N2000 CDS

User Guide

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N2000
User Guide
ENG

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A.Introduction

The N2000 Photographic Data Workstation is a software package, to install which on your personal computer will allow you to control your chromatography and analyze the data received from it. Your personal computer then becomes a sophisticated chromatography integrator and a data storage device.

This Software allows you to:

- ✧ Setup, modify, catalog, recall, and print data processing Methods.
- ✧ Catalog and recall chromatographic data.
- ✧ Analyze data by integrating to find, identify, and graph peaks.
- ✧ Setup and run automated batches.
- ✧ Graphically manipulate the displays via capabilities to zoom in / zoom out, split / unsplit screen, scroll, position relative cursors, track time and amplitude, and display baseline.
- ✧ Graphically specify Timed Events.
- ✧ Calculate, display, and print different kind of Reports, namely: the Area, Normalization, External Standard, and Internal Standard.
- ✧ Create Customized Reports.
- ✧ Export stored data through other data formats such that they can be used in other software packages such as Excel, Lotus 123, and dBase III /IV.
- ✧ Dynamically link with other Windows applications such as Microsoft Excel or Microsoft Word to exchange data.

A1. Specifications of N2000 Workstation

General

Number of Channels: 2
Input Voltage: -500 mV ~ 1.7 V
Input Resistance: > 10 MΩ
Sensitivity of Integration: 1 μV-sec
Dynamic Range: 10^7
Linearity: ~ 0.1 %

Peak Processing

Number of peaks: > 1000
Width of peak: 0.1 sec
Automatic Time Programming
Manual Integration enabled
Automatic identification of complex peaks and precise partition of overlapped peak
Automatic tracing and correcting base line
Automatically eliminate the affect of negative peak
Meet the GMP regulation

Methods for Identifying Peak

Conservative time method
Components table method

Parameters for Integration

Peak area
Peak height

Method for Quantitative Calculation

1. Normalized Method,
2. Normalized Method with Proportional Factor,
3. Internal Standard Method,
4. Grouping Method,
5. Multiple Internal Standard Method,
6. External Standard Method,
7. Logarithmic Method.

A2. System Requirements

Hardware Computer

IBM or 100% compatible (P-1 or higher)

CPU: 166 MHz or faster

Memory: 32M Bytes or more

Disk Drive: 1 hard disk, 1 CD-ROM drive, 1 or 2 floppy disk drives

Monitor: VGA display and graphics card

256 colors, 1024 by 768 pixels

Mouse: Bus or serial mouse

Printer (optional): Any printer that works with Microsoft Windows

Software Windows

Microsoft Windows 95/98 or later

Internet Explorer 4.0 or later

Others Misc. Hardware

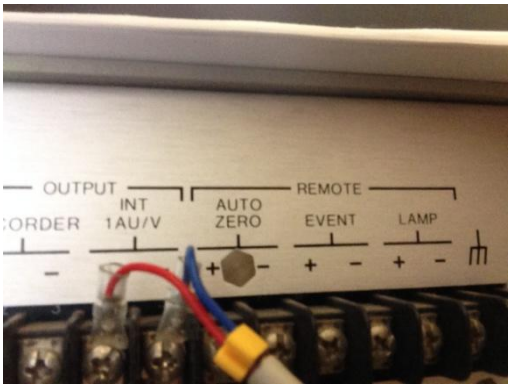
22-bit high performance ADC card

Terminal panel and cover

B. CDS Connection Description

B1.CDS-Detector

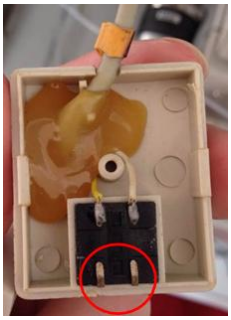
There are two wires red and blue in channel one.
Connect these wires as in picture, location can be different as detector brand, find the data output location.



B2.CDS-Manual Injector

Please find below parts.

Open the box as below, find the location in red circle and the lines of manual injector.



Connect the lines of manual injector with the two terminals in red circle, now you do not need to press the button every time to start require data, the purpose of connection is to give start signals to CDS from manual valve.

B3.CDS- Computer

The installation consists of the Hardware and the Software.

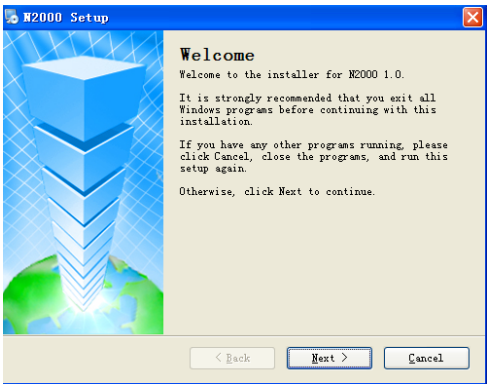
Before installing the Hardware, be sure that your monitor is ready for displaying 1024 by 768 pixels (800 by 600 pixels will be OK, but is not recommended).

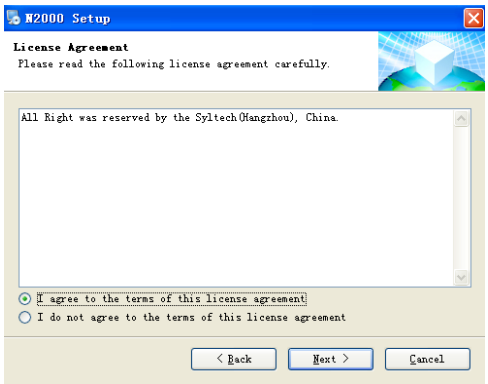
Before installing the 'Workstation' software, be sure that Microsoft Windows (Version 9x or higher) is installed on your computer.

Software installation

Double click set up 

, choose the save path, then click " Next" to finish, if install in C, you should make folder in C.





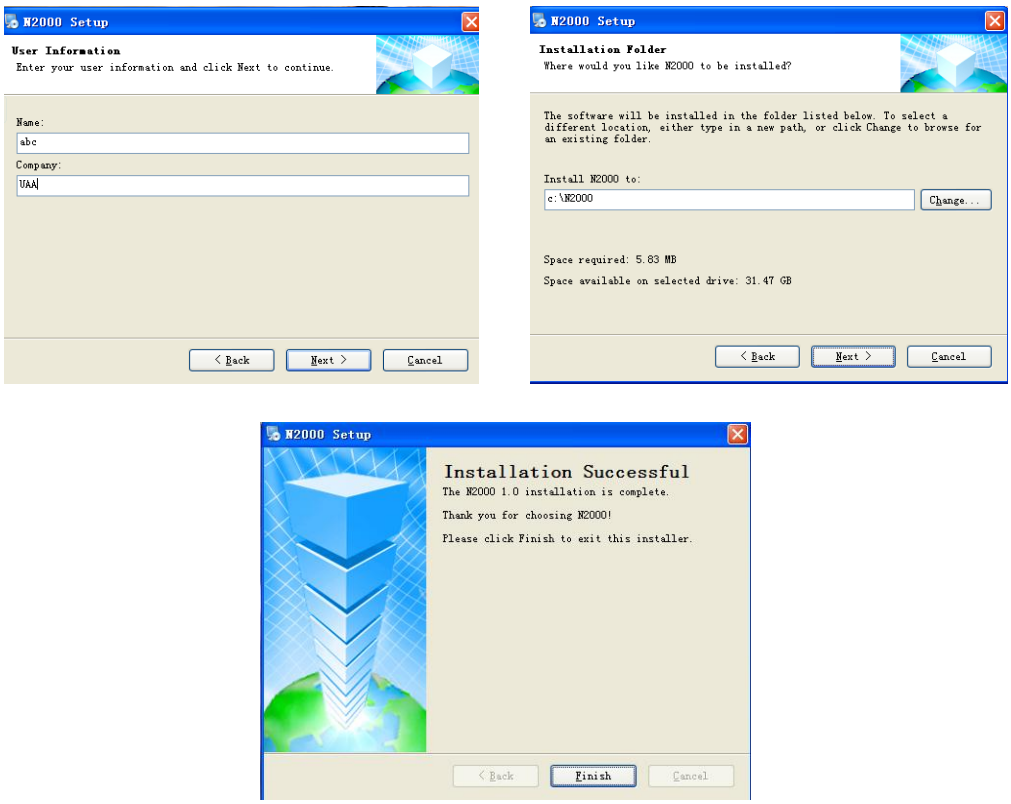


Figure B-001

Hardware Installation

1. Connect “Signal Line” with “Data Collection Terminal”
2. The other side of “Signal Line” has 2 shovel type plug spring signal lines and 2 start lines with buttons, which should press while acquire data. The yellow loop labels “1” and “2”, corresponding channel 1 and channel 2; Red shovel type line is positive(+), the other is negative (-), which should correspond with HPLC output signal positive and negative.
3. Use “Connection pile” to link shovel type signal lines with HPLC output signal Line. (Different brands HPLC has different type output signal Line. But all of them has a positive and negative end.)
4. Connect “Communication Line” with the right of Data Collection Terminal. The other end of communication line has two plugs, one is USB, connect to the Computer, the other is a 9 core plug, connect to the Computer serial port

Connection pile

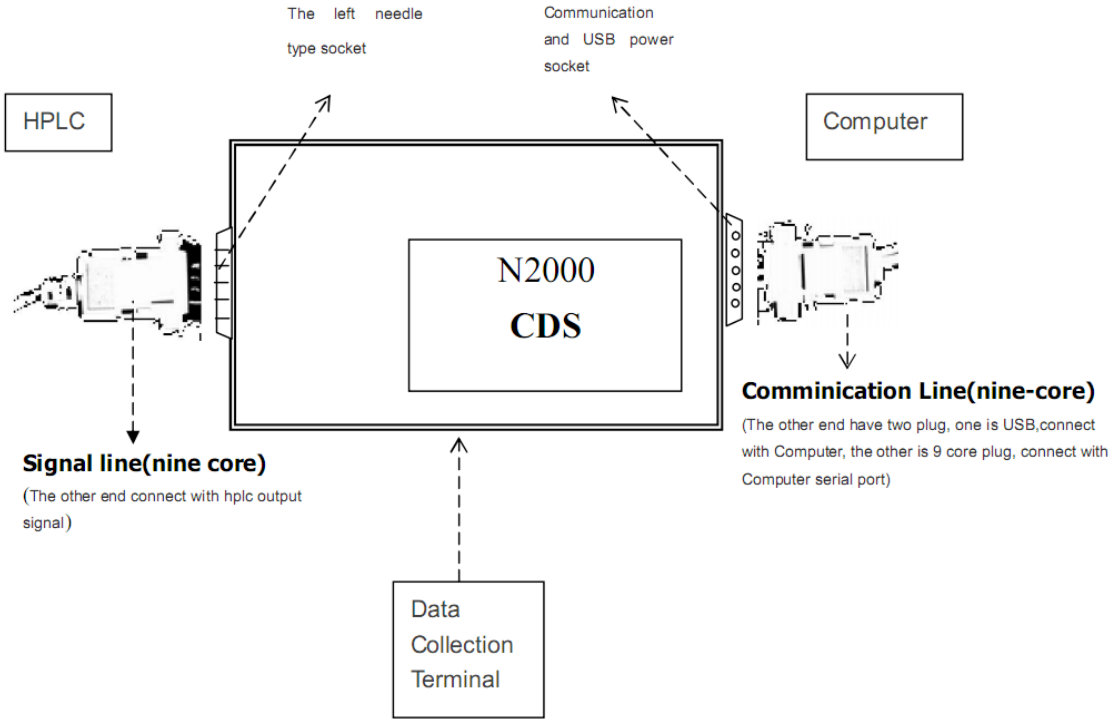

The left needle type socket
Communication and USB power socket
HPLC
Computer
N2000
CDS
Signal line(nine core)
(The other end connect with hplc output signal)
Comminication Line(nine-core)
(The other end have two plug, one is USB,connect with Computer, the other is 9 core plug, connect with Computer serial port)
Data Collection Terminal

Figure B-002

C.Online Workstation

C1. Startup

Take the following procedure to startup the Online Workstation.

1. Click the 'Start' icon at the tool bar of 'Windows' desktop to draw the menu.
2. Point to 'Program' to draw the secondary menu.
3. Point to 'N2000 Chromatostation' to draw the subsidiary menu.
4. Click 'Online chromatostation' to startup.

This procedure is illustrated in Figure C-001.

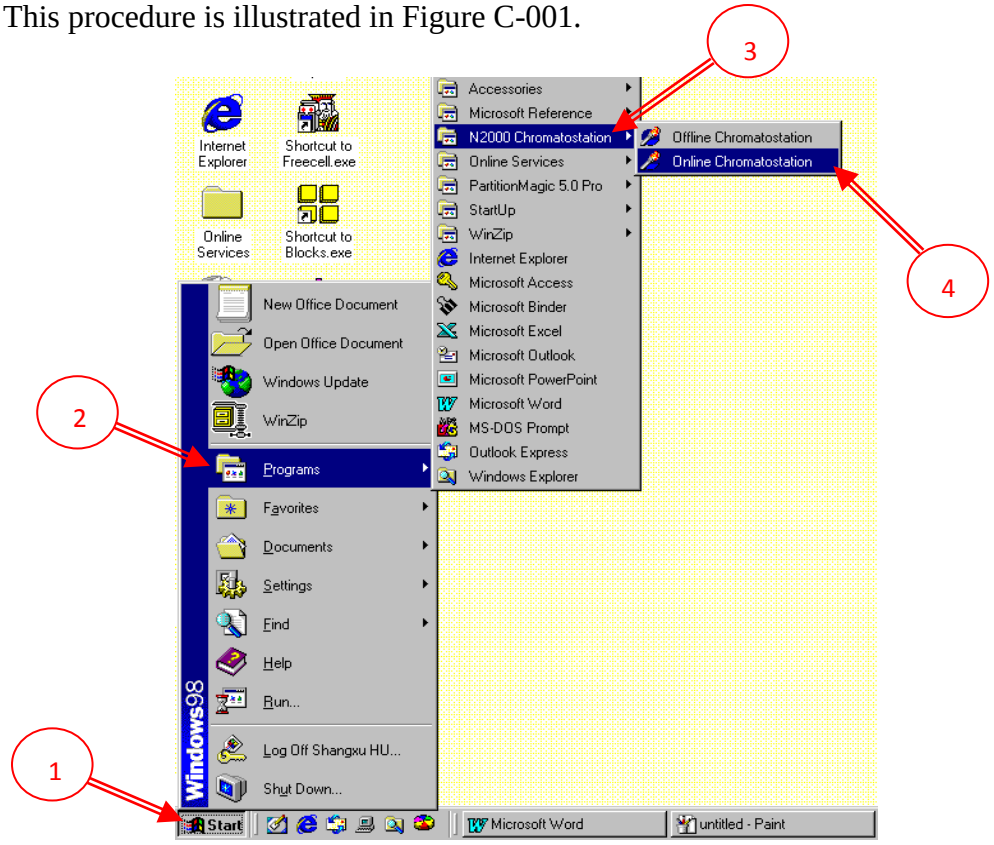


Figure C-001. Procedure to startup the Online Workstation

C2. Open the Main Interface

As soon as the Online Workstation is started, the dialog box 'Channel' appears as shown in Figure C-002.

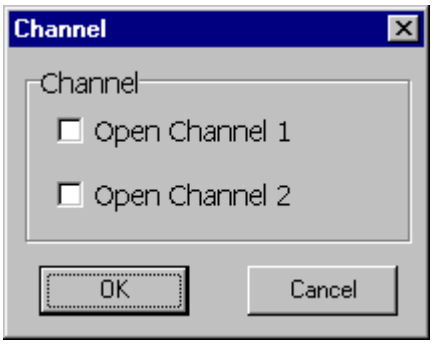


Figure C-002. The Dialog box 'Channel'

Please take the following procedure:

1. Point to the channel you want to open and click.
2. Click the 'OK' button.

Then the main interface of Online Workstation pops up. The Online Workstation can open 2 channels consecutively, and the main interface appears as shown in Figure C-003.

The main interface consists of:

1. The main Menu Bar (MB),
2. The Tool Bar (TB),
3. The Dialog Box for Channel 1 (DB1), and
4. Dialog Box for Channel 2 (DB2).

Of course, there will be only one Dialog Box in case only one Channel is opened.

The Interface shown in Figure C-003 is obtained when the screen area of your computer monitor was set at 1024 by 768 pixels.

If the screen area of your computer monitor was set at 800 by 600 pixels, the width of screen can not accommodate the whole Tool Bar. The Tool Bar will be split into two lines as shown in Figure C-005, while this does not change the function of the interface.

