity axis of graph will become Absorbance Unit series, too. But after system configuration is done, the unit of intensity axis of graph will return to the Volt series (The unit in the instrument parameters is left to [AU]). In such a case, please use the system after downloading method.

3.4.16 Notice of data file in Snapshot

Snapshot shows the data during acquisition. The 'used files' item in the data file properties will include only the method file information, the other files information will not be set.

3.4.17 Restriction in data recovering function[LC]

Even if the system configuration meets the requirement for the data recovery function, the data, which has not been started from 0 min in SPD-M20A, cannot be recovered properly. The data from other detectors, which acquired in the same time, will be recovered.

3.4.18 Notice of Contour plotting in PDA tab[LC]

The arrow cursor, which is used for spectrum extraction from contour graph, may disappear with scrolling out the graph during plotting (for or not for data acquisition) from the passage of time. In such case, please click the time axis of the Contour graph.

3.5 Batch Analysis

3.5.1 Notice for Terminating LabSolutions after Stopping Batch

If Real Time Analysis is terminated while a batch is stopping, LabSolutions may not be finished safely. LabSolutions can be finished safely after the batch start button becomes available.

3.5.2 The transition to another window during Realtime Batch analysis

When another window has been opened and it is in operation while running the Realtime Batch analysis, the Realtime Batch windows will come up at its completion. To avoid coming up the Realtime Batch window during operation, please reduce its window size or minimize the Realtime Analysis program.

3.5.3 Time consumption to register batch tables

It takes from a few ten to a few hundred msec per line to check error on registering batch table. Therefore, while a batch file with a large number of lines consumes time to check error on registration, another application may not be operated. In such a case, please wait for a while and operate it again.

(Typically, it takes about 30 sec to validate a batch file with 1000 lines on standard spec. PC.)

3.5.4 Estimated time for Realtime Batch analysis

The estimated time of the Realtime Batch analysis completion does not include the waiting time for operations such as sample injection with the Autosampler, cooling for the oven, startup and shutdown time set to the batch file. It is calculated based on the end time set to the method file. However, if a method file is the same as the front line in batch table, the estimated time will be compensated by actual time to perform each line in running batch analysis.

3.5.5 Notice to run Realtime Batch with using method file opened by others

When you perform a Realtime Batch analysis, and another application (e.g. Calibration Curve, Quant. Browser, Analysis Editor etc.) is open the method file with the specified in the batch table, the results of the batch processing (means Calibration information etc) does not reflect to the method file. In this case, the Realtime Batch analysis will proceed to the end. After its completion, please perform data processing with Postrun Batch or Quant. Browser.

3.5.6 Restrictions on the type of character for data filename

When the data filename may duplicate at the time of re-injection, '~(number)' will be added at the end of the file name automatically. In this case, letter '~' is used as key. Therefore please don't use the letter '~' for filename.

3.5.7 Notice for Sharing Batch Table

When executing a batch table in which file names of existing data files are specified, if the batch table is opened in read-only mode, the batch table cannot be saved and the Auto-Rename function is not available. In this case, execute the batch table after opening it in writable mode.

3.5.8 Notice for Registering Batch Table to the Queue

If a batch analysis is added to the queue when batch analysis cannot be started immediately (LabSolutions has already been analyzing.), the following message is displayed “Registered to the Batch Queue...” LabSolutions cannot start next batch analysis while this message is displayed. When a dialog box is open in the Real Time Analysis program, the same situation occurs. Close the message box or dialog box by clicking the [OK] button to continue the next analysis.

3.5.9 Notice for Restarting Batch Queue

If LabSolutions real time analysis is terminated when the batch queue is not empty, the queue is memorized. When you start LabSolutions real time analysis next time, and then open batch table and click [Start Realtime Batch], the batch is added to the queue. Please be advised that the added batch is not started immediately as the queue is not empty. To restart the queue, click [Start] button in the [Batch]-[Show Batch Queue] menu.

3.5.10 Limitation of Registering Batch Table to the Queue

A batch table in which data filenames are automatically created can be registered to the Batch Queue as many times as needed. However, by way of exception, when the batch table is executed with any rows selected for the execution range, the batch cannot be added to the queue.

3.5.11 Notice for Printing from Realtime Batch analysis

When too many jobs are queued to printer spooler, unexpected error will occur. When printing a report in an unattended operation, please prepare enough amount of paper to print.

3.5.12 Restriction on space in Report Format filename

On the batch table of Realtime Batch or Batch Editor, please keep out spaces at the top of the filename to specify summary report format and report format. Such report format files will not be opened from the batch table.

3.5.13 Restriction on re-registration of the batch file when it's running

The batch file, when it's running, can be opened only in read-only. Therefore, please save it by the alias when you register the running batch file to the batch queue.

3.5.14 Notice for registration of batch, which includes the same data filenames

When the analysis of the same data filename by the Single Run or Realtime Batch registered in the batch queue is going to start, only "Auto-increment" can be selected by "Overlapped Data File Name" dialog.

Without any duplication of data filename at the time of registration, the same data filename might be generated at runtime. At that time, the data file name newly created is automatically changed.

3.5.15 Notice for Start/End Settings of Batch Table

When the batch analysis is stopped due to some errors while the Realtime Analysis program is closed, the batch analysis is re-started from the first row even if [Star from Continuing Row] is selected on the [Settings]/[General] tab/[Start/End Setting] in the batch table.

3.6 Data Analysis

3.6.1 Notice for Calculating Theoretical Plates and Resolution

When theoretical plates and resolution are calculated by the USP method, these values will be 0.00 if the inflection point cannot be calculated.

3.6.2 Notice for Registering Column Performance into Agent Database

At the Agent registration, only the result by the first calculating formula (*) is reflected though two or more calculation methods for the column performance can be selected.

* The calculation formula is decided at the first selected row of the calculation method (USP and JP...) on the Column Performance tab in Method view.

3.6.3 Notice for Manual Integration Command

When manual integration command "Move BL(Auto Correct)" is performed, the lower end point of the baseline is corrected.

3.6.4 Notice for Manual Calibration

In the Calibration Curve Window, calibration points in the calibration curve can be removed and recalculate the calibration curve by removing the check marks on the check boxes of Area/Height. However, when any calculation is processed in this Window, all the check marks are placed and recalculated. To remove calibration points, please remove the check marks after necessary calculation is done.

3.6.5 Notice for QA/QC Calibration Results when Ref STD ID is specified

When "Ref STD ID" is set for compounds in the Compound Table, the results of QAQC Calibration parameters for these compounds are output as the same results as those of the referred compounds.

3.6.6 Notice for QA/QC terms

The term "Deviation%" is used in LabSolutions, even if the term "Accuracy%" has been used in the previous version of LabSolutions Ver. 5 like LCsolution or GCsolution. (There is no change in the calculating formula itself.)

3.6.7 Notice for Data Comparison (chromatogram division, multiplication)

The result of "Division and Multiplication" of the Chromatographic calculation is different from LCsolution and GCsolution (the previous version of LabSolutions Ver. 5), though the result chromatogram becomes similar graph plot.

Because the value of the result becomes too small in the division of the chromatograms if the signal intensity is divided as it is, "Maximum value - Minimum value" of chromatogram 2 is multiplied as a coefficient (The reciprocal of the coefficient is multiplied because the result grows too much at multiplication).

Because of this processing, the result (signal intensity) by LabSolutions Ver. 5 might be different from LCsolution Ver. 1.

3.6.8 ASCII output of the calculation results from the Data Comparison

When the chromatogram is operated with smoothing or addition in LabSolutions Ver. 5, its ASCII output might be different from the older version.

In the previous version of LabSolutions Ver. 5, the result of chromatographic operation like addition or smoothing, etc. is rounded to the decimal integers (long integer) and is saved to the data file. The unit of this long integer is 0.1uVsec, and the value comes "Area" = "intensity" x "Sampling rate".

In Ver. 5, the operation result is saved without rounding it off in double precision type.

In ASCII conversion, the result is output in intensity value by which both versions also rounded to the decimal. But data files saved by the older versions might contain the deviation at the rounding for file saving. It makes difference from ASCII output in LabSolutions Ver. 5.

3.6.9 Notice for checking raw data

When a lot of data files are processed at once by the Check Row Data function, it will cause slow reaction of screen because of the load for processing. Please wait for a while until the result comes up.

3.6.10 Notice for Method Created by LCsolution Version 1.2 or before[LC]

In LCsolution Ver. 1.21, the defect is fixed that when the quantitative parameter "# of Calib. Levels" was changed in the Compound Table Wizard, if the parameter was applied to method file, it caused a mismatch of "# of Calib. Levels" between configured detectors in the method, and when editing the method in the Calibration Curve window, calibration points could not be deleted or an application error occurred.

In LCsolution Ver. 1.21 or later, such method files are not created by the above procedure, however the same problem occurs when such method files which had been already created are used, or when method parameters are exported from data files which had been acquired by such method files. In this case, please clear the mismatch in the method by following the next procedure.

[Procedure]

1) Open the method file on the Analysis Editor window. When the next message appears, select [No].
   "The hardware configuration for this method is different from the current instrument configuration. Do you want to modify the configuration in the method to the current instrument configuration?"
2) From the [Method] menu, select [Data Analysis Parameters] of one of the configured detectors.
3) In the [Quantitative] tab of the [Data Analysis Parameters] window, change the "# of Calib. Levels" parameter to another value and close the window by clicking [OK] button.
4) Open the [Data Analysis Parameters] window again, and restore the "# of Calib. Levels" value.
5) Save the method file.

3.6.11 Notice for Max. Slices

In the integration parameter settings, there is an advanced parameter of Max. Slices. When a small value from 1 to 5000 is set as Max. Slices, it affects the integration results like the peak area and height may change, so set Max. Slices to 0 (slice data is not exported) when slice data is not required.

3.6.12 Notice for Custom Parameter

Custom parameters specified in the Batch Table are cleared when the postrun analysis is executed on the Data Analysis window. In addition, on the Quant Browser, these cannot be displayed. In the reporting the Quantitative Results View on the Quant Browser, values of custom parameter 6 to 10 is displayed as a Zero if the summary report is edited to display these custom parameters.

3.6.13 Notice of Statistic Calculation (Average, %RSD, Standard Deviation, etc.)

The results of the average, %RSD and standard deviation in the system suitability are calculated by the value rounded by the digit number specified in the format settings.

They do not always match with the results in Quant Browser and QA/QC as the original value, which is not rounded, is used for the calculation in Quant Browser and QA/QC.

In the summary report, either calculation method can be selected by checking on/off “Calculate by specified digits” in the Summary tab of the properties.

3.7 PDA Data Analysis[LC]

3.7.1 Notice for Displaying Purity Curve

When the spectrum data used for peak purity calculation is of lower intensity than the noise data, the purity curve is not drawn.

3.7.2 Notice for Displaying Contour Plot

If another window is opened over the contour plot, the time and wavelength cursor line may not be updated. In such a case, perform [Initialize Zoom] of the contour view to refresh the screen.

3.7.3 Notice for Spectrum Background Correction

It is necessary to process PDA data before spectrum background correction, because spectrum background correction is performed using the spectrum at the start and end time of the baseline of the nearest peak of the specified chromatogram. (If the peak is not resolved, the start time of the first peak and the end time of the last peak in these unresolved peaks are used.) The chromatogram for the spectrum background correction is specified at the current channel focused on the Chromatogram View. This is indicated in the text title of the spectrum display.

3.7.4 Notice for Peak Purity Calculation

If a target peak for peak purity calculation has been divided vertically, the peak should be resolved by changing the peak integration parameter or analysis conditions. Peak purity calculation result of unresolved peaks does not have any meaningful information.

3.7.5 Notice for Printing the Library Search Result

As a result of performing the re-retrieval on the Library Search Results, please print after applying the method. The printing from Library Search Result, it is likely not to match as the result on the screen if it prints without applying the method. Because the print is done according to the method.

3.7.6 Notice on the Similarity identification

With the identification method of Similarity, when several peaks are in the same allowance time range, the peak identification method differs according to the Window/Band method.

[Window (TIME WINDOW) method]

The peak with the retention time closest to the standard retention time specified on the compound table is selected, and then the similarity is calculated between the peak spectrum and the standard spectrum registered in the compound table. If the similarity satisfies the threshold (minimum similarity) set in the compound table, the peak is identified as the compound.

[Band (TIME BAND) method]

The peak with the largest similarity that satisfies the threshold (minimum similarity) is identified.

3.7.7 Notice for Data Analysis of Fast Sampling Data

When fast sampling data of PDA detector is opened in the PDA Data Analysis window, the Spectrum View may not be redrawn promptly when the extracted spectrum wavelength is changed. This is because the purity calculation for the Purity View is processed. In this case, the speed of response is improved by setting "Not Calculated" for the [Purity Index Mode] in the Purity View Display Settings.

3.7.8 Notice for Peak Separation and Impurity Analysis by Derivative Spectrophotometry

When performing peak separation and/or impurity analysis by selecting [Derivative] for the type of chromatograms in [Multi Chromatogram] settings, please this function in analysis conditions such that spectrum similarity of the peak is not influenced by noise, pH and so on.

3.7.9 Notice for PDA Zero Adjustment

Zero adjustment is performed to PDA Data at the start time of acquired data. As a result, the shape of spectrum at each time is changed, when Start Time of Data Acquisition is changed. To cancel the effect of zero adjustment to peak spectrum, please check [Background Correction] in the UV Spectrum tab.