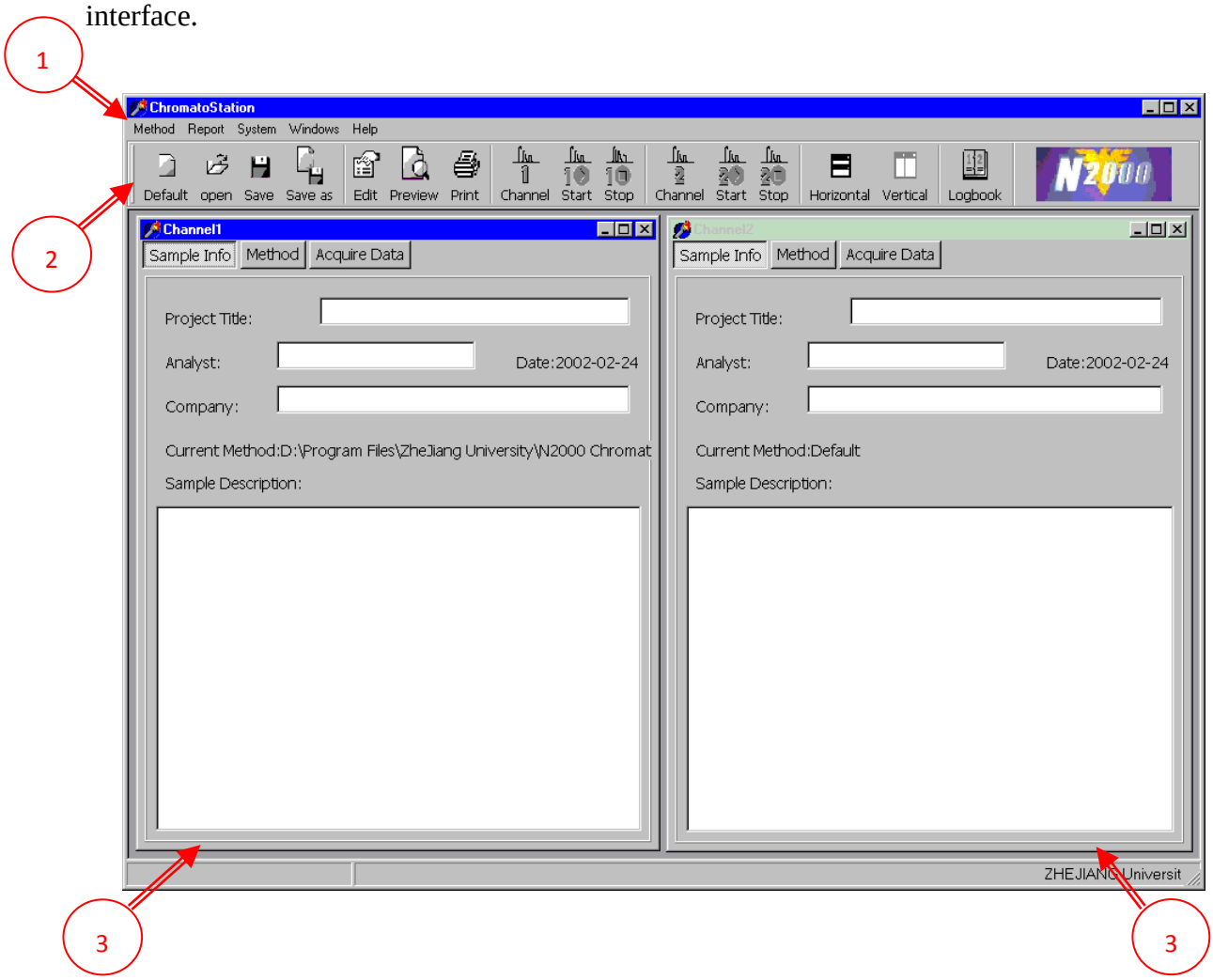


Figure C-003. Main Interface of Online Workstation (1024 by 768 screen)

The head of the main interface is shown in Figure C-004.

Figure C-004. The Head of Main Interface (1024 by 768 screen)

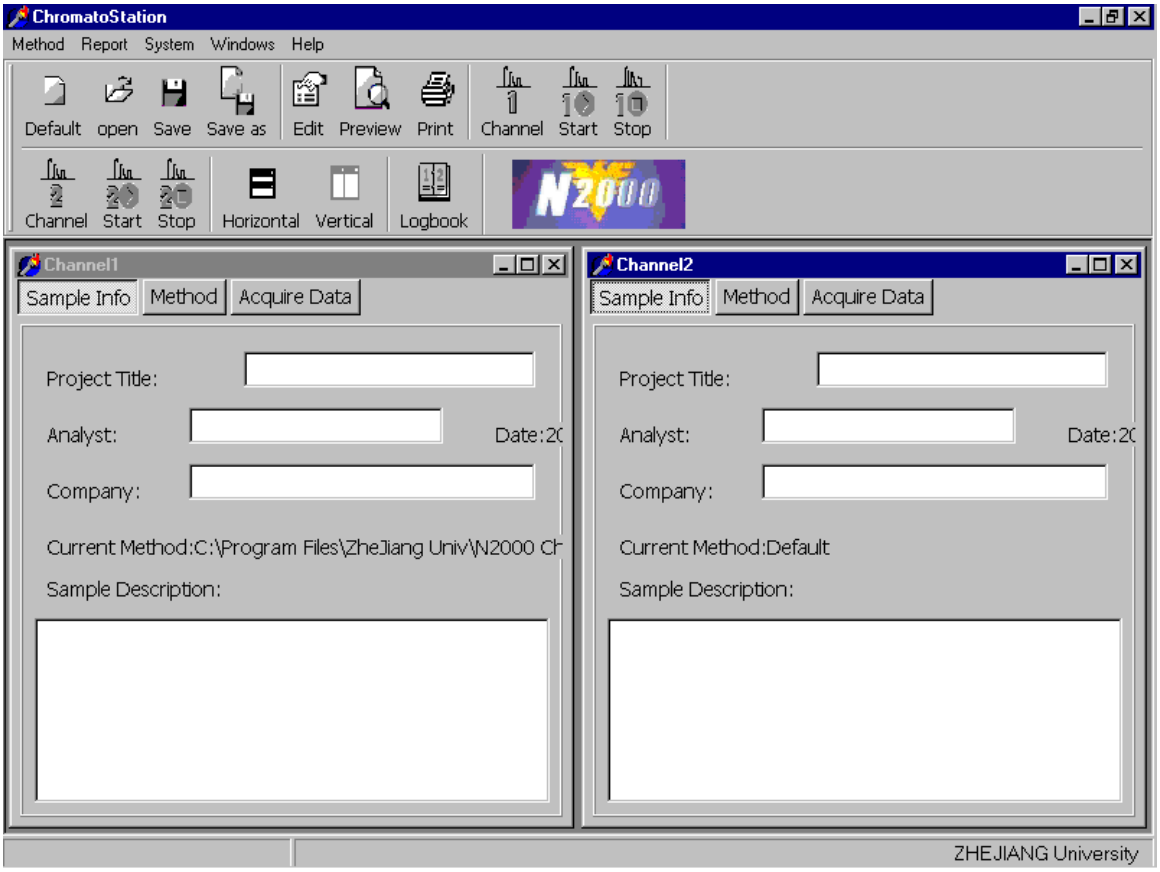


Figure C-005. Main Interface of Online Workstation (800 by 600 screen)

Figure C-006. The Head of Main Interface (800 by 600 screen)

C3. The Main Menu Bar (MB)

The main Menu Bar 1s shown in Figure C-007, which includes:

1. 'Method', for selecting the operating method of acquiring your sample;
2. 'Report', for editing and modifying your experiment report;
3. 'System', for setting the frequency of data acquisition and others;
4. 'Windows', for opening and regulating the sampling channel; and
5. 'Help', for explaining the software package.

Figure C-007. The Main Menu Bar

C4. The Tool Bar (TB)

The Tool Bar is shown in Figure C-008, which includes:

1. 'Default', to use the default methods;
2. 'Open', to open the existing method of operation;
3. 'Save', to save the modified method of operation;
4. 'Save as', to save the newly compiled method of operation.

5. 'Edit', to edit your experiment report;
6. 'Preview', to preview your experiment report after compiling or modification;
7. 'Print', to print your experiment report.

8. 'Channel 1', to open the channel 1;
9. 'Start', to start the data acquisition through channel 1;
10. 'Stop', to stop the data acquisition through channel 1.

11. 'Channel 2', to open the channel 2;
12. 'Start', to start the data acquisition through channel 2;
13. 'Stop', to stop the data acquisition through channel 1.

14. 'Horizontal', to arrange the two opened dialog boxes horizontally;
15. 'Vertical', to arrange the two opened dialog boxes vertically; and

16. 'Logbook', to store the experiments you have done.

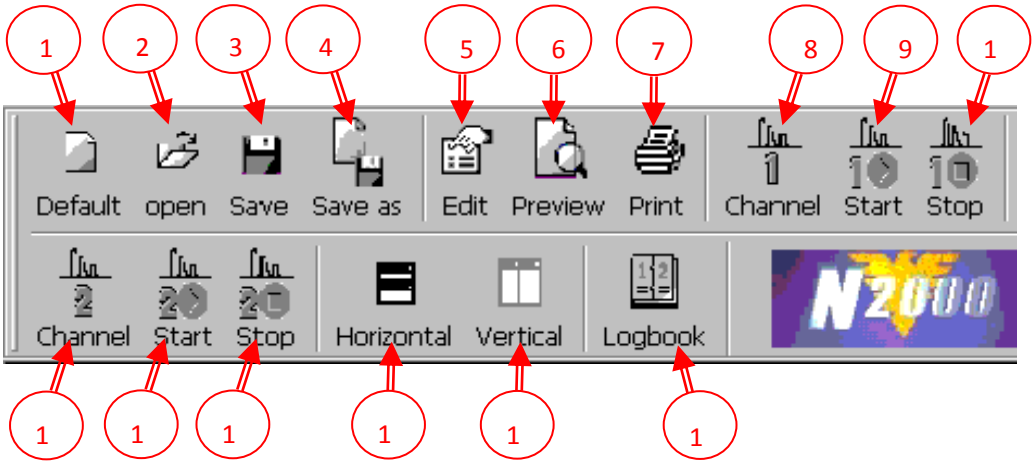


Figure C-008. The Tool Bar (800 by 600 screen)

C5. The Dialog Box

There are three major buttons on the Dialog Box as shown in Figure C-009. They are:

1. 'Sample Info', to input the sample information;
2. 'Method', to select the method for implementing the experiment, and
3. 'Acquire Data', to acquire data.

Their usage will be illustrated in the following sections.

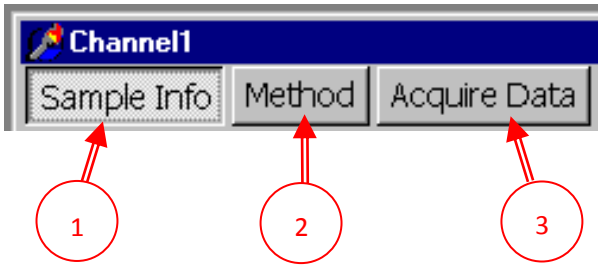


Figure C-009. The Major Buttons on the Dialog Box

C6. Enter the Information of Experiment

1. Point to the button ‘Sample Info’ and click.
2. The dialog box for Sample Information will appear as shown in Figure C-100.
3. Type in the ‘Project Title’, ‘Analyst’, ‘Company’ and ‘Sample Description’ in appropriate blank space according to your requirements.

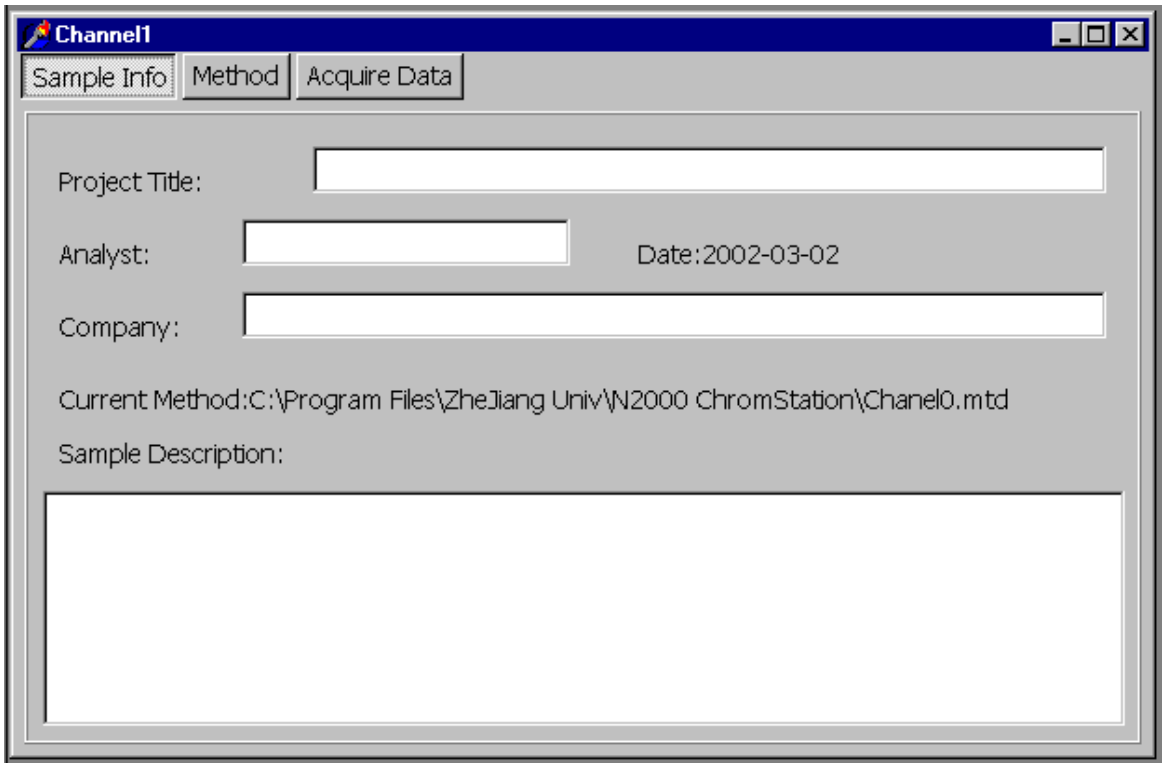


Figure C-010 Dialog box for Sample Information

C7. Define the Method for Experiment

1. Point to the button 'Method' and click.
2. The dialog box for editing the method for experiment appears.
3. At the bottom of this dialog box please find the bar for further choices as shown in Figure C-200.

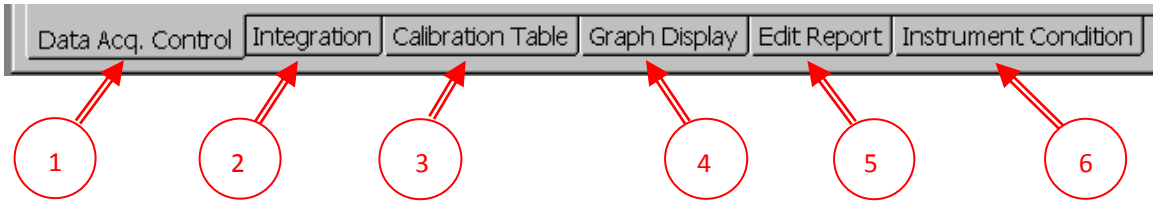


Figure C-011 Tool bar for editing the method for experiment

The further Choices available are:
1. 'Data acq control', to control the data acquisition process;
2. 'Integration', to set the parameters, variables, and method for integration;
3. 'Calibration table', to edit the calibration table;
4. 'Graph display', to set the parameters for displaying the graph in report;
5. 'Edit report', to determining the contents of your experiment report; and
6. 'Instrument condition', to input the characters of your instrument.

The function of each choice will be illustrated in the following.

C8. Data Acquisition Control

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Data Acq. Control’ and click.
3. The Dialog Box for acquiring the data appears as shown in Figure C-210.
4. Setup the options you need.

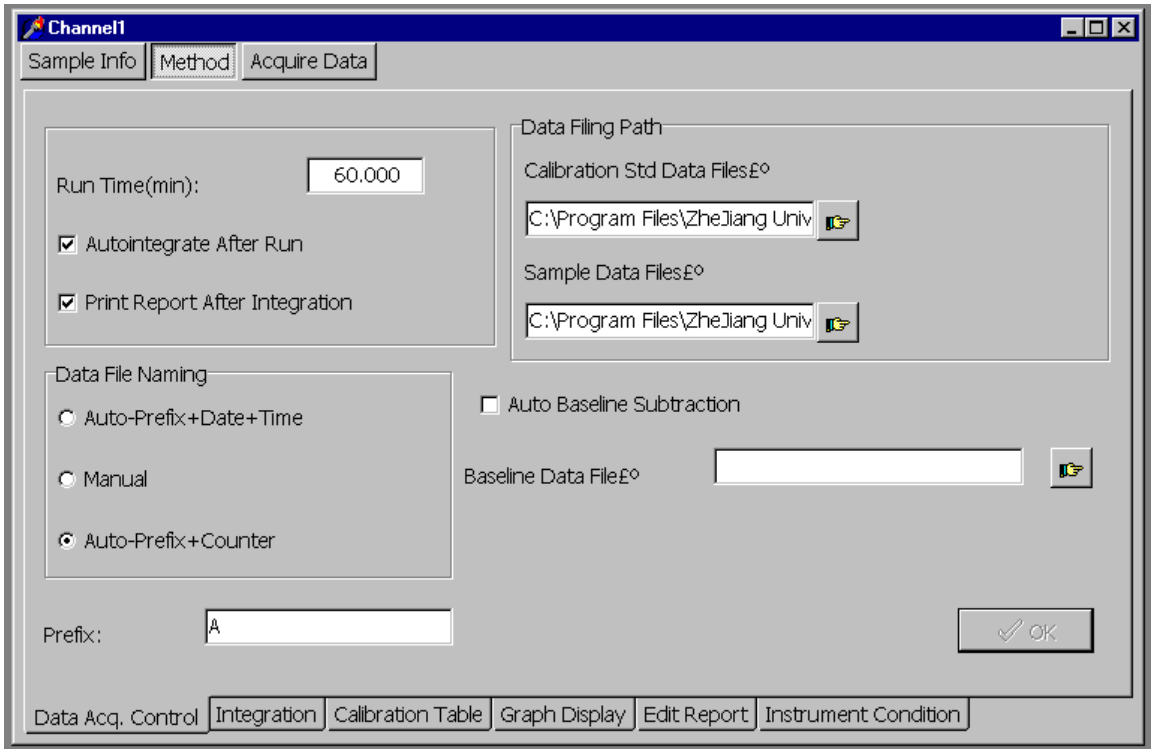


Figure C-012 Dialog box for Data Acquisition Control

C9. Edit the Integration Process

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Integration’ and click.
3. The Dialog box for controlling the integration process appears as shown in Figure C-220.
4. Setup the options you need.