3.7.10 Notice for Data Plot

The maximum time of plotting is the maximum analysis time calculated by wavelength range or sampling period if it is shorter than 60 min.

3.8 Browser

3.8.1 Notice for Data Processing on Browser

On the Quant Browser, data files, which are opened, are processed with the current method file whose name is displayed on the title bar. Please open data files, which use the same method for data processing. When data file does not contain chromatogram of the detector channel in the configuration information of the method, the detector channel is not processed. When detector channel of the data file is not included in the configuration information of the method, the detector channel is not processed.

3.8.2 Notice for Browser Operations

On the Quant Browser, even if you select row(s) on the Quantitative Result View and then press the [Ctrl]+[C] on the keyboard, the Quantitative Result View cannot be copied to the clipboard. In this case, the selected row(s) on the Compound Table View will be copied. To copy the Quantitative Result View, please select [Copy] on the right-click menu.

3.8.3 Notice for Opening Many Data Files on Browser

When many data files are opened on the Quant Browser or Data Browser, the following message may be displayed and the operation may be terminated.

"Insufficient memory."

In such a case, there is a possibility of having reached the maximum of the memory size which can be used with application.

Please reduce the number of the data files opened simultaneously.

3.8.4 Notice for Exporting Quantitative Results on Browser

When the Quantitative results are exported to *.txt or *.csv file on the Quant Browser and then you try to open the file on the Excel, the file may not be opened because it is recognized as a SYLK (Symbolic Link File) format file.

This is because Excel recognizes it as a SYLK format file if the "ID" strings are found in the top of file contents. In such a case, you should insert any characters or space in front of "ID" in the top of contents using the Text Editor.

3.8.5 Notice for Results displayed on Browser

In the previous version of LabSolutions Ver. 5, %RSD and standard deviation in the Quant Browser window are calculated by using the displayed values on the Quantitative Results view.

In LabSolutions Ver. 5, they are calculated by using the internal values without rounding.

In the previous version of LabSolutions Ver. 5, Deviation, %Dev and Accuracy[%] in the Quant Browser window are calculated by using the displayed values of Conc. and Std. Conc. on the Quantitative Results view.

In LabSolutions Ver. 5, they are calculated by using the internal values without rounding.

3.8.6 Notice for Printing Image of Data Browser

When Display Information Area in All Cells check box is selected, the information is displayed on the right side of each cell. This layout does not affect the print image.

For other cases, not all information on the window is printed as the image though Print Image is a function to print the window information as WYSWYG.

3.8.7 Notice for Saving Layout Files

The following information is not saved in the layout file.

• Channel setting on the LC peak table cell

• Display mode setting (overlay/stack/single) in the PDA chromatogram cell

The style of each peak table is saved as the data browser settings.

3.9 Report

3.9.1 Notice for Round Method of Report Output

In the report items such as peak table and quantitative results, round method for the values can be selected in the property of the report items.

In LCsolution Ver. 1, the following four types of round methods are supported

-"Round(Standard)" method in which the values are processed by the Microsoft standard library (original values of floating point are directly rounded) and "Round"/"Round Down"/"Round Up" methods in which values are rounded after the original values are converted to decimal numbers.

As the internal value is treated as floating point, there is a case round, round down and round up at boundary values are affected by the quantitation error of floating point. As the result, in rare case, the last digit of the value output by "Round(Standard)" differs from that of "Round" method (becomes smaller than that of "Round" method).

(GCsolution Ver. 1 and 2 uses the "Round(Standard)" method.)

In LabSolutions Ver. 5, concerning the rounding methods, the algorithm is improved to round boundary values more strictly by considering the quantitation error of floating point. By this reason, the "Round(Standard)" and "Round" methods in the LCsolution Ver. 1 are unified as "Round" method in the LabSolutions Ver. 5.

In addition, in the LabSolutions Ver. 5, rounding methods of values can be specified in the [Data Proc. Settings] of the System Settings(Administration tool), which enables to unify all the rounding methods for values in Postrun and Quant Browser windows, values of ASCII output, values of report output(in the case when “Option Settings” are not specified for the values in the report format).

By this reason, in rare case, the report output of LCsolution Ver. 1 is slightly different from that of LabSolutions Ver. 5 for the same internal value.

To apply the previous version of LabSolutions Ver. 5 compatible rounding algorithm in which the values are processed by the Microsoft standard library, run the following file included in the installation CD.

LabSolutions\Supplement\RoundMode_LCsolution.reg

(Even after this setting is performed, the selection list in the report format does not show "Round(Standard)", it shows "Round". To reset the restriction, execute "RoundMode_LabSolutions.reg" which is included in the same folder.)

3.9.2 Notice for Displaying Column Index Strings

There are some report items whose Column Index string length is longer than the value of Ref. String setting. For such items, please abbreviate notation or change the value of Ref. String setting to display them in the table.

3.9.3 Notice for the Specification of Enforce file name on each item[LC]

For LCsolution Ver. 1, the file name is printed in all of the report item titles with @ mark at the top of the file name if Enforce file name on each item is selected.

For LabSolutions Ver. 5, the file name without @ mark is printed in all of report item titles if it is selected. If multiple report items have been added to a report, it compares the file names to determine whether the report is for all of the items in a single file or from multiple files, and prints * mark at the top of the file name if the file loaded on the item is different from that loaded to the report format.

3.9.4 Notice for Printing Report Image

When a report image reaches slightly to the next page, there is a case that a blank page is output to the next page depending on a printer driver. In this case, please adjust the size of the report item to fit it in the same page.

And when large amount of data are printed out through the summary report item or the GPC calculation report item, there is a case calculation error of printing region is accumulated and the print image may be overlapped on the next report item. To avoid overlapping, please insert the report item to the next page.

3.9.5 Notice for Printing Chromatogram Report Item

When printing out chromatogram report items, there is a case that the last number of time scale (x-axis) is not output in the report despite it is output in the preview. This defect occurs when the width (x-axis) of the chromatogram report item is short because of the calculation difference between the graph area and font position for the zooming factor.

In such a case, please resize the width (x-axis) of the chromatogram report item.

3.9.6 Notice for Previewing Report Image

There is a case report image is not displayed properly when previewing report by using the slide bar to jump page (this tend to occur as the number of pages increases).

In such a case, press the [Next] button from the first page to redisplay the report image properly.

3.9.7 Notice for Using "Meiryo" Font on Windows 7/Windows Vista

When you set "Meiryo" font in the report items, there is a case that the characters are not output with the proper font size. Do not use Meiryo font in the report items.

3.9.8 Notice for Preview Window and Print Output

When the display size of the preview window is not almost the same as the print size, for example when the [Zoom In] button is grayed out, the output image does not always match on preview and on print. When proportional font is used, there is a case the output image is slightly different on preview and on print.

3.9.9 Notice for Report Editor and Print Output

When Using Current Width is set as Display Settings in the Format Settings window for the Display Items in the table such as Ret. Time in the Peak Table item, there is a case the displayed digits are different between the report editor window and print output depending on the cell width.

The image of the report editor is not always the same as that of the print output. Please confirm the actual image by displaying by displaying the PDF output.

3.9.10 Notice for Calibration Curve Item

When the display width of the table is larger than the specified area, the calibration curve item does not display the table by return. Please confirm if the table is fully displayed in the specified area by preview.

3.9.11 Notice for Editing Report Items

When editing report items, for example when you input a larger value in the start time of Chromatogram X/Y scale than the value of the end time, a warning message of "Minimum value should be less than max value." appears. If this message is displayed, the input values are set in the report item. In this case please revise the incorrect values.

3.9.12 Notice for Inserting Object from Other Applications

In the Report Editor windows, when objects of other applications are inserted, the close button, menu and toolbars in the report window may not be displayed properly depending on the inserted objects while editing them. In this case, cancel editing the report by entering [ESC] key, and then edit it again. To close the Report Editor, after saving the report format by [File] menu, click the close button or enter [Ctrl]+[F4] key while editing the object. Using the assistant bar, tab control or [Window] menu also can change the active window to other windows.

Depending on the type of inserted objects, there is a case it takes a long time to output or the object image is not printed out correctly. Please be advised that unexpected objects may be inserted by [Paste] operation through clipboard.

3.9.13 Notice for Editing Print Image File

The intensity range of the current chromatogram view in Data Analysis, PDA Data Analysis or Data Comparison window applies to the Y scale of chromatogram in the print image of Print Graph/Print Graph image function. Please notice that Y scale setting in the report format file of the print image does not function.

3.9.14 Notice for Summary Report Output

Summary report is printed out during a batch table run at those lines of the batch table where "Summary End", "Summary Start&End", or "Summary End&Start" is set in the Summary Type field. When the batch run (acquisition or reprocessing) is stopped at other lines, summary report is not printed out.

3.9.15 Notice for Block Setting in the Summary (Data) Item

In the Summary (Data) item, setting Block in the Display tab to 2 or more is available only when multiple chromatogram are included in a data file and Type in the Chromatogram tab is set to separate.

For a single chromatogram data or setting to overlay as Type in the Chromatogram tab, blank area is output if Block is set to 2 or more.

3.9.16 Printing Graph Image

The report format files of the Print Graph Image and Print Graph in the Data Analysis and Browser window are memorized for each user. The report format files of the Print Method in the Data Acquisition and Method Editor window, and the Print Batch Table in the Realtime/Postrun Batch and Batch Editor window are memorized for each instrument and each user.

3.9.17 Notice for Printing the UV Spectrum Item[LC]

In the UV Spectrum report item, labels of lambda max and lambda min may be output on the other labels when multiple spectra are overlaid on a graph, as the case of overlapping the labels is not considered.

3.9.18 Difference of the Number of Lines to Output Strings

There is a case the number of lines to output strings in a window are different from the previous version of LabSolutions Ver. 5 depending on display area, printer resolution and other conditions.

3.9.19 Difference of the Output Order of the Method Item

As the data processing parameters in the method report item are output for each detector, the output order of the method item is changed from the previous version of LabSolutions Ver. 5.

3.9.20 Notice for the PDF Output of Contour and 3D Graph[LC]

When contour or 3D graph is output to a PDF file, there is a case the output image or scale is not displayed clearly. This is because of the compression settings of PDF output.

In the case of SkyPDF, it can be improved by changing the Down sampling setting as follows though the PDF file size becomes larger.

Select "Sky PDF Pro Driver" in the Printers and Faxes and open Properties in the right click menu, and then press the Printing Preferences button in the General tab to open the SkyPDF Pro Driver Printing Preferences window. Set the value of down sampling to 600dpi or more in the Compression Options tab of the window. (Default setting is 300dpi.)

3.9.21 Limitation of Printing the Overlapped Area of FRC Results and Simulation[LC]

When printing the FRC Results and FRC Simulation on the Chromatogram report item, there is a case either of the FRC Results or FRC Simulation in the overlapped area is printed with hatching depending on a kind of printer drivers.

3.9.22 Notice for Printing System Suitability Test Report

The system suitability test report is always printed out to the Windows default printer even when another printer is selected in the Print Setup window of LabSolutions.

3.9.23 Notice for "B Curve" command in the LC Time Program[LC]

For method files, in which some LC Time Program commands are not supported with the current system configuration, those commands are not run on the current system. For this reason, when a method file, in which LC Time Program command of "B.Curve" is set, are used in the CBM-20A "Fast LC" mode, the "B.Curve" command is not executed. However, the "B.Curve" command affects on the gradient curve displayed in the Data Analysis windows and the chromatogram report. To solve this mismatch, edit the method with the original system configuration and delete the "B.Curve" commands.

3.9.24 Notice for Contour and 3D Graph Report Item[LC]

When many report items are inserted into the report format, it consumes memory proportional to the number of items. As PDA report items such as Contour and 3D Graph take much memory, your operation may be terminated when printing report or generating a PDF file.
In such a case, add more RAM or print report in the Postrun analysis after the data has been acquired and unnecessary applications are closed.

3.9.25 Notice for converting Data File including GPC Report Items[LC]

This version does not support GPC option for now. When LCsolution Ver. 1 data file including GPC report items is opened and prints data report, blank report is printed out. When GPC report items are included in standard report items, all report items are not output image.

3.9.26 Notice for Chromatogram Intensity Unit

In the chromatogram report item, the intensity unit can be selected from uV, mV and V. On the other hand, in the instrument method, AU for UV detector, S/cm for CDD detector and RIU for RID can be selected as intensity units. The chromatogram acquired with the instrument method that these intensity units are specified is reported with the following intensity unit.

Report setting	Instrument method setting		
	AU	S/cm	RIU
uV	uAU	nS/cm	nRIU
mV	mAU	uS/cm	uRIU
V	AU	mS/cm	mRIU

3.9.27 Notice for Intensity Unit when Overlaying Chromatogram

For LCsolution Ver. 1, the intensity unit is always uV when overlaying chromatogram.
For LabSolutions Ver. 5, the intensity unit is uV for multiple detector data, and the detector specific unit for single detector data when overlaying chromatogram.
For example, when overlaying PDA detector data chromatogram, the intensity unit is uV for LCsolution Ver. 1, and uAU for LabSolutions Ver. 5. To display the overlaid chromatogram in units of uV, please replace the $Unit$ macro with “uV” strings in the Y Scale(Inten,) setting of the Setting Scale tab in the Chromatogram properties.