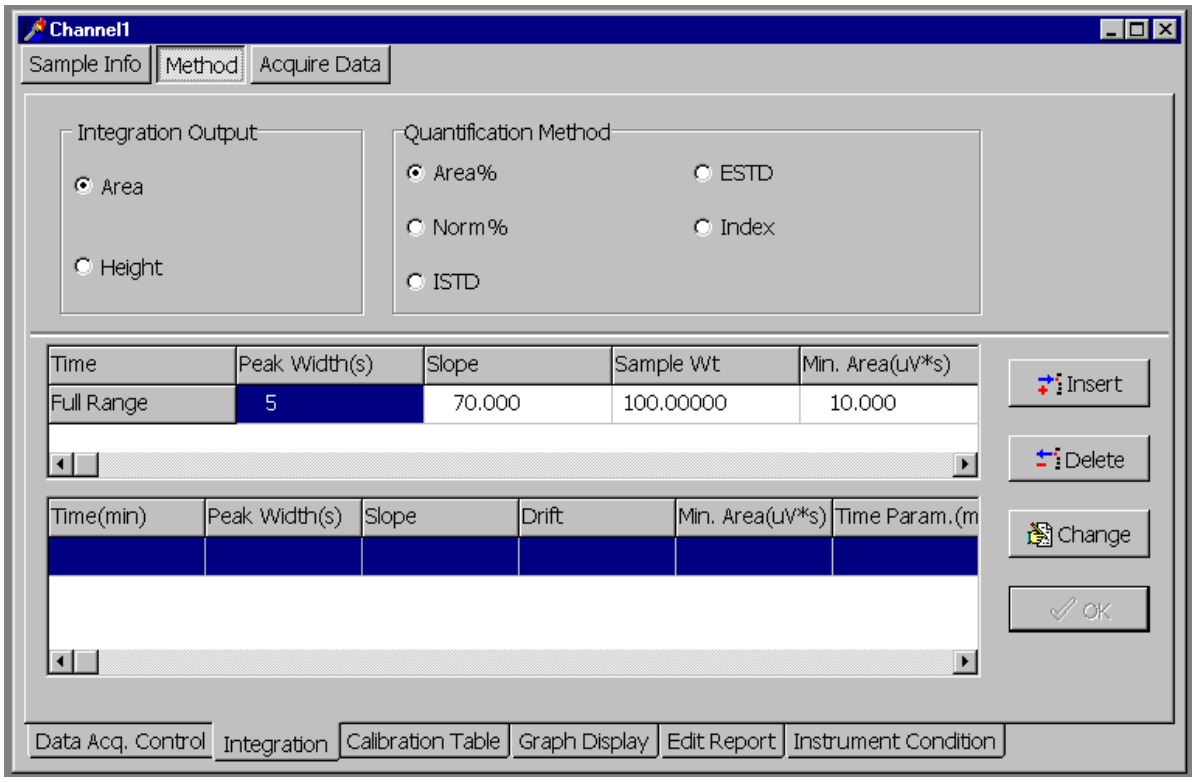


Figure C-013 Dialog box for the Integration Process Control

C10. Edit the Calibration Table

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Calibration Table’ and click.
3. The Dialog Box for editing the calibration table appears as shown in Figure C-230.
4. Setup the options you need.

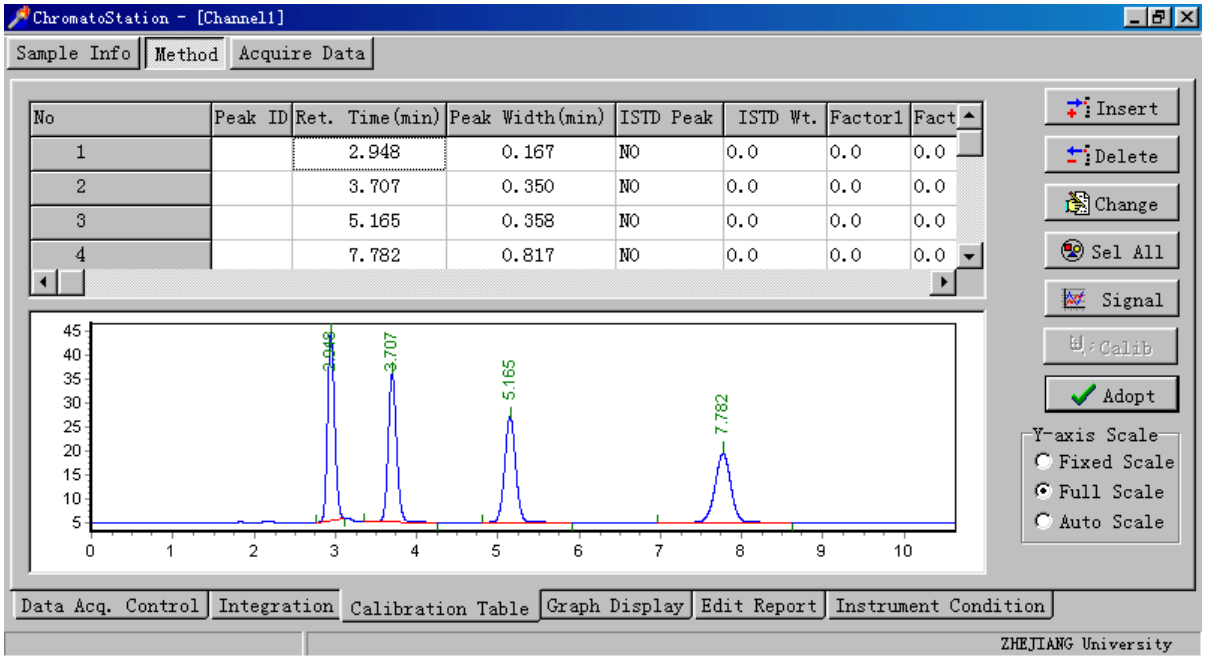


Figure C-014 Dialog Box for Editing the Calibration Table

C11. Edit the Graph Display

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Graph Display’ and click.
3. The Dialog Box for editing the graph display appears as shown in Figure C-240.
4. Setup the options you need.

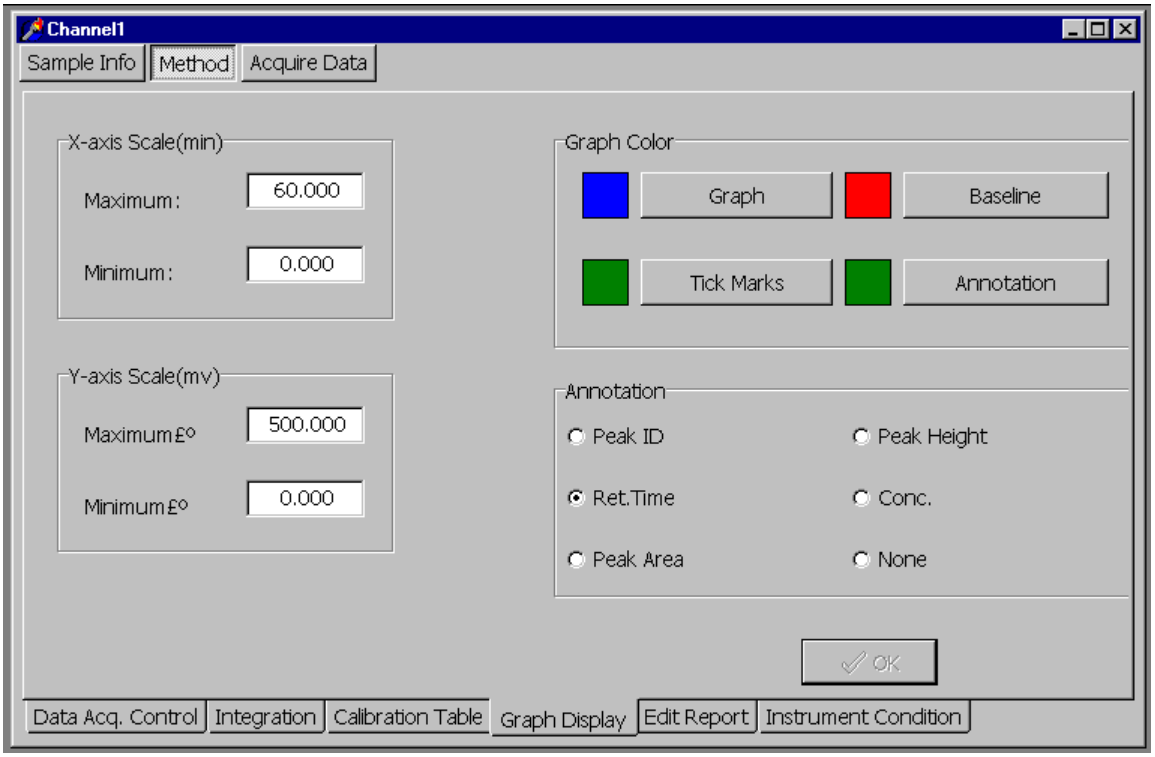


Figure C-015 Dialog Box for Editing the Graph Display

C12. Edit the Experiment Report

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Edit Report’ and click.
3. The Dialog Box for editing the experiment report appears as shown in Figure C-250.
4. Setup the options you need.

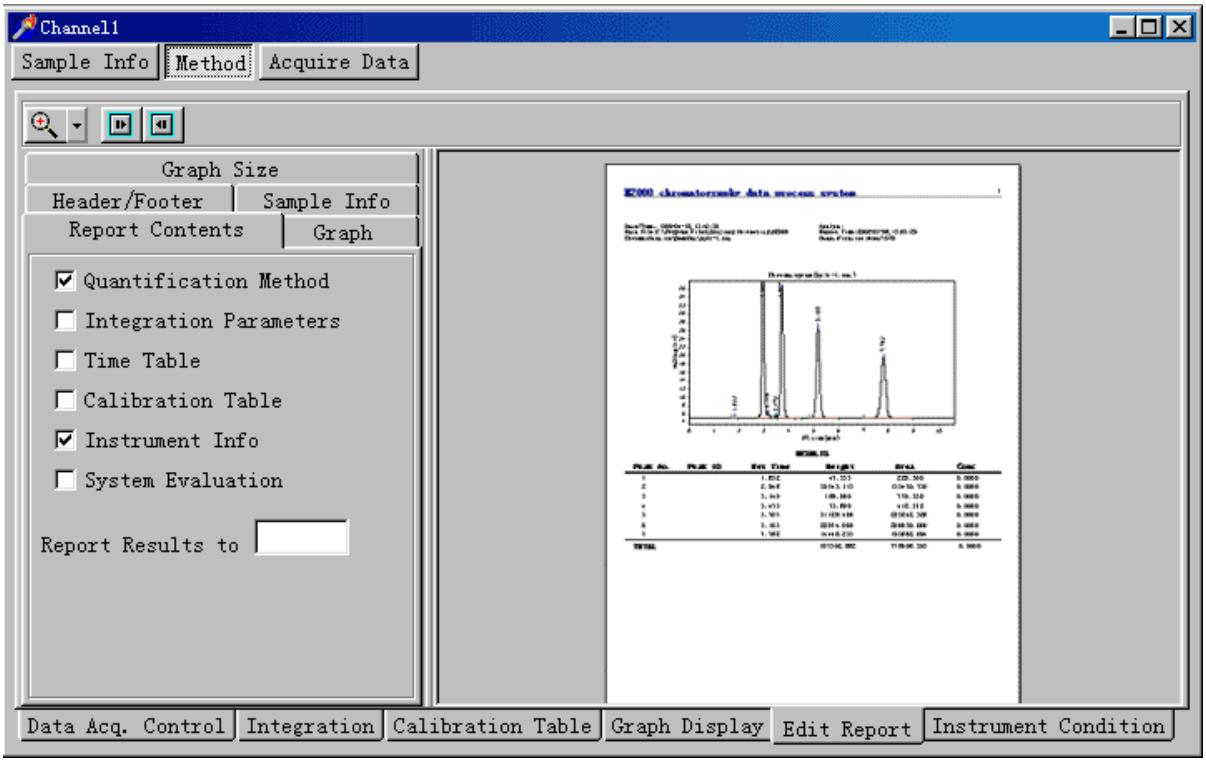


Figure C-016 Dialog Box for Editing the Experiment Report

C13. Set the Instrument Condition

1. Point to the button ‘Method’ and click.
2. Point to the Choice ‘Instrument Condition’ and click.
3. The Dialog Box for editing the instrument condition appears as shown in Figure C-260.
4. Setup the options you need.

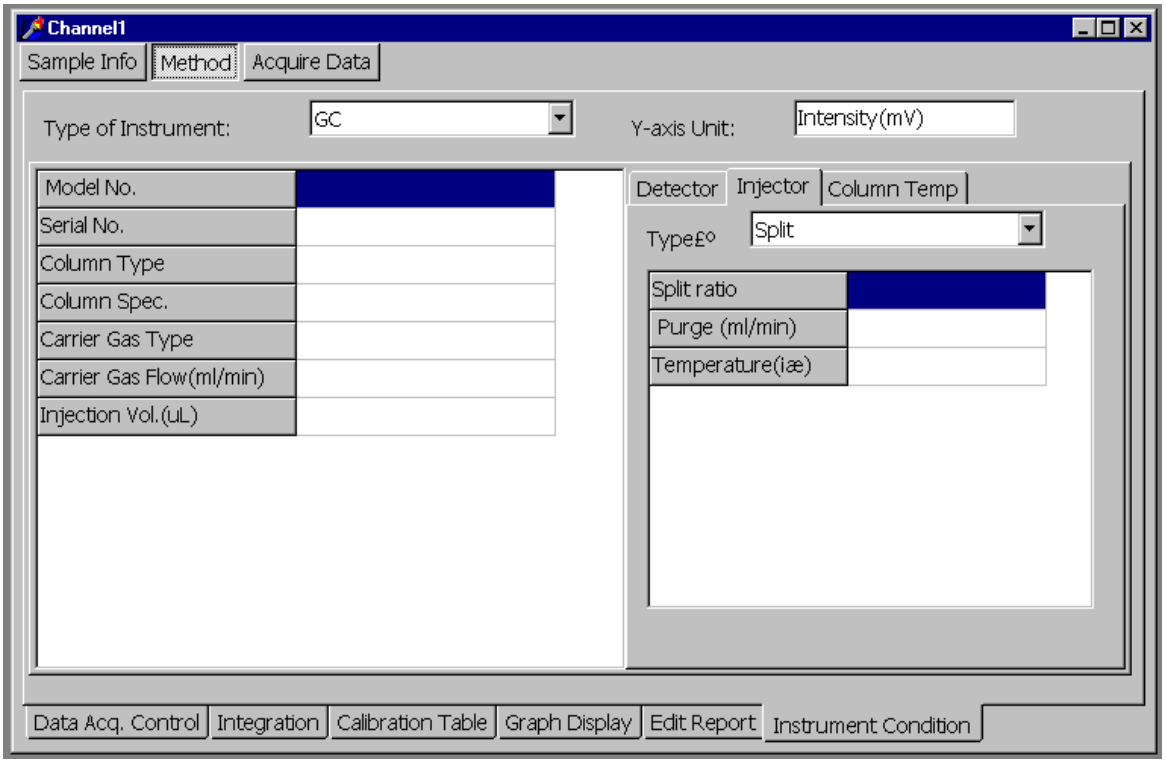


Figure C-017 Dialog Box for Editing the Instrument Condition

C14. Acquiring Experiment Data

1. Point to the button ‘Acquire Data’ and click.
2. The Dialog Box for acquiring data appears as shown in Figure C-300.
3. Enter the parameters according to your requirements.
4. You can aso choose shortcut key of “ F5” (Channel 1), “F7” (Channel 2)
5. If you want to check the baseline, you can press the botton.

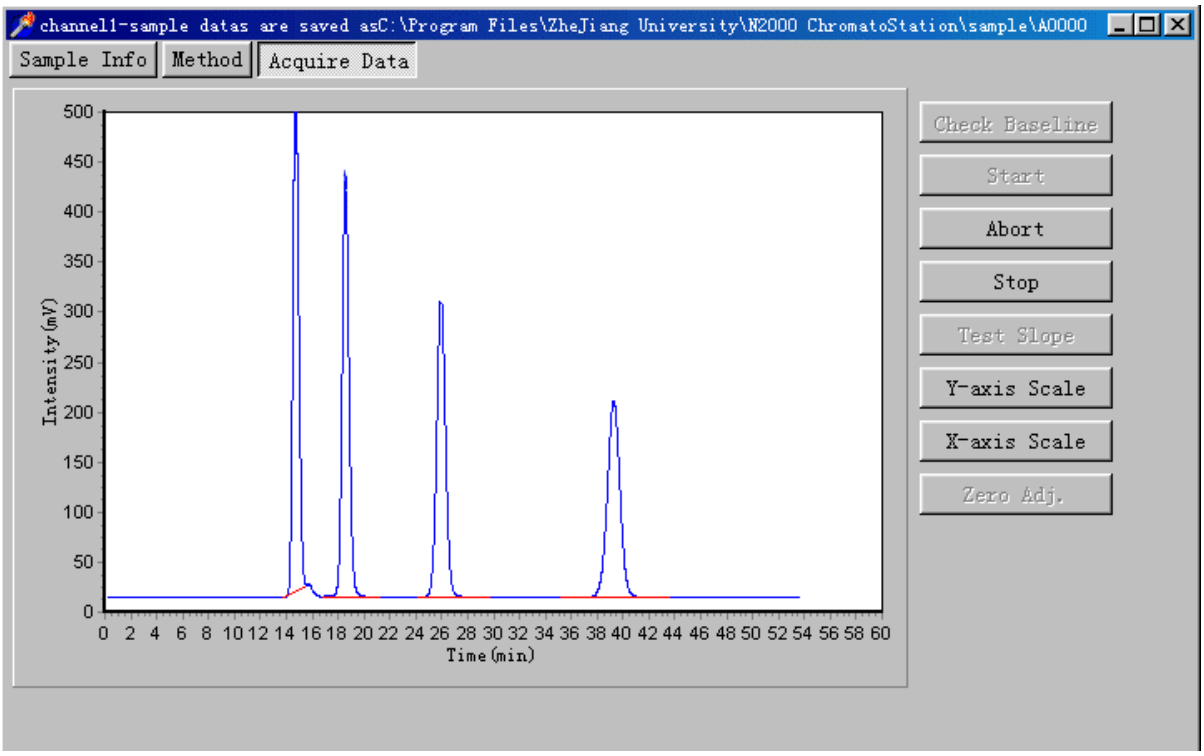


Figure C-018 Dialog Box for Editing the Instrument Condition

C15. File Style Introduction

1. MTD: Storage method, Default method, current methods extension name.
2. DAT: Only include the data information.
3. ORG: Besides data information, also include the experiment information and sample analysis method, instrument condition, integral and quantitative calculation and the result report.
4. MDY: Modify the ORG file will be saved as MDY.