3.9.28 Notice for Transparent Setting of Report Items

When the background of the report item is set to transparent, there is a case it may be filled when the report is output into PDF file. (The transparent image is output on Preview and Print to printer.)

3.9.29 Notice for Delete the Report Item

There is a case the report item cannot be deleted using the [Delete] key. In such a case, open the right click menu and then select [Delete].

3.10 PDF File Output

3.10.1 Notice for PDF Driver (SkyPDF)

LabSolutions uses the SkyPDF pro Driver (SKYCOM Corporation) for the PDF output function.
Although SkyPDF Pro Driver is displayed in the Printer Name list box in the Printer Setup window, do not select SkyPDF Driver in the list box, as there is a case batch analysis stops during run and you cannot continue analysis operations.
To output PDF file, perform PDF out directly from the menu (for example, the File/Data Report/PDF Output menu in the Data Analysis window) or select the Redirect Report to PDF file check box in the PDF Output tab of the Tools/Options menu.
When 'SkyPDF Pro Driver' is selected as Printer Name in Print Setup dialog, the output redirection of PDF files is "C:\SkyPDF" by default after LabSolutions Ver.5.51.

3.10.2 Notice for Setting Default Printer

Other PDF drivers than SkyPDF Pro Driver may cause unexpected problems on printing analysis reports.
Please do not select Acrobat PDF and other PDF drivers as the printer.

3.10.3 Notice for File Name and Folder Path of PDF Output

If "," character is used for a file name or the folder path in which the file is stored, PDF files cannot be exported. When exporting PDF files, "," character should not be used for the name of data file and the folder path in which these files are stored.

3.10.4 Limitations for the System Suitability Function

The system suitability test report is always printed out to the Windows default printer even when selecting the Redirect Report to PDF file check box in the PDF Output tab of the Tools/Options menu.

3.10.5 Not Supporting Security Password Function

Although the previous versions of LabSolutions Ver. 5 supports the security password function in the PDF Output tab of the Tools/Options menu, LabSolutions Ver. 5 no more supports this function.

3.10.6 Notice for Registering PDF File to Agent Database

When a PDF document file is registered to the Agent database, please check the “Delete import files after data registration (*.PDF)” check box. If a PDF file of the same name already exists, there is a case the file may be registered to the database.

3.10.7 Notice for PDF Output from Batch

When processing batch analysis/reanalysis, if PDF files, whose name are the same as that of PDF files to be output by the batch processing exist and are opened by other applications, PDF files cannot be output. In this case, the previously existing PDF files are registered to Agent database instead of the proper data reports. When processing batch analysis/reanalysis, please don’t open the PDF files whose name is the same as that of PDF files to be output by the batch processing.

3.11 File Conversion

3.11.1 Notice for Converting Method File

If method file is converted from CLASS-LC10/GC10 or CLASS-VP, the following message is always displayed when you open it.

"The hardware configuration for this method is different from the current instrument configuration. The configuration in the method is adapted to the current instrument configuration. "

This is because LabSolutions has more configuration information than others and it detects mismatches in the configuration settings of the method file. Please save the method file. After that, it is not displayed.

3.11.2 Notice for Converting CLASS-VP Method File[LC]

When CLASS-VP method file is converted into the LabSolutions format, configuration file InstrumentN.cfg (where N is instrument number) must be specified.

When the method and configuration file do not match, the instrument parameters are not converted correctly.

3.11.3 Not Supporting Grouping Settings of CLASS-VP Method File[LC]

On the file conversion for CLASS-VP file, method file in which grouping is specified or data file acquired using such a method file cannot be converted.

3.11.4 Limitation of Converting CLASS-VP Method Manually Configured[LC]

In CLASS-VP, when the system configuration is manually configured without executing "Auto Configuration", the Analog detector which is normally configured as detector C (D) can be configured as detector A or B. When converting the data files which were acquired in such a configuration, LabSolutions cannot convert the data processing parameters in these data files, and invalid values or values of other detectors may be set to the data processing parameters in the converted data files. If the message of "Data processing parameters may not be converted properly. Please check the parameters in converted file." is displayed, please confirm/reset the data processing parameters in the converted data file.

3.11.5 Notice for Converting Chromatogram to ASCII/AIA Format

Chromatogram data is internally treated as double precision floating numbers. When the data is converted to the ASCII format, the intensity data is rounded in units of UV equivalent integer. When data is converted into AIA ANDI format, intensity data is converted to single precision value. By this convention, processing imported data may result in slightly different values from the original data.

3.11.6 Notice for Converting ASCII Format to LabSolutions Data File

The following items are converted to LabSolutions data when imported in ASCII format.

[Header]	Header information
[File Information]	File information
[Sample Information]	Sample information
[Original Files]	Original file information
[File Description]	File description
[Configuration]	Detector configuration
[LC Chromatogram (Detector Channel)] or [Chromatogram (Ch#)]	Chromatogram raw data
[PDA 3D]	PDA 3D raw data

The following items from the list above are mandatory and cannot be omitted: [Header], [Configuration] and corresponding raw data ([LC Chromatogram (Detector Channel)], [Chromatogram(Ch#)] or [PDA 3D]).

For the system configuration of the imported data, CBM-20A is assigned as a system controller. When status traces are included in the ASCII format data, LC-20AD, SIL-20A, CTO-20A, and SPD-20A are assigned as pump, autosampler, oven, and detector, respectively.

3.11.7 Notice for Generated Data such as Operations and Conversion from ASCII/AIA

Data files, which are made by calculation in the Data Comparison Window, don't have the information of acquired date. In the sample information report of these data, the "Date Acquired" is output as "1970/01/01 9:00:00". And these data cannot be registered to Oracle/SQL Agent database. (There data can be registered to MDB Agent database, in this case the Acquisition Date is registered as "1601/01/02 15:00:00" and the Instrument Name is registered as "Not identified".)

This specification is the same for the data files, which are converted into LabSolutions data from ASCII/AIA data in which information of acquired data does not exist.

3.11.8 Notice for Converting AIA (Andi) File into LabSolutions Data File

When converting the AIA (Andi) file into LabSolutions data file, there is a case that the date acquired can not be read properly depending on a kind of the AIA files as date and time are not stored properly following the Andi format. In this case, the analysis date is set as "1970/01/01 21:00:00".

3.11.9 Notice for System Configuration of AIA (Andi) File (.cdf)

When AIA file is opened in the LabSolutions software, the detector of the data is configured to AD1, as AIA file does not include the system configuration information. By this reason, the detector information in the Data Analysis window is displayed as AD1.

3.11.10 Notice for the data processing parameters of AIA (Andi) File (.cdf)

When AIA file is opened in the LabSolutions software, the data processing parameters such as integration parameters are initialized.