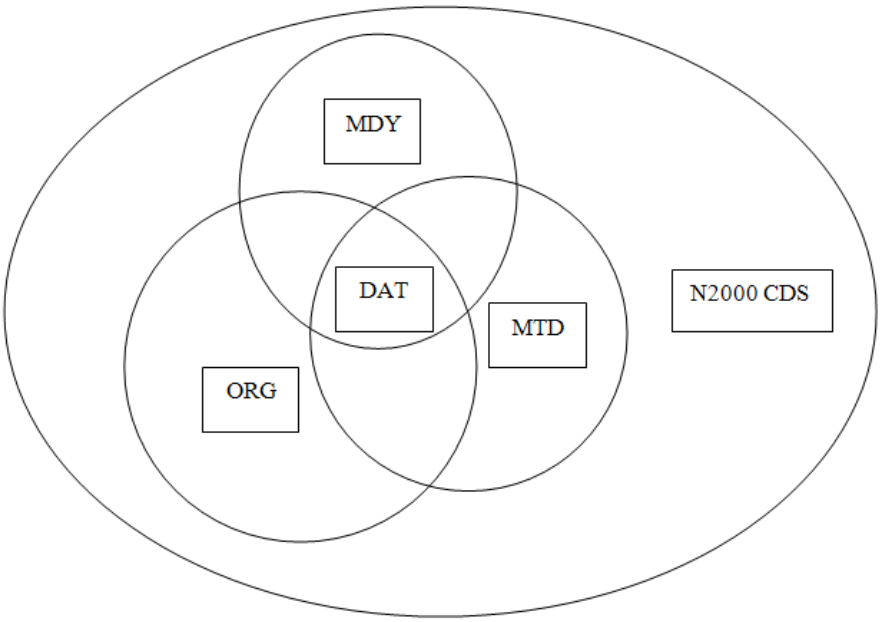


Figure C-019 N2000 CDS Structure Diagram

C16. Chromatograpm operating mode

1. Zoom in: Hold the left mouse button in the chromatogram window from left to right, the selected area will be enlarged after let it go.
2. Zoom out: Hold the left mouse button in the chromatogram window from right to left, the selected area will be the whole chromatogram after let it go.
3.Drag: Hold the right mouse button in the chromatogram window, the other part of chromatogram can be shown in the window.
4. Choose one peak: Press “Shift” to click the peak you need, then press “Input”, below dialogue table will come out.

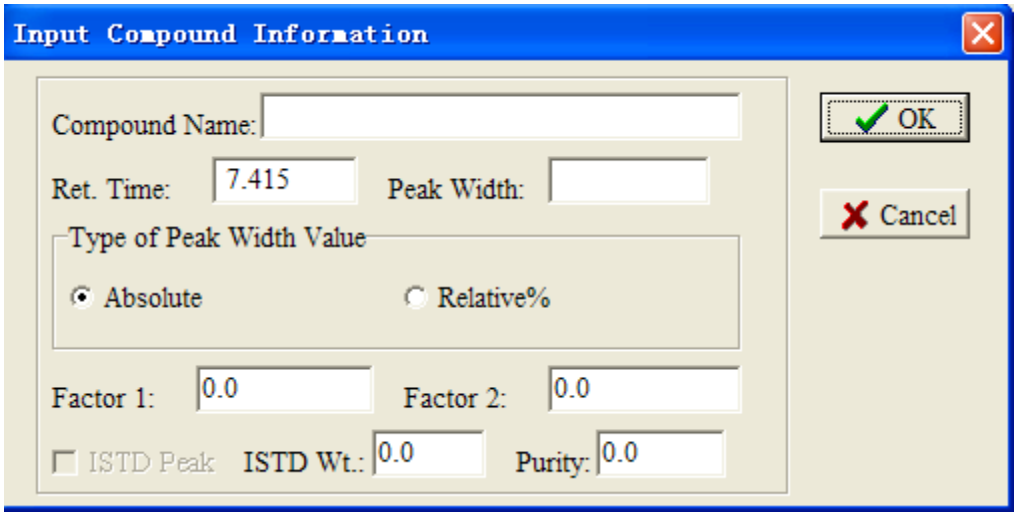


Figure C-020 Input the Compound Information

5. Choose a time for a period: Press “Shift” to drag the time you need to use in the time program.

C17. Edit Time Program

1. To remove the unnecessary peak, please use the Lock Function of Time Program

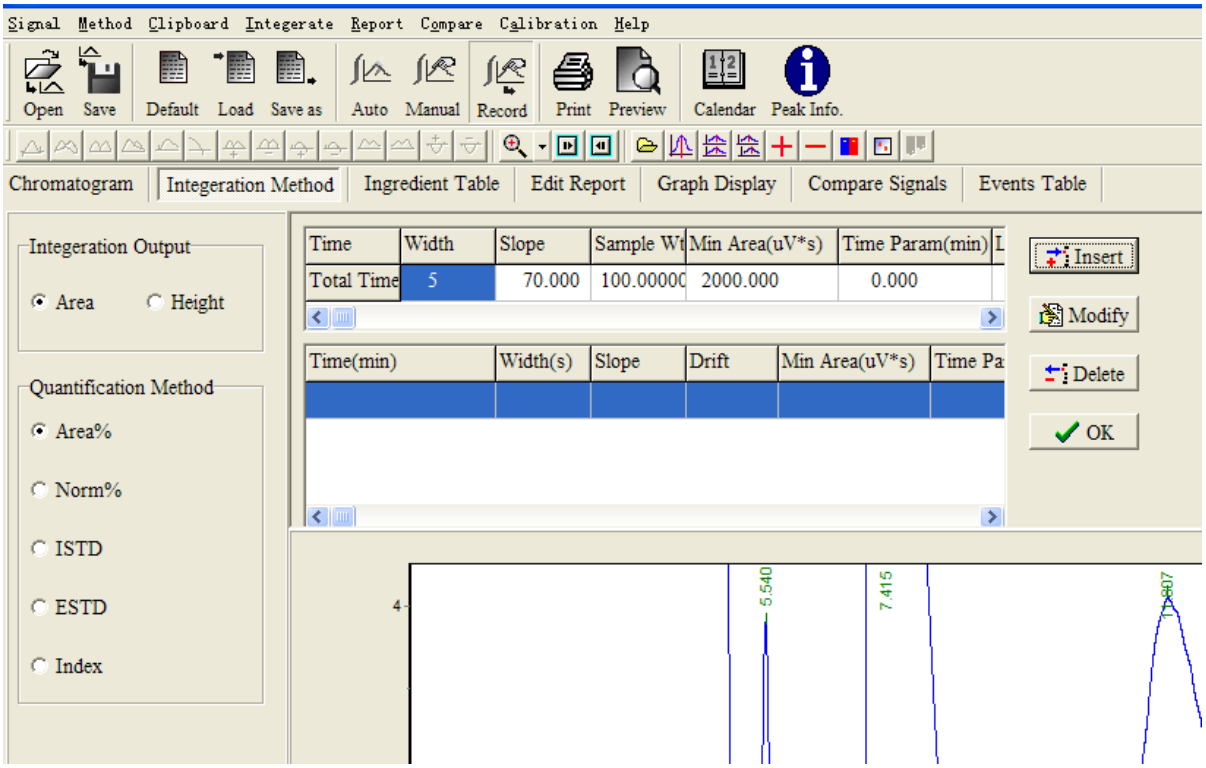


Figure C-021 Integration Method

Press click the Inset, below dialogue table will come out.

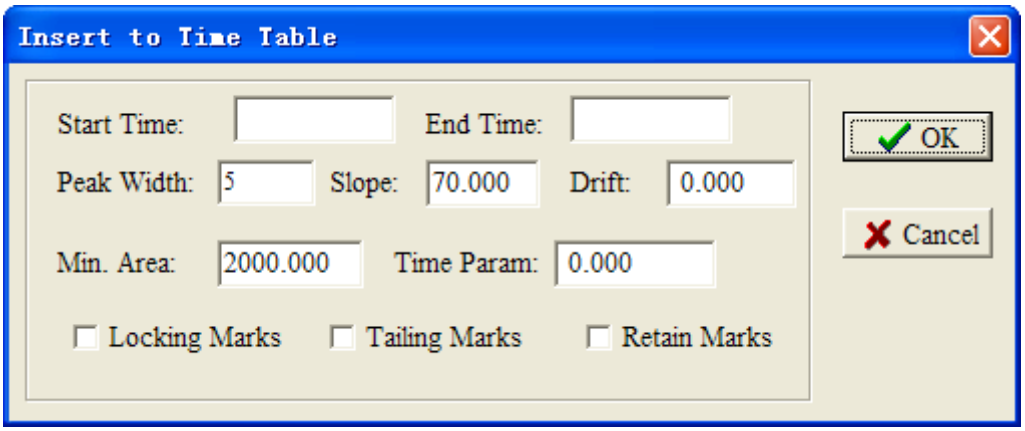


Figure C-022 Input the Time Program Information

Note:

1. Start time can not be set as “0”
2. Next Program Start time can not be overlapped with the before time Program
3.Locking Marks: All peaks during this range will be locked.
4.Tailing Marks: All peaks will be deal with the tailing marks style
5. Retain Marks: All peak integration will be same with baseline.

C18. First Sample Example

1. Open the “Online” of CDS

Figure C-023 Input the Time Program Information

2. Set the serial port:

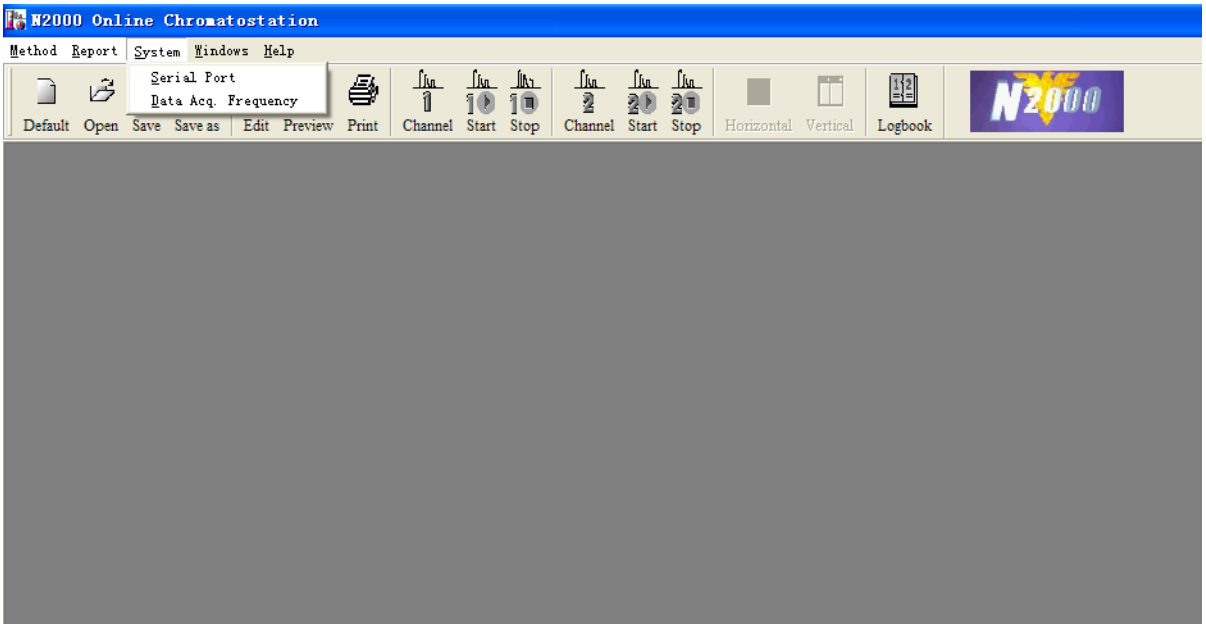


Figure C-024 Serial port selection

Click “Serial Port”, below dialogue will come out, please set the serial prot.

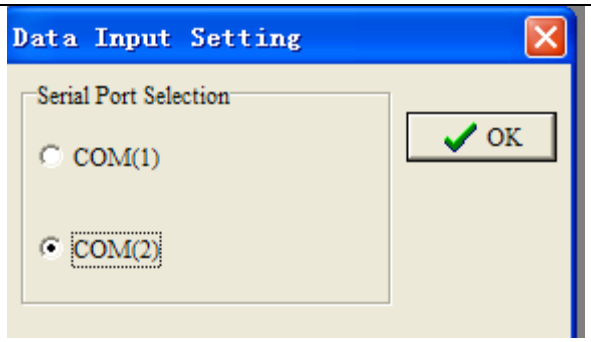


Figure C-025 Serial port selection

3. Channel selection
Choose the right channel.

Figure C-026 Channel selection

4. Data Aquire Selection

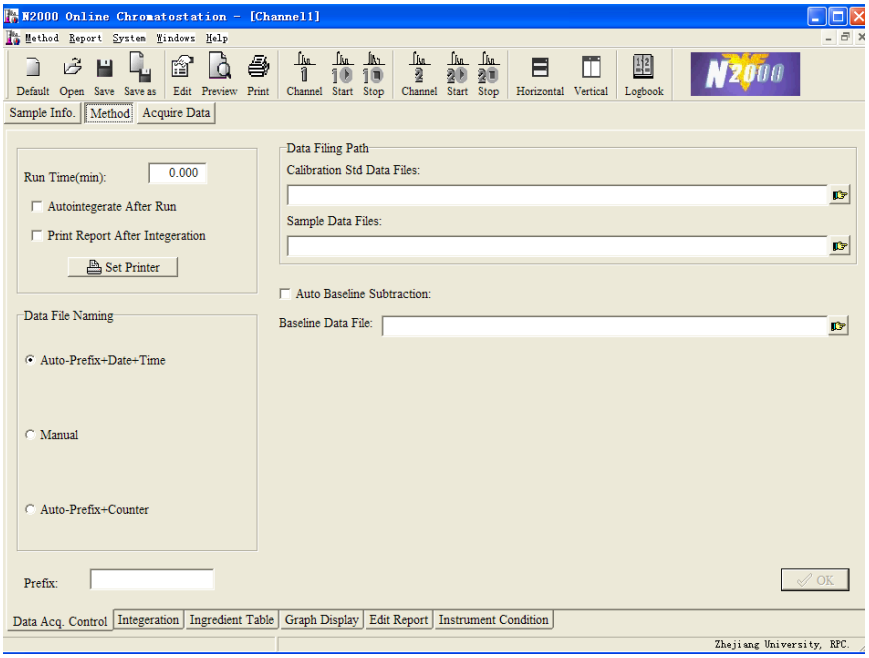


Figure C-027 Data Aquire Selection

5. Inject the sample

Press " Start" to acquire the data, after please press "Stop" to finish.

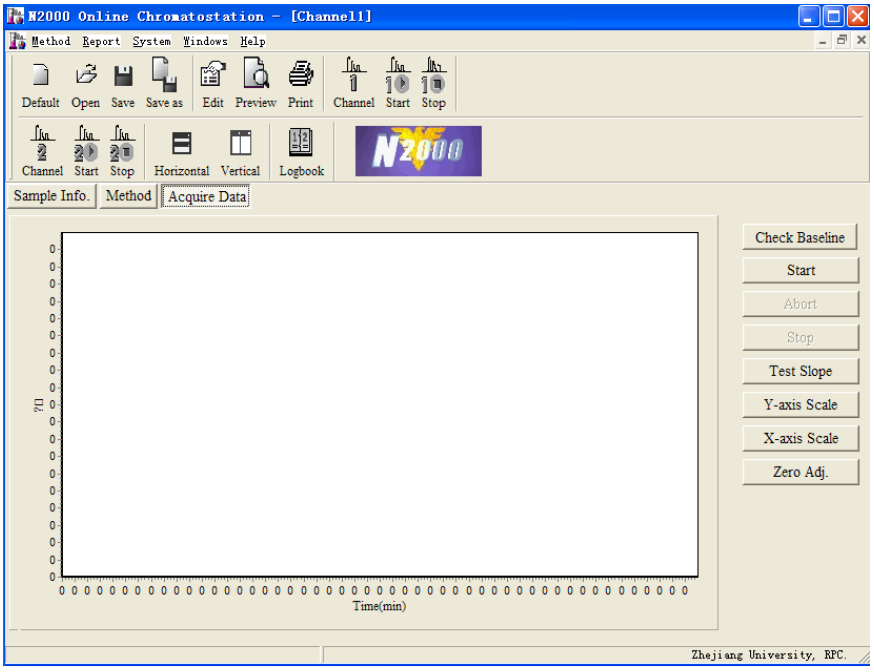


Figure C-028 Data Aquire Selection

C19. Calculation options and Calibration

NORM Method Procedure

1. Choose the Area Norm Method as below, press “OK”.

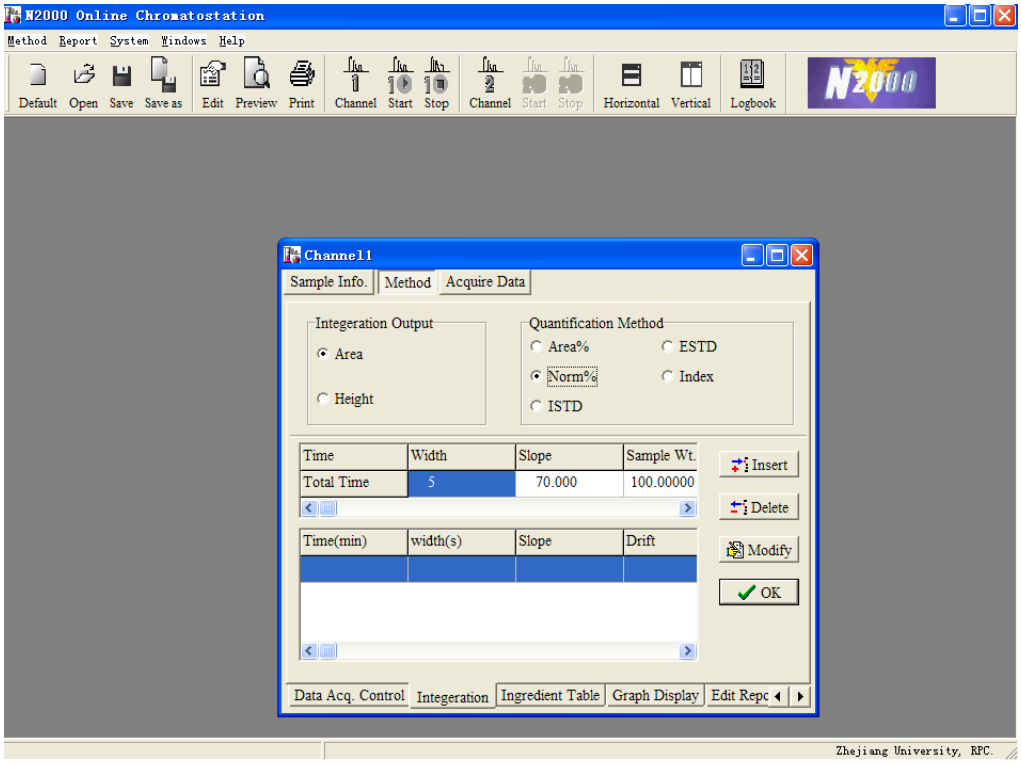
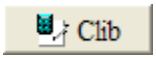


Figure C-029 Method Selection

2. Choose “ Ingredient Table” , Peak ID can be input here. Choose “Set All”, then click “OK”,  will be lighted.

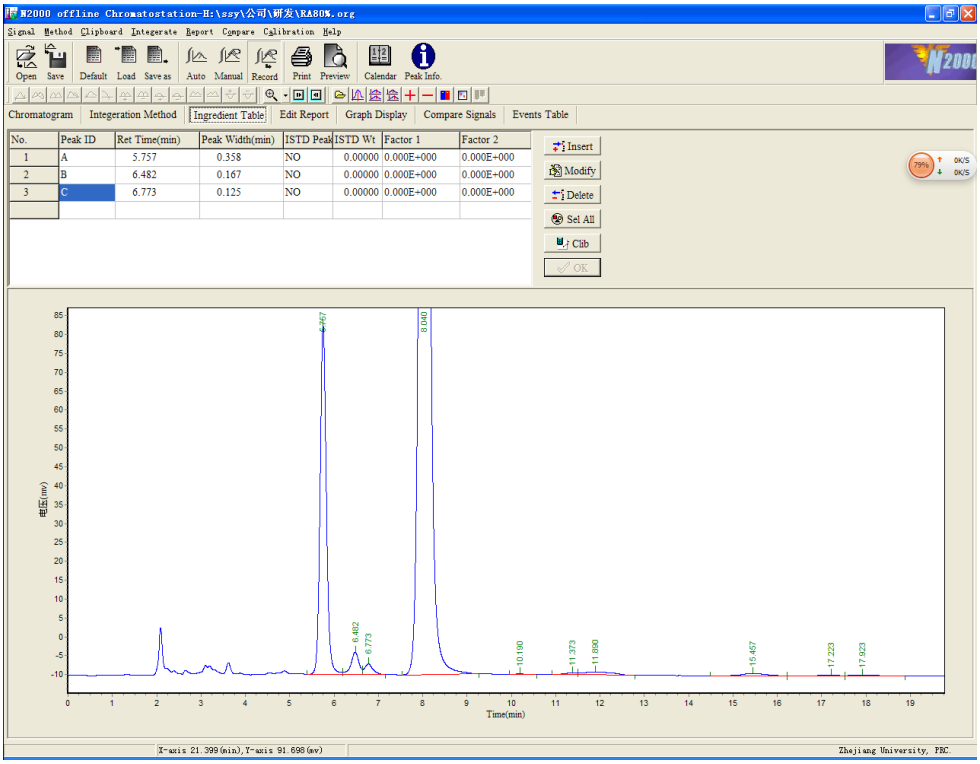


Figure C-030 Ingredient Table

3. Click 

, Calibration table will come out.

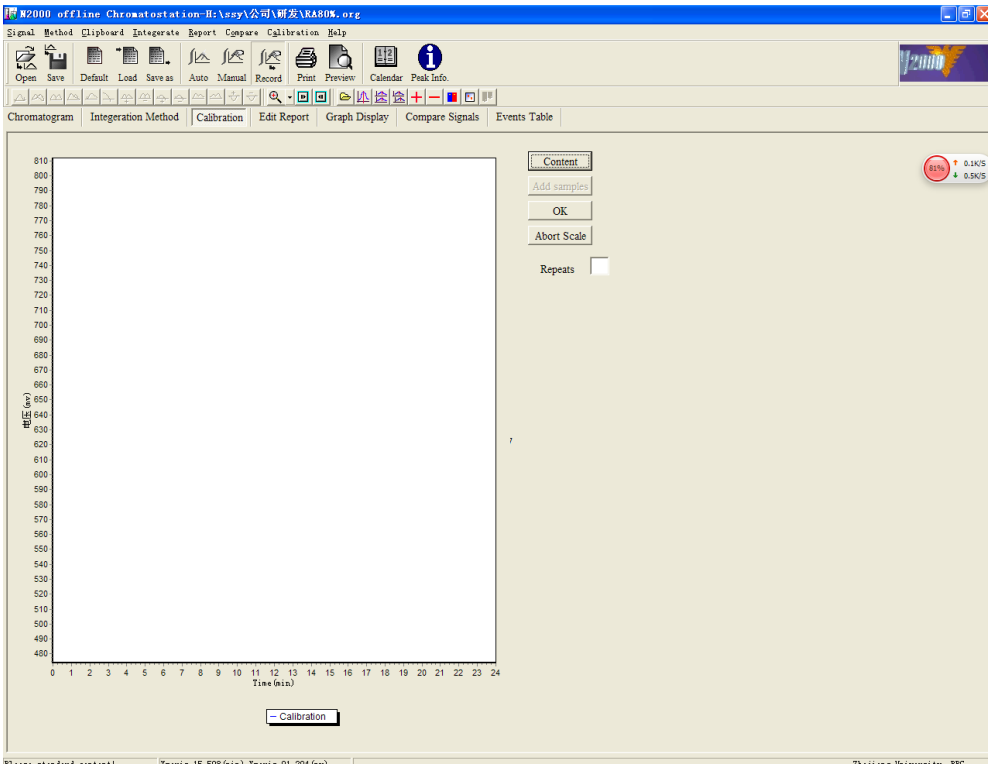


Figure C-031 Calibration Table

4. Click Content, input the concentration of A, B,C like below, press “OK”.

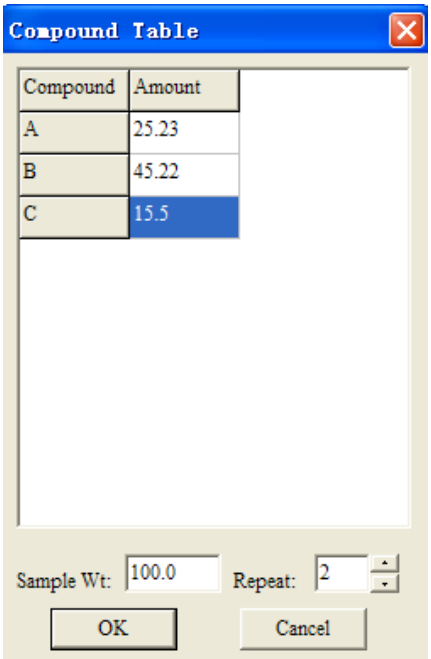


Figure C-032 Compound Table

5. Calibration

Choose “Add samples” to run calibration. Click Add samples, below dialog will come out:

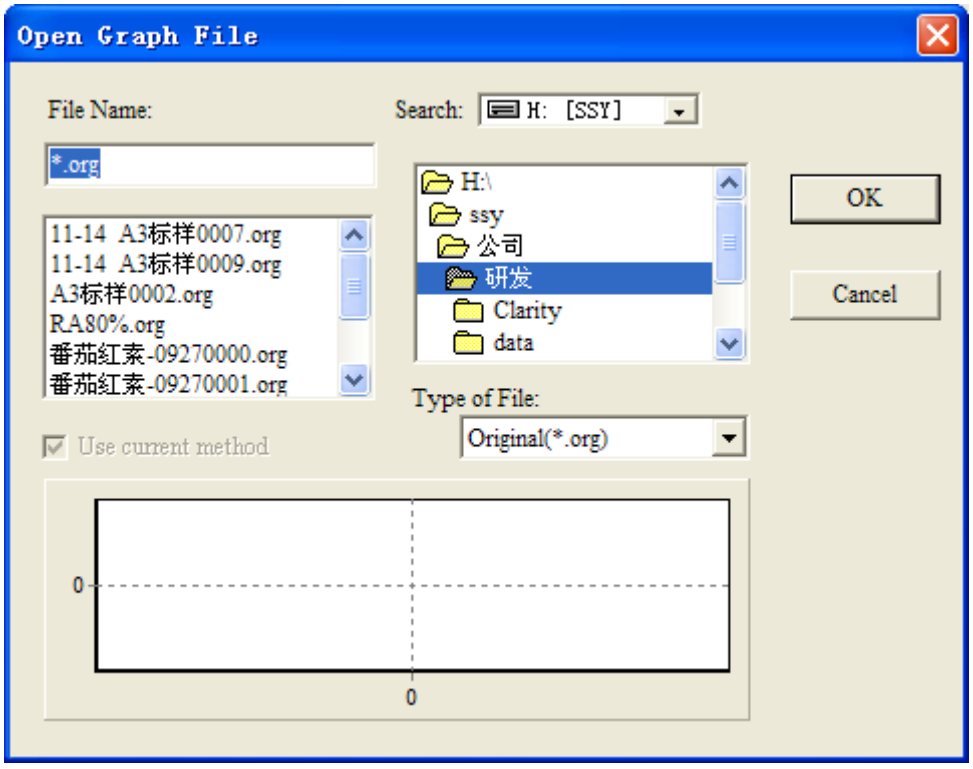


Figure C-033Add samples

Choose the sample you need, then “OK” to finish the first time calibration.

6. Repeat the Step of 5 again to have the second time calibration. Then choose “OK”, Calibration finish button will come out automatically.

Note: If the finish button hint do not come out, maybe the rentention time of peaks in the sample chromatogram is not in the timewidth of ingredient table. Please revise the time or width of ingredient table.

Finish Calibration and Preview the Calibration Curve below, click “Save as”, input File Name.MTD to save it for analysis sampler.

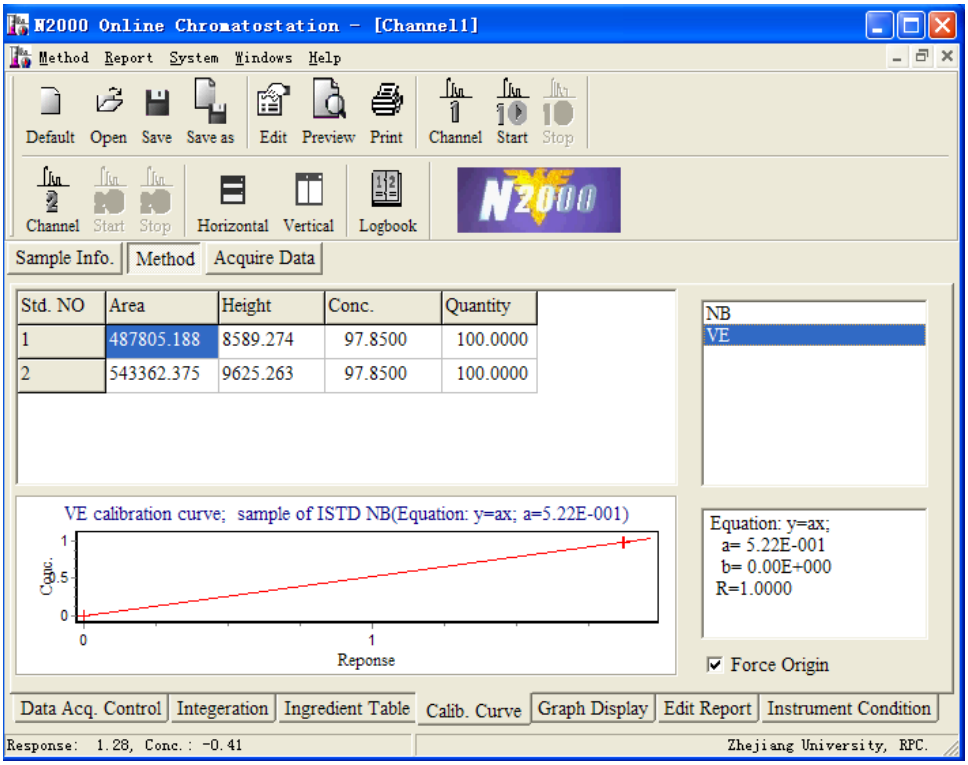


Figure C-034 Calibration curve

ISTD Method Procedure

1. Open “Online”, then choose the Channel and set the parameter of “Method”，

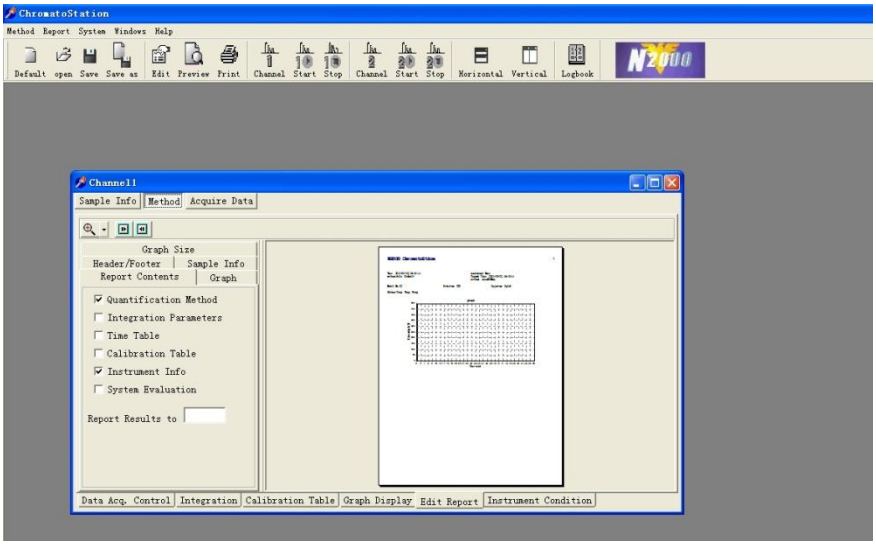


Figure C-031 Dialog Box for Calibration Table

2. Inject 2-3 standard sample, start to acquire data.

3. Choose “Integration”, choose intergral parameter, for example, choose “Height” and “ISTD” here, then confirm “OK”.

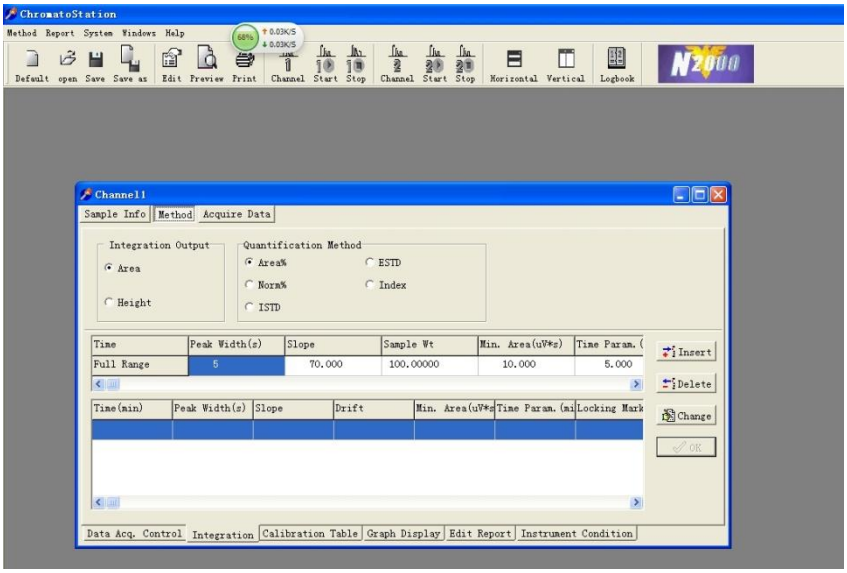


Figure C-032 Dialog Box for Calibration Table

4. Choose “Ingredient Table”, we try “Insert” way. Press SHIFT on keyboard, click the NB peak, then click “Insert”, edit the “ISTD Wt” and “Purity” to 100.

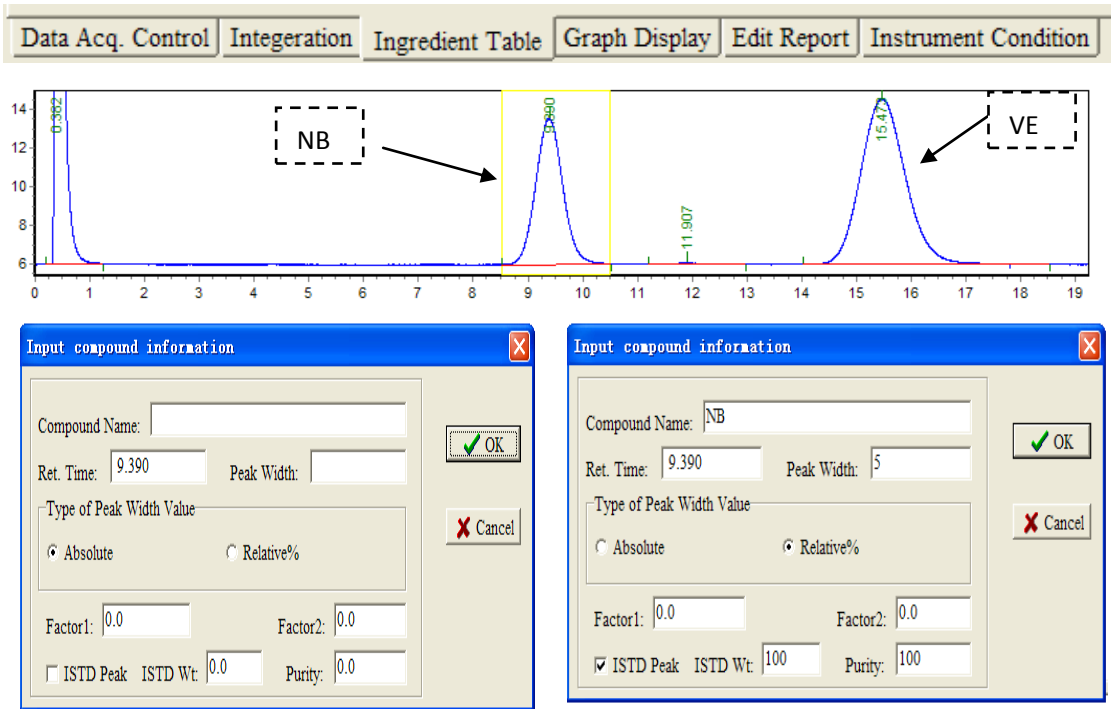


Figure C-033 Dialog Box for Calibration Table

5. Use same method to add VE peak, without edit data. Change “NB” to “VE”.

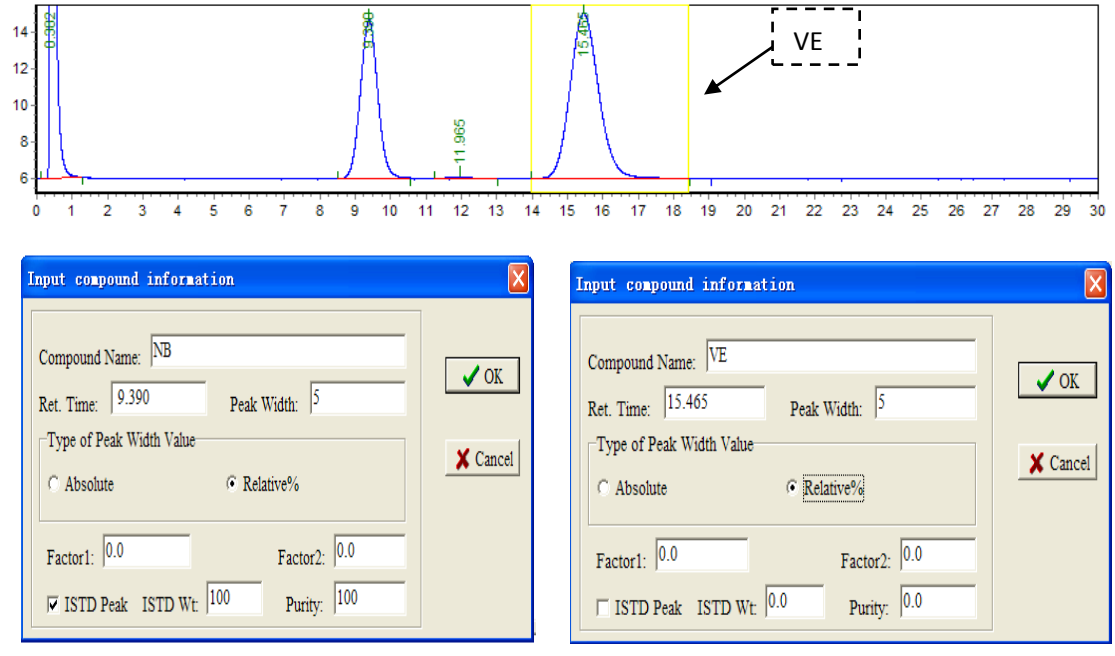
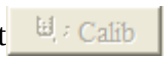


Figure C-034 Dialog Box for Calibration Table

6. Confirm "OK", Chromatography Software will highlight 

, click it.