Therefore, there is no relation between the values displayed in the peak table and the data processing parameters. To make consistent between the values displayed in the peak table and the data processing parameters, perform [Analyze] in the Method menu.

3.11.11 Notice for Status Curves[LC]

The status curves are not displayed when opening the following LCsolution Ver. 1 data file from LabSolutions Ver. 5.

Data file imported from ASCII format file, was stored as LCsolution Ver. 1 data file.

3.11.12 Using CLASS-LC10/GC10 and CLASS-VP Files

When chromatogram channels and system configuration do not match in the CLASS-LC10/GC10 and CLASS-VP data file, there is a case the detector information is removed from the system configuration on converting files as the corresponding chromatogram does not exist. By the same reason, there is a case the detector information is removed from the system configuration for the LCsolution data file (.lcd) that was converted from CLASS-LC10 or CLASS-VP data file on LCsolution Ver. 1.

(The same notice is necessary for the CLASS-GC10 data files.)

When the system configuration information is not included in the data file like CLASS-VP sample data files s_multi_1(~6).DAT, it is not possible to convert to the LabSolutions Ver. 5 data file.

3.12 Notice for the QA/QC Calculation Results (Difference from GCsolution Ver. 1 and 2) [GC]

3.12.1 S/N Ratio of the QA/QC Calculation

GCsolution Ver. 1 and 2 calculates the interval noise divided for each 0.5 min so that the intensity range between two parallel lines including all data points in the interval becomes minimum by the successive approximation method.

LabSolutions Ver. 5 calculates the interval noise so that the intensity range between two parallel lines of which line slope is obtained by applying the least square method to all data points in the interval includes them. (The same calculation method is used in LCsolution Ver. 1.)

S/N Ratio of the QA/QC calculation is defined as the ratio of signal to noise.

AS the noise calculation algorithm is different, there is a case the value of S/N ratio calculated by GCsolution Ver. 1 and 2 and by LabSolutions Ver. 5 does not match.

3.12.2 Residual SD of Y Intercept

GCsolution Ver. 1 and 2 calculates the standard deviation of Y intercept of the calibration curve for the residual SD of Y intercept in the QA/QC.

In LabSolutions Ver. 5, the formula of the residual SD of Y intercept is changed so that the effect of the blank analysis is included. (The same formula as LCsolution Ver. 1.)

4. LC Instrument Control Notes[LC]

4.1 System

4.1.1 Notice for using Prominence Web Control Function

When using CBM-20A/lite system controller, leaving Internet Explorer open for extended periods with the system controller connected may cause PC operation to become unstable. To avoid this, shut down Internet Explorer once every day or so when running the system controller continuously. Do not keep running any Internet Explorer programs to display CBM-20A/lite and SPD-M20A/SPD-M30A status monitor.

4.1.2 Notice for automatic detection CBM-20A/20Alite from LabSolutions

Automatically detection works only the subnet mask is same between CBM-20A/lite and the PC. If they are located the network which has other subnet mask, it is necessary to set CBM-20A/lite IP address manually on the PC.

4.1.3 Restrictions in Fast LC Mode of Prominence UFLC/UFLCXR and Nexera system

LabSolutions supports Fast LC mode of Prominence UFLC/UFLCXR and Nexera system.

The following restrictions apply when the control mode is set to Fast LC mode instead of Normal mode.

1) Number of Lines in Time Program
   Please note that if more than 320 lines of pump-related commands are set in the time program, those pump-related commands in excess of the 320 lines will not be executed. In Normal mode, the time program can be comprised of up to 400 lines, however, in Fast LC mode, the number of lines that can be used for pump-related commands is 320 lines (although the total number of lines that can be used, including non-pump related commands, remains at 400 lines).
2) Valid Pump Commands
   Among the time program commands that can be used from LabSolutions, pump purge command (Pump Purge/Ppurge) will not be executed in Fast LC mode.
   In addition, B.CURV (B.Curve) is always 0 in Fast LC mode. Please note that even if B.CURV (B.Curve) is set to a value other than 0 in Fast LC mode, only linear gradient operation will be conducted.

4.1.4 Notice for Key Lock of System Controller

When LabSolutions real time analysis program is started, the system controller key operation is locked.

The key operation can be unlocked by the Instrument Control bar for initial settings. It can be disabled if "Prohibit editing parameters on instrument" is selected in the Security Policy. Even though, it can be unlocked if the password is entered on the instrument control panel in case of emergency.

4.1.5 Notice for Using Optional Loop in LC-2010HT

When the optional loop setting of the instrument LC-2010HT is changed, please press the [Auto Configuration] button on the System Configuration window in LabSolutions, unless the change is not updated in LabSolutions. In this case, the previous method files, which are to be used in the updated system configuration, should be saved once in that configuration before analysis.

4.1.6 Notice for Rinse Port Septum of LC-2010 series

In the System Check for the LC-2010 series in which rinse port septum is not used (LC-2010HT), "Number of Rinse" is excluded from the check item.

4.1.7 Notice for Pump Time Program settings

In the ternary gradient or low-pressure gradient mode, when the total value of B, C and D.Conc exceeds 100%, the message "There is a section in which the total concentration of B, C and D.Conc exceeds 100%." pops up on drawing the gradient curve. In this case, set these concentrations as the total value not exceeding 100%.

4.1.8 Notice for Shutdown

The function of "Degasser(LC Pump, Subcontroller) OFF after cool down" in the Shutdown works by turning off the power supply to the instruments connected to the pumps/subcontrollers. When this function worked, the FCV solenoid valves connected to the pumps/subcontrollers are also turned off, and the valve position or its state(Open/Close) returns to the initial position(the position with the power off) of each FCV valve.

4.2 Autosampler

4.2.1 Sample Rack Name

The notation of Autosampler sample rack has been changed as shown below since LCsolution Ver. 1.22.

(Before)	(After)
Rack 1.5mL Standard	Rack 1.5mL 105vials
Rack 1.5mL Cool Rack	1.5mL 70vials

4.2.2 Not Supporting S.Pret Time Program Command

The S.Pret command for the Autosampler time program entry is not supported.

4.2.3 Using MTP/Deep Well Rack

When using MTP/Deep well rack, it is necessary to specify MTP Type in the Autosampler parameters to 96 wells or 384 wells on CBM-20A/lite.

When using Rack Changer/C, please set MTP Type to 96 wells on CBM-20A/lite.

4.2.4 Maximum Injection Volume of SIL-20A series

Maximum injection volume of SIL-20A series (SIL-20A, SIL-20AC, SIL-20AXR, SIL-20ACXR) can be specified on the Autosampler control panel. LabSolutions uses this value to validate the upper limit of injection volume.

When the maximum injection volume of the Autosampler SIL-20A series is less than 100uL, please set Sampling Speed to 5uL/sec for the best reproducibility of injection volume. When a method file created on the maximum injection volume setting of the Autosampler different from the current configuration is read, please confirm the value of Sampling Speed.

4.3 2D Detector

4.3.1 Maximum Acquisition Time of 2D Detector

The maximum acquisition time using a conventional 2D detector is calculated as follows:

{7 [Mbytes] x 1024^2/4 [Byte]} x {Sampling period [msec]/60000}

For example, the maximum acquisition time is...

approx. 6116min when sampling period is 200msec
approx. 305min when sampling period is 10msec
9999.9min (Upper limit of acquisition time) when sampling period is 500msec

If the specified acquisition time exceeds the above limit, the method is not saved as the acquisition time is validated and the warning message is displayed.

Please be advised that you should not extend the run time longer than the maximum time calculated by the above formula.

To extend the maximum acquisition time, execute the file below, which is included in the installation CD-ROM. The value rises threefold.

LabSolutions\Supplement\MaxMemorySizex3.reg
(To reset the restriction, execute "DefaultMaxMemorySize.reg" which is included in the same folder.)

.3.2 Status Log of SPD-20A/V Cell Temperature

When SPD-20A/V temperature control cell is not installed, cell temperature is recorded as 0 degree Celsius.

4.3.3 Not Supporting Spectrum Scan

Although the SPD Scan (RF Scan) time program command performs spectrum scan at UV (RF) detector, the scanned spectrum is not stored in the PC.

4.3.4 Supporting CDD-10Avp/sp Control via CBM-20A/lite

For the CDD-10vp/sp control via CBM-20A/lite with LabSolutions, please notice the following restrictions to use.

<Restrictions>

1. In the system configuration of LabSolutions, pump D cannot be set as the pump for suppressors of CDD-10Avp/sp. Set pump A ~ C or pump A+B.
2. When you use CDD-10Avp/sp with CBM-20A/lite, operate the system via LabSolutions. CDD-10Avp/sp cannot be controlled on the Internet Explorer via CBM-20A/lite. (Operations of CDD-10Avp/sp system on the Internet Explorer are out of guarantee.)
3. When the analysis time is extended in a system where CBM-20A/lite controls CDD-10Avp/sp with suppressors, the suppressor switch interval is automatically extended by maximum 20 minutes. When the analysis is extended exceeding 20 minutes, the regeneration of the suppressor starts, and the baseline change is recorded in the data. Therefore, do not extend the analysis time exceeding 20 minutes.

4.3.5 Fast Sampling

Fast sampling of 100Hz is available for these detectors.

#	Item	CBM-20A/lite	Other Units
1	Fast sampling of SPD-20A/20AV	Ver. 2.02 or later	SPD-20A/20AV Ver. 1.10 or later
2	Fast sampling of RF-20A/20AXS		RF-20A/20AXS Ver. 1.00 or later

1) When SPD-20A/20AV or RF-20A/20AXS is used with the fast sampling rate, connect the PC to the system controller with the Ethernet connection. (Communication through RS-232C for the fast sampling is not assured.)
2) For SPD-20A/20AV and RF-20A/20AXS, fast sampling can be set on the System Configuration window. In the configuration where fast sampling rate (Base Period 10msec) is specified, the sampling rate cannot be changed in the method editor.
3) When detector's ROM version are updated for the fast sampling, be sure to execute [Auto Configuration] on the System Configuration window. The fast sampling rate cannot be set before auto-configuring the updated detectors.

When acquiring data by SPD-20A/20AV or RF-20A/20AXS with fast sampling rate (100Hz), specify the Response as "*No Filter". With other settings, sharp peaks lose sharpness and are not measured as they are.

* [Note] The description "0.02" for the Response is changed to "No Filter". The Response value of "0.02" corresponds to "No Filter".
[Note] When the Response is small, the data becomes sensitive for sharp peaks, but the baseline noise increases.

4.4 Evaporative Light Scattering Detector

4.4.1 Notice for the ELSD operation

While the ELSD is controlled by the LabSolutions software, the operation on the ELSD front panel is locked. To operate the ELSD on the front panel, close the LabSolutions software and stop controlling the ELSD from PC. When the communication between PC and ELSD is disconnected by abnormal termination or other unexpected reasons, there is a case the operation on the ELSD front panel is kept locked. In such a case, turn off the power supply of the ELSD and turn it on again.

4.4.2 Displaying Nebulizer Gas Pressure

There is a case the nebulizer gas pressure values displayed on the LabSolutions Instrument Monitor window and the ELSD front panel are different. Although the nebulizer gas pressure is displayed in units of 1kPa on the ELSD front panel when the pressure unit is kPa, it is displayed in units of 10kPa on the LabSolutions Instrument Monitor window. This is the same for the other pressure units such as bar.

Example)
(kPa)
On the ELSD front panel: 347 kPa
On the LabSolutions Instrument Monitor window: 340 kPa

(bar)
On the ELSD front panel: 3.47 bar
On the LabSolutions Instrument Monitor window: 3.4 bar

4.4.3 Offset Setting Range

Although the Offset setting range is -999mV through 1000mV on the ELSD front panel, it is limited to -999mV through 999mV on the LabSolutions if the ROM version of ELSD-LTII is 1.5. (When the ROM version of ELSD-LTII is 1.6 or later, the Offset can be set to -999mV through 1000mV.)

4.4.4 Zero Adjustment

When pressing the [Zeros ELS Detector] button on the Instrument Control tool bar, the offset value is automatically changed by the ELSD to adjust the signal intensity at the time of [Zeros ELS Detector] to zero. By this reason, [Zeros ELS Detector] is initialized when downloading the instrument parameters as the offset value adjusted by [Zeros ELS Detector] is replaced with that of the instrument method. Perform [Zeros ELS Detector] after downloading the instrument parameters. When selecting the Auto-zero check box on the ELSD configuration window, the signal intensity on start becomes zero regardless of the offset setting of the instrument parameters as the zero adjustment is performed on starting acquisition.

4.4.5 Shutdown Function

While LabSolutions is controlling ELSD-LTII through RS-232C, the ELSD shutdown function by the external event cable is not available.

In such a case, please shutdown the ELSD-LTII from the batch or instrument control bar in the LabSolutions software.

4.5 PDA Detector

4.5.1 Maximum Acquisition Time of SPD-M10Avp/SPD-M20A Detector

The maximum acquisition time using a SPD-M10Avp/SPD-M20A detector is calculated as follows:

{128 [Mbytes] x 1024^2/4 [Byte]} / {End Wavelength - Start Wavelength + 1 [nm]} x {Sampling Period [msec]/60000} x 1.2

For example, the maximum acquisition time is...

approx. 2372min when Wavelength range: 190 - 370nm Sampling period: 640msec
approx. 702min when Wavelength range: 190 - 800nm Sampling period: 640msec
approx. 10min when Wavelength range: 190 - 800nm Sampling period: 10msec

If the specified acquisition time exceeds the above limit, the method is not saved as the acquisition time is validated and the warning message is displayed.