7. Input the standard sampler Amount in below Tables.

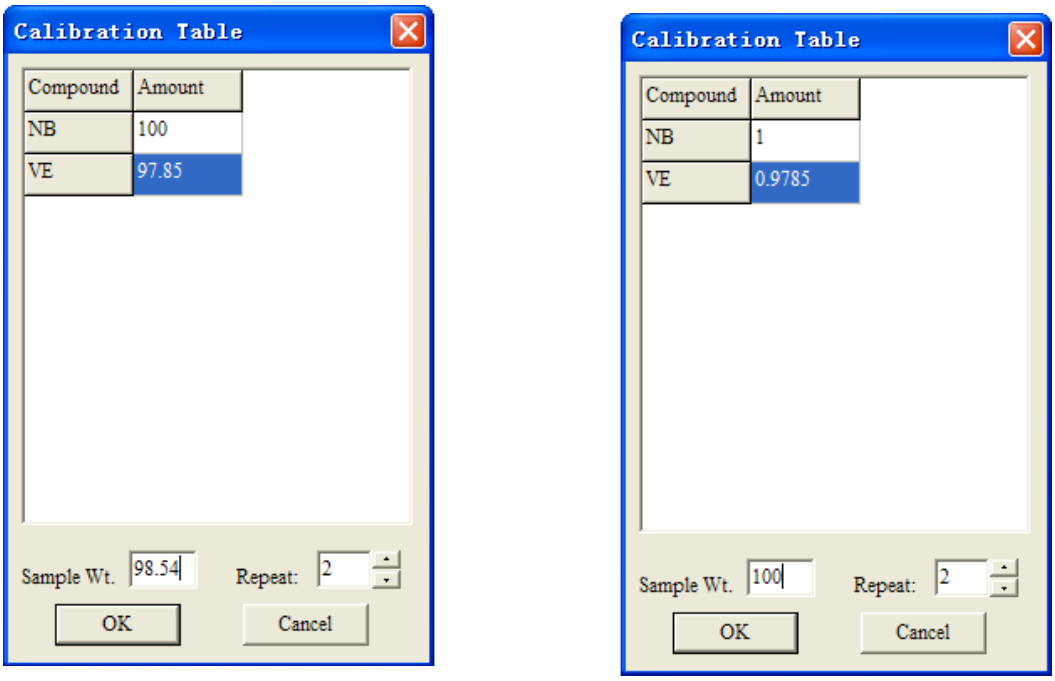
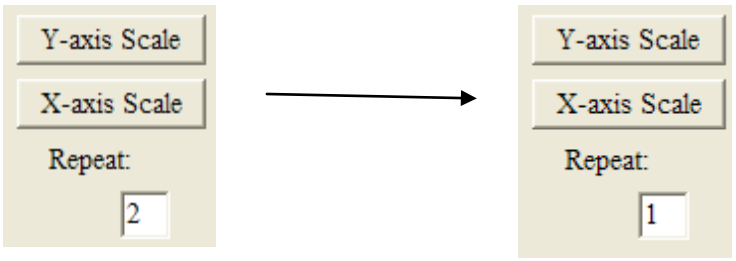


Figure C-035 Dialog Box for Calibration Table

8. Calibration:
Finish one time standard sampler calibration



Finish another time standard sampler calibration

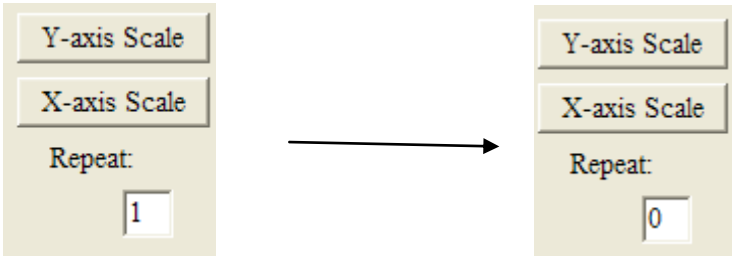


Figure C-036 Dialog Box for Calibration Table

9. Finish Calibration and Preview the Calibration Curve below, click “Save as”, input File Name.MTD to save it for analysis sampler.

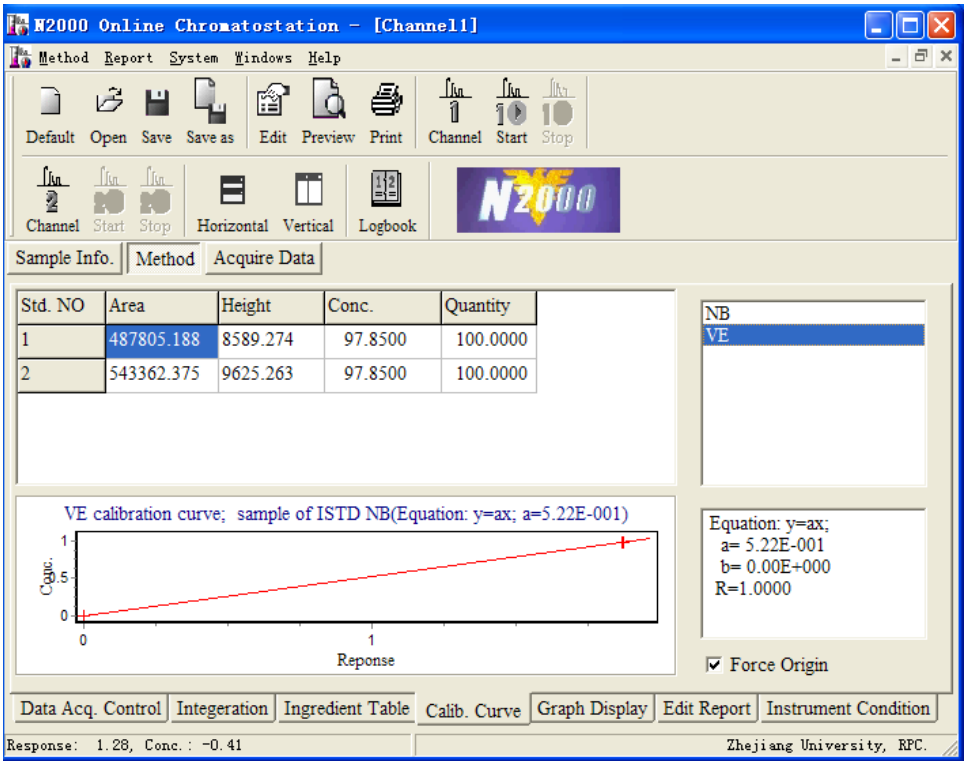


Figure C-037 Dialog Box for Calibration Table

ESTD Method Procedure

1. Online
2. Channel 1
3. Set Method
4. Integration, Choose "Area" and " ESTD", "OK"

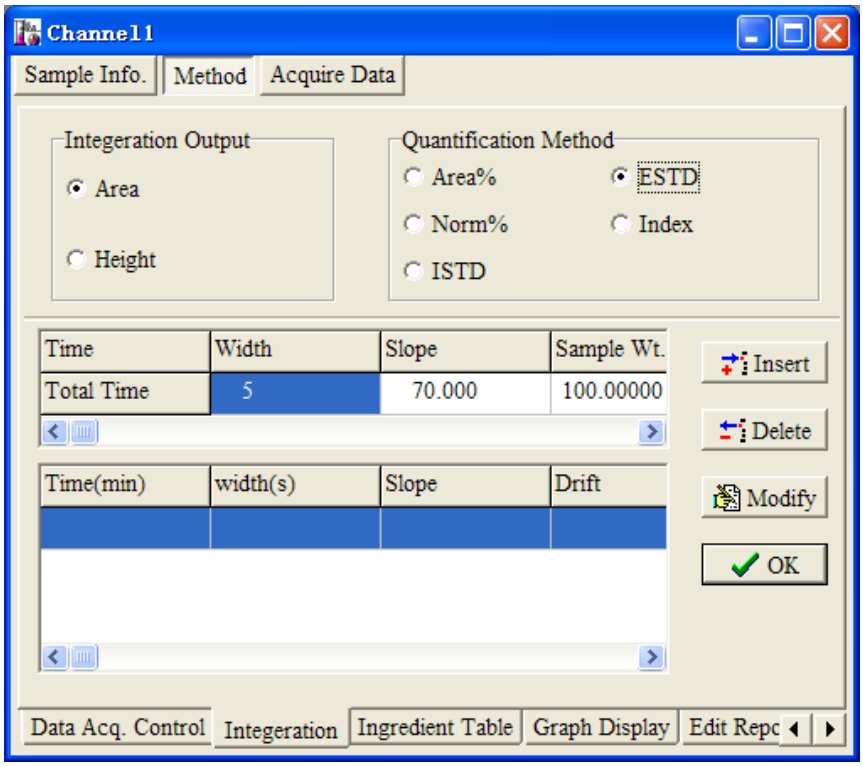


Figure C-038 Dialog Box for Calibration Table

5. Calibration Table, select "Signal" Single, choose your file, Open

6. select" Sel All" Sel All, Name the Peak you need, input in "Peak ID", then " Adopt"

7. Calib, select "Calib Std" ,input the amount number,"OK", select "Calib Signal", choose your file.

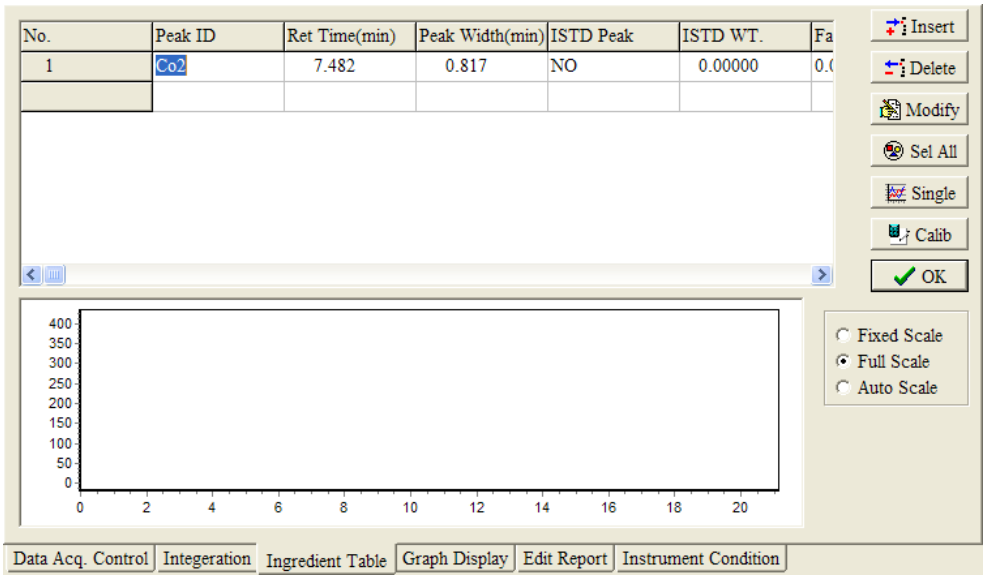


Figure C-039 Dialog Box for Calibration Table

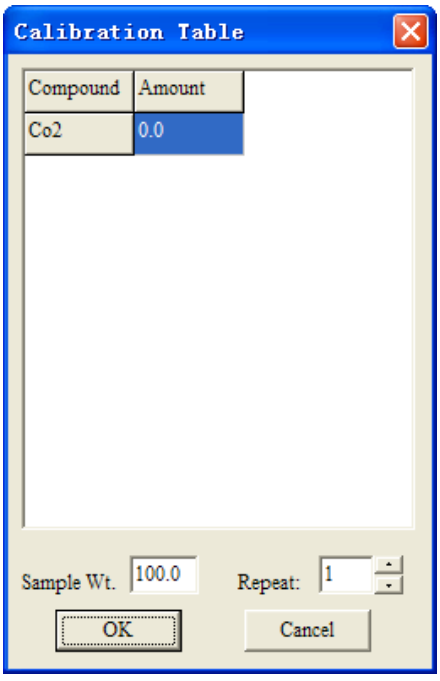


Figure C-040 Dialog Box for Calibration Table

8. Do Step7 again for another calibration
9. Select "Done", Save it as .mtd

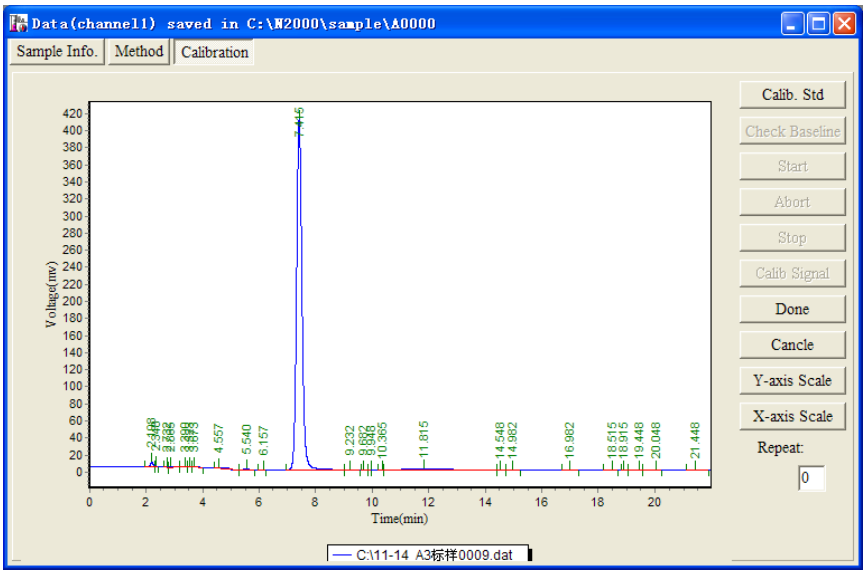


Figure C-041 Dialog Box for Calibration Table

Note: If the finish button hint do not come out, maybe the rentention time of peaks in the sample chromatogram is not in the timewidth of ingredient table. Please revise the time or width of ingredient table.

10. Check your Calibration Curve in the under menu of "Method"

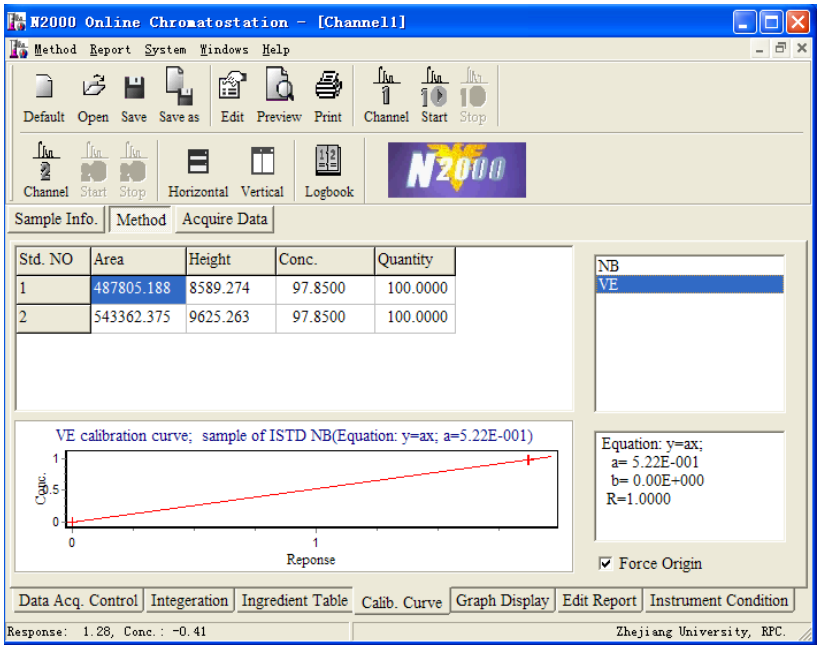


Figure C-042 Calibration Curve

D.Offline Workstation

D1. Startup

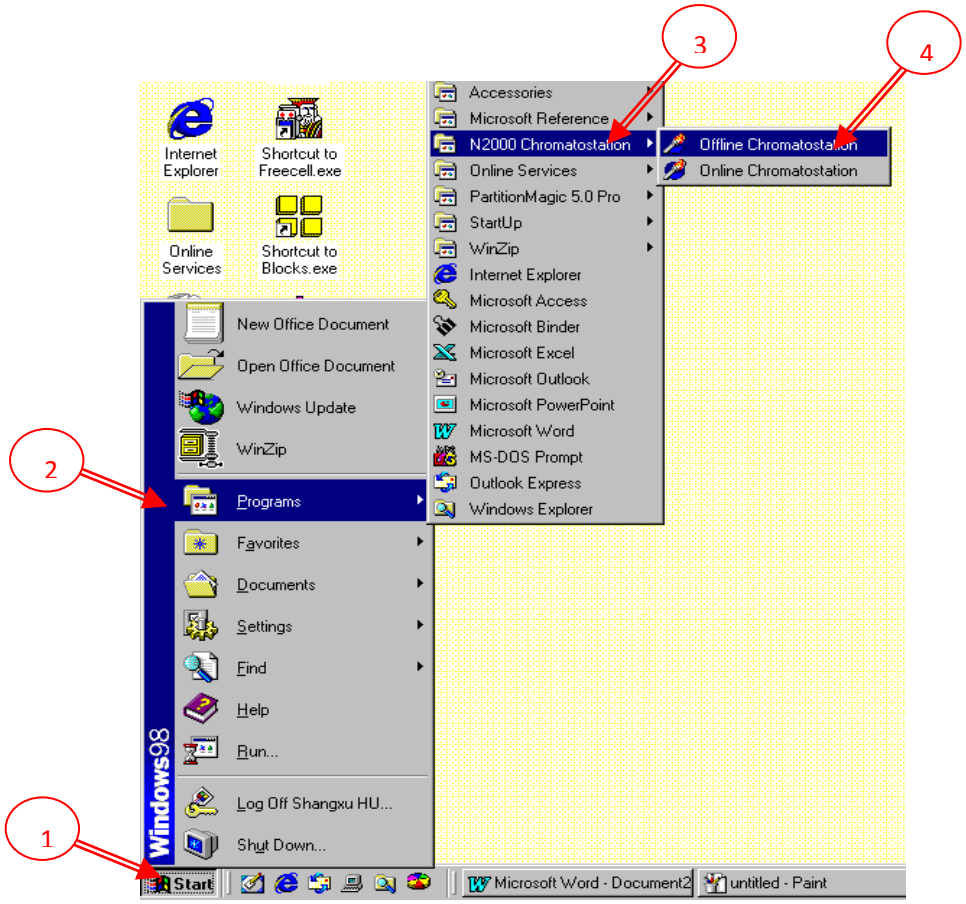


Figure D-001. Procedure to startup the Offline Workstation

Take the following procedure to startup the Offline Workstation.

1. Click the ‘Start’ icon at the tool bar of ‘Windows’ desktop to draw the menu.
2. Point to ‘Program’ to draw the secondary menu,
3. Point to ‘N2000 Chromatostation’ to draw the subsidiary menu,
4. Click ‘Offline chromatostation’ to startup.

This procedure is illustrated in Figure D-001, then the main interface of Offline Workstation appears.

D2. The Main Interface

The main interface of Offline Workstation appears after taking the above procedure. The head of the main interface is shown in Figure D-002.

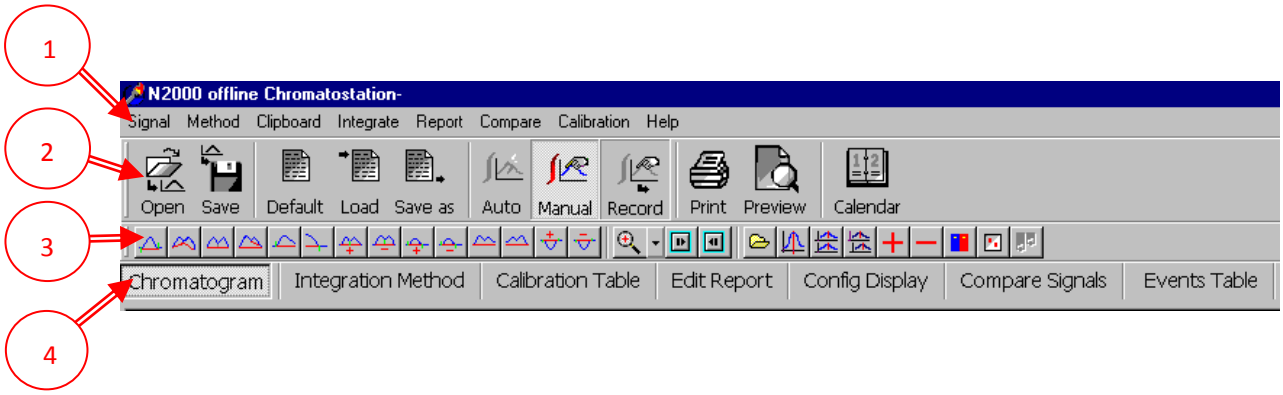


Figure D-002. Head of the Main Interface of the Offline Workstation

The head of main interface of Offline Workstation consists of:

1. The main Menu Bar (MB),
2. The Primary Tool Bar (PT),
3. The Secondary Tool Bar (ST), and
4. The Dialog Box Bar (DB).

The main Menu Bar is shown in Figure D-003, which includes:

1. 'Signal', to manipulate the chromatography signal,
2. 'Method', to select the method,
3. 'Clipboard', to send your results to the place you need,
4. 'Integrate', to implement the integration operation,
5. 'Report', to preview or print your experiment report,
6. Compare, to manipulate signals,
7. Calibration, to save or print calibration curve, and
8. Help.

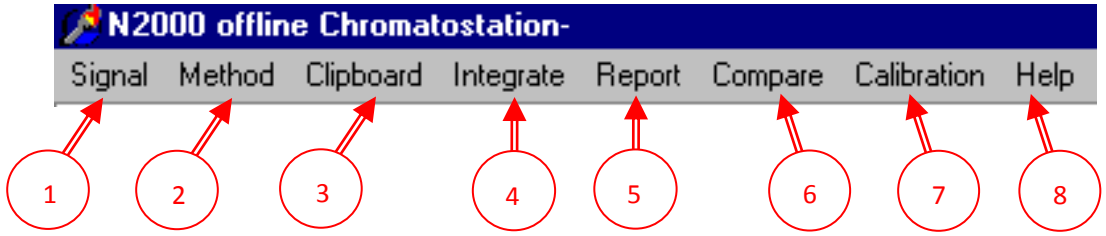


Figure D-003. The Main Menu Bar of the Offline Workstation

The main Primary Tool Bar is shown in Figure D-004, which includes the following buttons:

1. 'Open', to open or load the data file,
2. 'Save', to save the data file,

3. 'Default', to use the default method,
4. 'Load', to load a method from the method subdirectory,
5. 'Save as', to save the current method according to your appointment,

6. 'Auto', to integrate automatically using the current parameters,
7. 'Manual', to integrate manually,
8. 'Record', to record the manual integration events,

9. 'Print', to print your experiment report,
10. 'Preview', to preview your experiment report, and

11. 'Calendar', to check calendar.

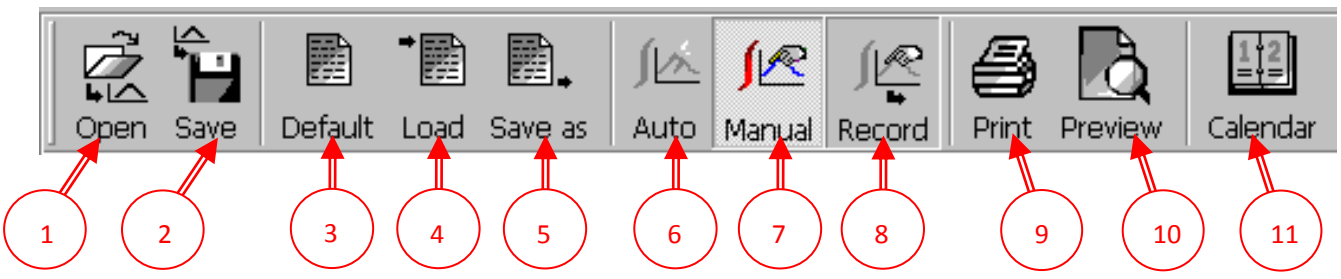


Figure D-004. The Primary Tool Bar of the Offline Workstation

The main Secondary Tool Bar is shown in Figure D-005, which consists of the following sections of buttons:

I. In the Section I the following buttons are included:

I-1. Draw baseline manually,
I-2. Integrate a single peak,
I-3. Integrate merged / overlapping peaks,
I-4. Integrate a tailing peak,
I-5. Change start time,
I-6. Change end time,
I-7. Separate peaks,
I-8. Merge peaks,
I-9. Add peak,
I-10. Delete peak,
I-11. Extend baseline backward,
I-12. Extend baseline forward,

I-13. Add negative peak, and
I-14. Delete negative peak.

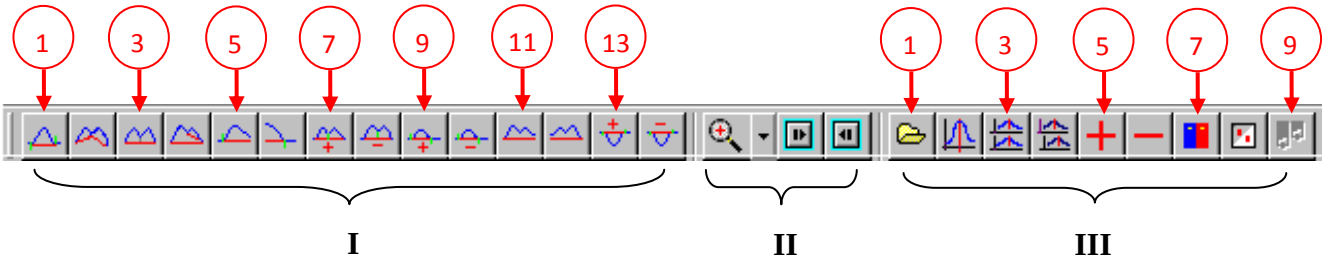


Figure D-005. The Secondary Tool Bar of the Offline Workstation

II. In the Section II the following buttons are included:

II-1. Zoom in report view,
II-2. Next page, and
II-3. Previous page.

III. In the Section III the following buttons are included:

III-1. Open a signal for comparison,
III-2. Set a time reference point as alignment marker,
III-3. Align the x-axis of multiple signals,
III-4. Reset the alignment for your signals,
III-5. Add chromatographic signals, and
III-6. Subtract chromatographic signals.
III-7. Append chromatographic signals,
III-8. Display signals overlaid, and
III-9. Display signals separately.

The further Choices regarding the Dialog Boxes available on the main interface are shown in Figure D-006, which includes the following Choices of Dialog Boxes:

7. To acquire Chromatogram stored,
8. To choose Integration Method,
9. To use Calibration Table,
10. To edit report,
11. To display Configuration,
12. To compare Signals, and
13. To use Events Table.

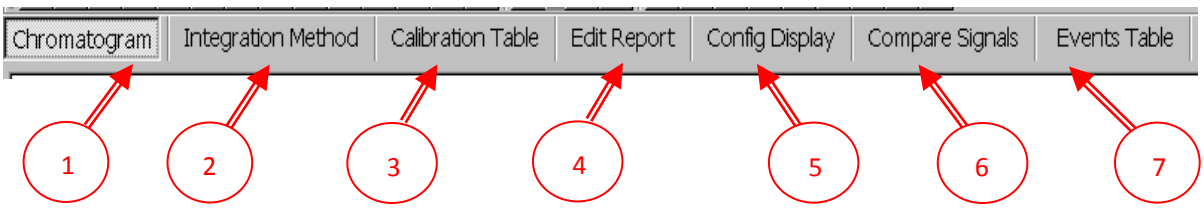


Figure D-006. The Dialog Box Bar of the Offline Workstation

The function of each choice will be illustrated in the following sections.