Please be advised that you should not extend the run time longer than the maximum time calculated by the above formula.

When the sampling period is high or the data acquisition time is long, the data file size becomes large. In this case, please increase memory on the PC.

To extend the maximum acquisition time, execute the file below, which is included in the installation CD-ROM. The value rises threefold.

LabSolutions\Supplement\MaxMemorySizex3.reg
(To reset the restriction, execute "DefaultMaxMemorySize.reg" which is included in the same

folder.)

4.5.2 Maximum Acquisition Time of SPD-M30A Detector

The maximum acquisition time using a SPD-M30A detector is calculated as follows:

{Memory Size for PDA Data [Mbytes] x 1024^2/4 [Byte]} / {End Wavelength - Start Wavelength + 1 [nm]} x {Sampling Period [msec]/60000} x 0.5 x {1024 / Spectrum Resolution}

If the specified acquisition time exceeds the above limit, the method is not saved as the acquisition time is validated and the warning message is displayed.

Please be advised that you should not extend the run time longer than the maximum time calculated by the above formula.

When the sampling period is high or the data acquisition time is long, the data file size becomes large. In this case, please increase memory on the PC.

#	Upper Limit of Memory Size for PDA Data [MB]	Sampling Period [msec]	Spectrum Resolution	Wave Length [nm]	Maximum Acquisition Time [min]
1	128	640	512	190 - 370	1977
2	128	640	1024	190 - 370	988
3	128	640	1024	190 - 700	350
4	128	5	1024	190 - 370	7.7
5	128	5	1024	190 - 700	2.7
6	128	5	512	190 - 700	5.4

In addition, if the upper limit of memory size for PDA Data is set 0, restriction of the maximum acquisition time is not checked.

4.5.3 Notice for Data Acquisition

Care must be taken when performing other application such as MS-Word and MS-Excel while acquiring PDA data. Memory and CPU intensive operations can consume large amounts of the PC resources thereby causing PDA data acquisition to be interrupted. If problems like this occur, please do not perform other applications during PDA data acquisition.

4.5.4 Notice for Setting Acquisition Time

The data acquisition time for PDA detectors should be longer than 0.3min. If PDA data is acquired with the acquisition time less than 0.3min, there is a case that the PDA data is not normally saved and the data analysis fails, the quantitation calculation is not executed and the data is not registered to the CLASS-Agent database.

4.5.5 Notice for SPD-M10Avp's Sampling Period

It is recommended that the sampling period for the SPD-M10Avp data acquisition is usually set to 240 msec or longer, when acquiring data from multiple instruments.

4.5.6 Bandwidth for Multi-Chromatogram Settings

The chromatogram output from PDA detector is averaged using the Wavelength and Bandwidth for multi-chromatograms in the Data Analysis Parameters.

For example, if the Wavelength is set to 250nm and the Band Width is n, the equation {250 +/- n}} is used as follows:

n=1 : (250 +/- 1) nm
n=2 : (250 +/- 2) nm
n=3 : (250 +/- 3) nm
n=4 : (250 +/- 4) nm
n=5 : (250 +/- 5) nm

The chromatogram is averaged for larger n using the element data, which fall into the wavelength range, specified by the Wavelength and Bandwidth.

4.5.7 Fast Sampling

Fast sampling (Sampling Period is upper than 100Hz, Sampling Time is lower than 10msec) is available. When the new functions are required in use of SPD-M20A, please update the ROM version of SPD-M20A to 1.10 or later.

[Note] When using SPD-M20A or SPD-M30A with the fast sampling rate, do not connect other PDA detectors.

When acquiring data by SPD-M20A or SPD-M30A with fast sampling rate (upper than 100Hz), specify the Time Constant as "0" or "0.010", and the Slit Width as "8". With other settings, sharp peaks lose sharpness and are not measured as they are.

[Note] When the Time constant is small, the data becomes sensitive for sharp peaks, but the baseline noise increases.

4.6 Fraction Collector

4.6.1 Notice for Displaying Fraction Mark

On the Real Time Analysis window, FRC Vial (number) is displayed only when the Fraction Mark is displayed.

4.6.2 Display Period of Real Time Hatching of Fraction Collection

Real time hatching of fraction collection to the chromatogram plot is updated at the following period in order to reduce communication stress.

Number of fractions	Period
20 or less	10sec
21 through 40	20sec
41 through 80	30sec
81 or more	60sec

4.6.3 Notice for Displaying Fraction Mark on PDA Multi-Chromatogram

For PDA data, hatching of fraction collection is applied to all multi-chromatogram plots.

4.6.4 Notice for Stop Time of FRC Time Program

When using fraction collector, "LC Stop Time" should be longer than the end time set in FRC time program. FRC time program commands set in the time later than the LC Stop Time do not work. In FRC Simulation, all the FRC time program commands are considered regardless of the LC Stop Time.

4.5.5 Notice for I.VIAL and F.VIAL of FRC Time Program

When using fraction collector, if "I.VIAL" and "F.VIAL" are set in the FRC time program, these commands are not valid and not performed once after a fraction collection started. The FRC simulation results change according to these commands, however it is not reflected on the operation of the fraction collector.

4.6.6 Notice for Difference between FRC Simulation and Results

Simulation of Fraction collector reports is supported in the Fraction Collector setup tab. This will result in the shading of chromatographic peaks based upon their inclusion in a give fraction. This function is intended for convenient viewing of fractions not for fine time determination. Shaded portions on the screen sometimes shift by 0.01min.

4.6.7 Notice for Time Setting of FRC Program

During FRC Simulation operations, if two events are separated by 0.01min or less in the time program, the two shaded regions sometimes merge into one color. The FRC simulation does not always match with the actual results as the analog signal from detector is converted to digital data with the A/D converter, and conversion error and signal offset difference error are included in this process.

5. Other Information

5.1 License Key

5.1.1 Keeping License Key

Please take the appropriate care of your license key as if you lose it, the new license may not be issued.

5.2 Other Notes

5.2.1 Notice for Virus Check Software

If you are using real time virus scanning, exclude all LabSolutions-related folders and their sub-directories. Some real time virus scanners mistake normal LabSolutions functionality for virus activity and this can cause unexpected problem.

5.2.2 Notice for the Instrument Administration Window

Once an instrument is registered in the Instrument Administration window, it cannot be deleted. When the registered instrument is not used, select it in the Instrument List and select the Disable instrument check box on the Edit Instrument window. They are not displayed on the main window.

5.2.3 Notice for the PC Information in the Administration Tools

This menu is available only for users having the administration right on Windows 7/Windows Vista.