D3. Acquire the Chromatogram stored

1. Point to the button ‘Chromatogram’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-100.

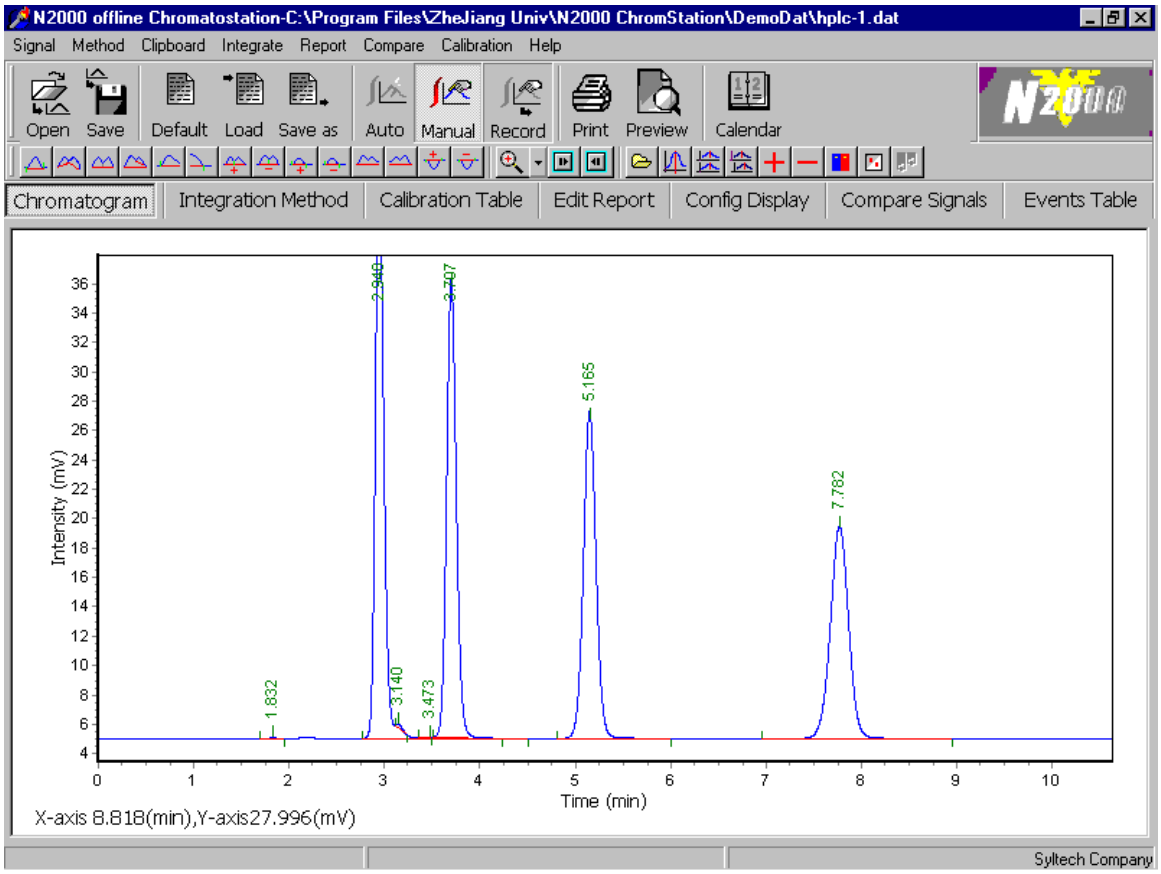


Figure D-007. A selected Chromatogram is displayed

D4. Select the Integration Method

1. Point to the button ‘Integration Method’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-200.

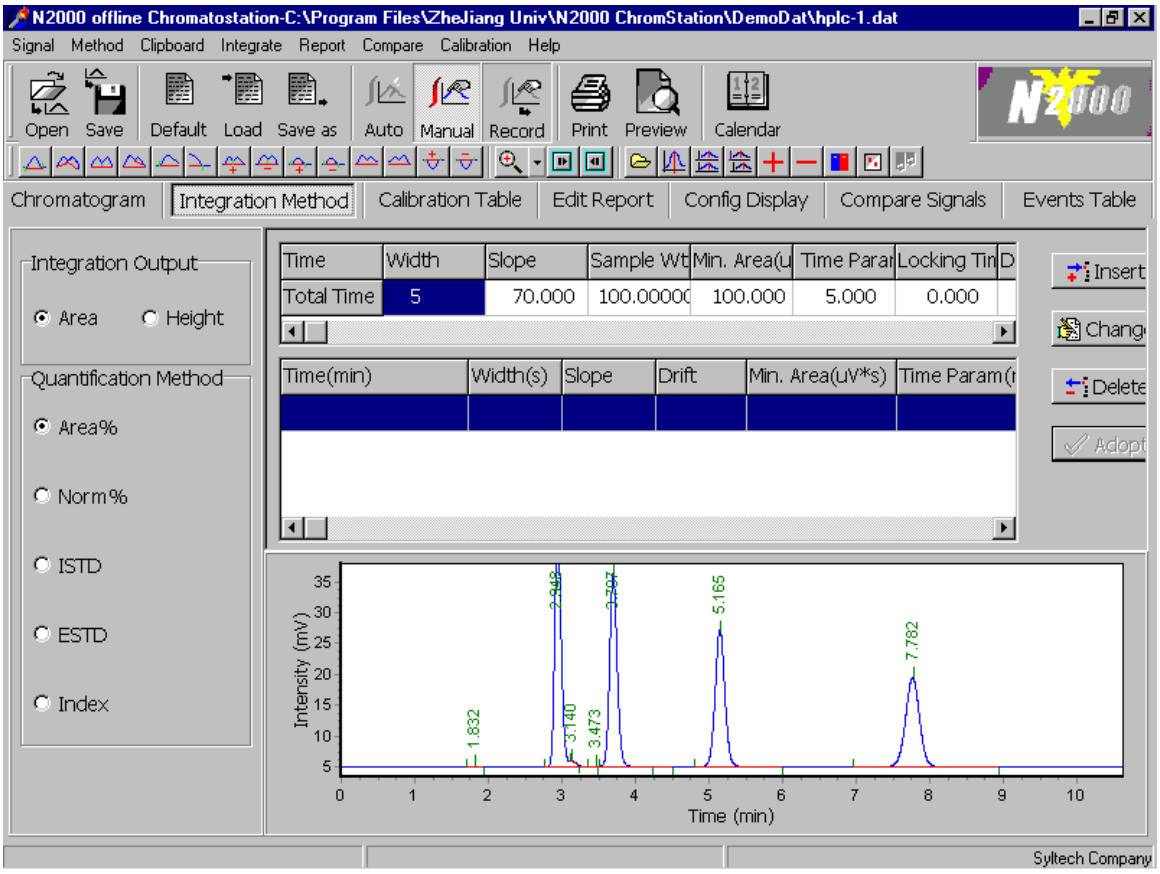


Figure D-008. The Dialog Box for Selecting Integration Method

D5. Set the Calibration Table

1. Point to the button ‘Calibration Table’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-300.

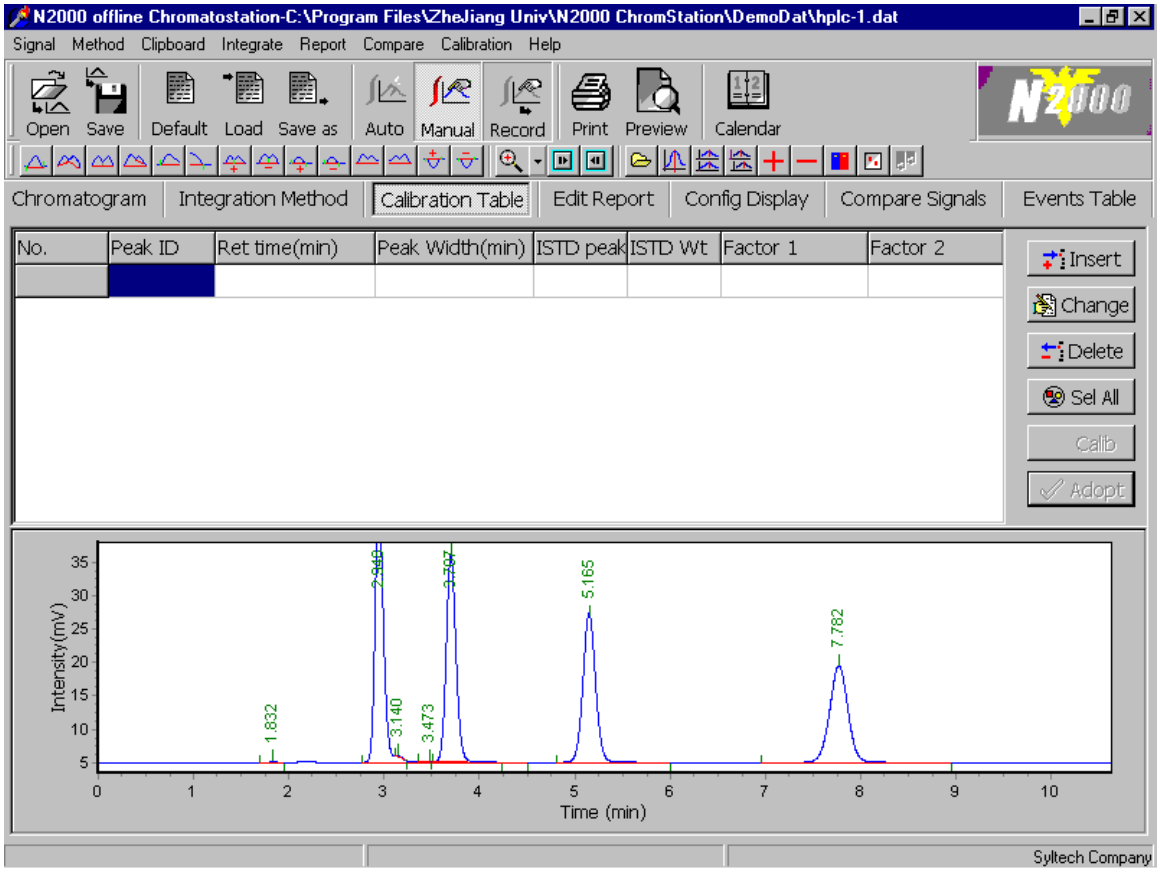


Figure D-009. The Dialog Box for Setting the Calibration Table

D6. Edit the Report

1. Point to the button ‘Edit Report’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-400.

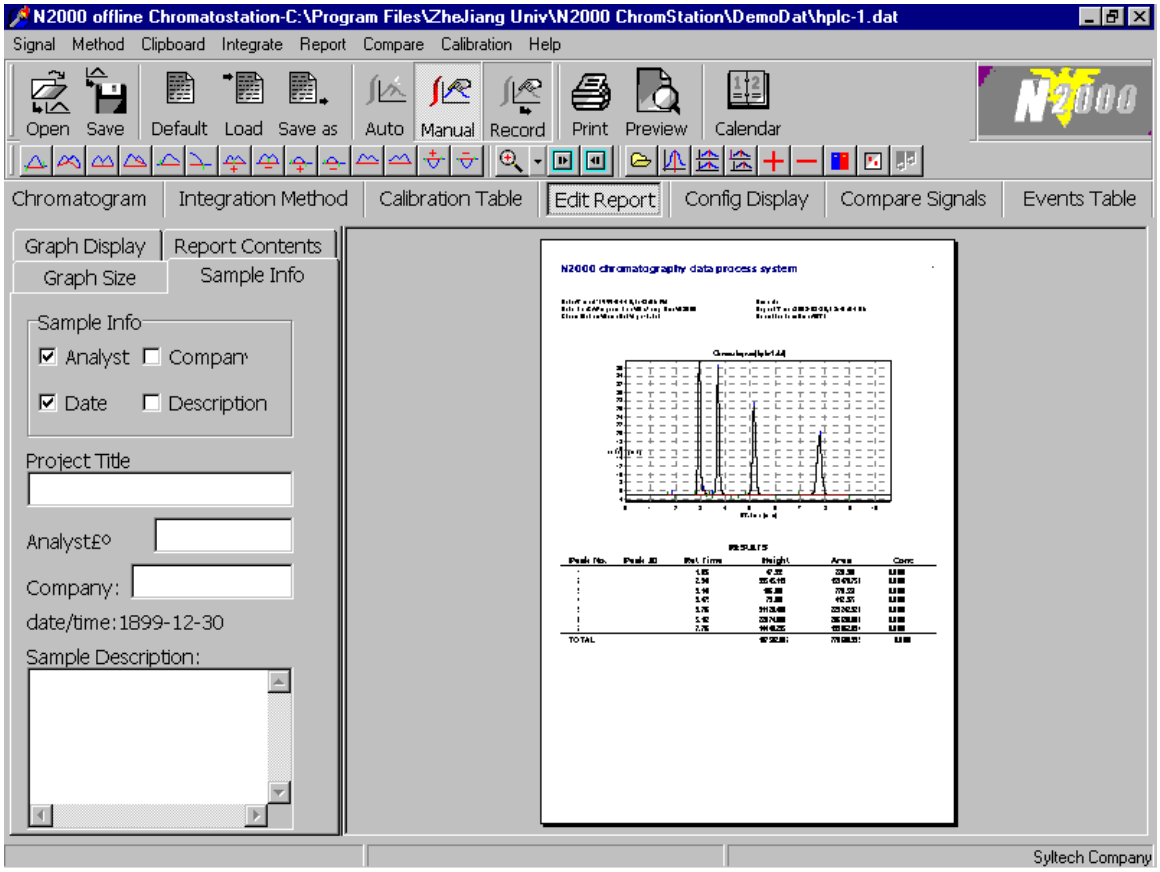


Figure D-010. The Dialog Box for Editing Report

D7. Display the Configuration

1. Point to the button ‘Config Display’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-500.

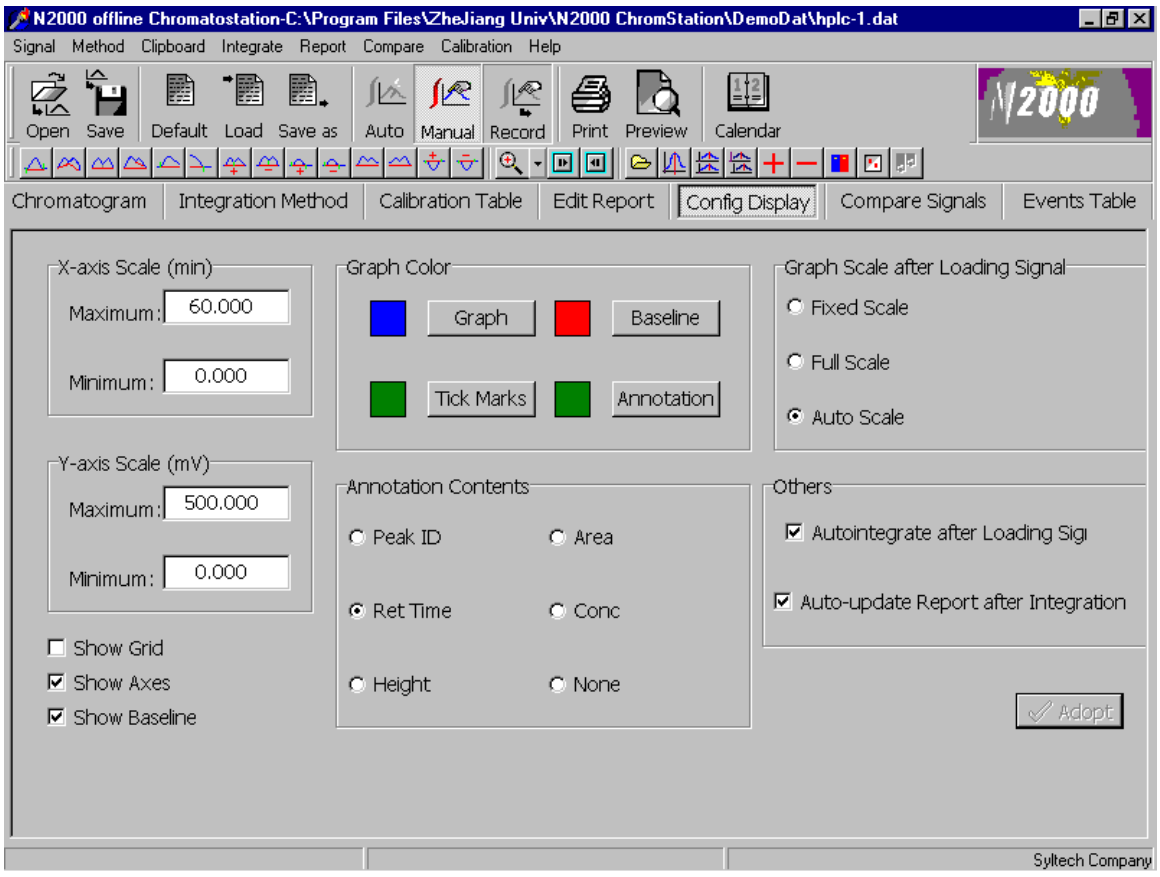


Figure D-011. The Dialog Box for Displaying Configuration

D8. Compare the Signals

1. Point to the button ‘Compare Signals’ and click.
2. Point to the button ‘Open’  and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-600.
5. Choose “  ”or “  “ to add or subtract two spectras.

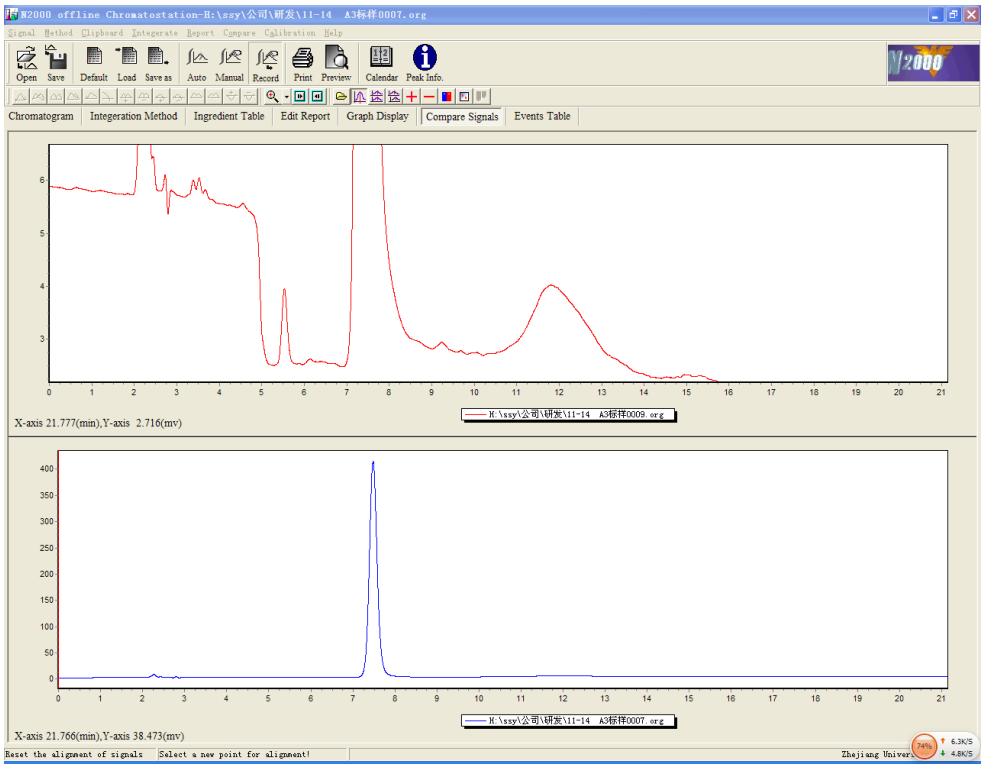


Figure D-012. Compare signals

Menu Instruction:

 Open the companred spectra

 Define the alignment time

 Alignment two spectras according to the define time

 Alignment two spectras according to the start point.

 Split joint two spectras

 Display the two spectras together

 Separetely display the two spectras.

D9. Edit the Event Table

1. Point to the button ‘Event Table’ and click.
2. Point to the button ‘Open’ and click.
3. Choose a data file and acquire it.
4. The selected Chromatogram will be loaded and displayed as shown in Figure D-700.

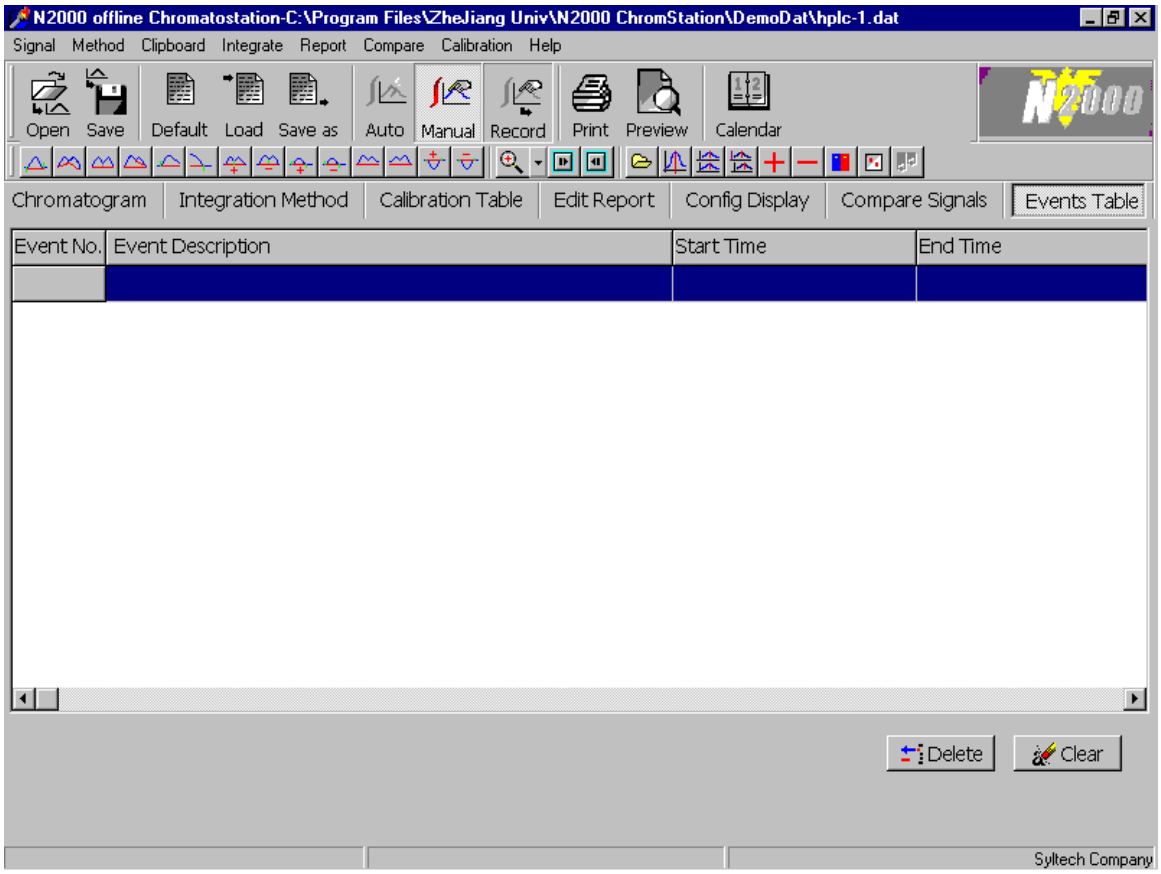


Figure D-013. The Dialog Box for Editing Event Table

D10. Edit the Report Style and Save as *. MTD

1. Report Style

Please set up the Report Method at below dialogue.

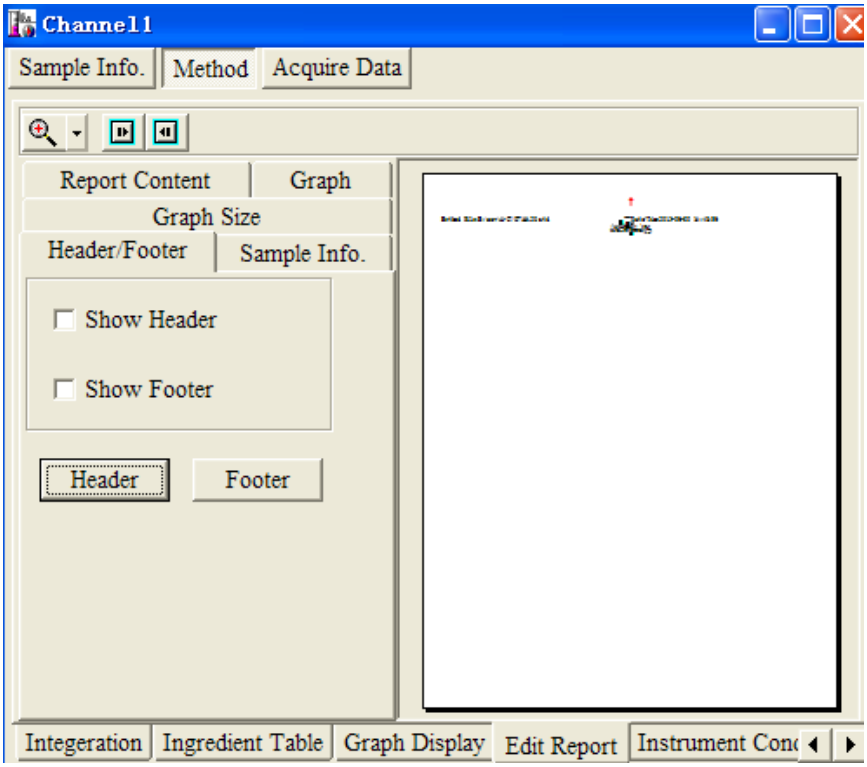


Figure D-014. Report Method

Press sample information to edit the company and analyst information as below.

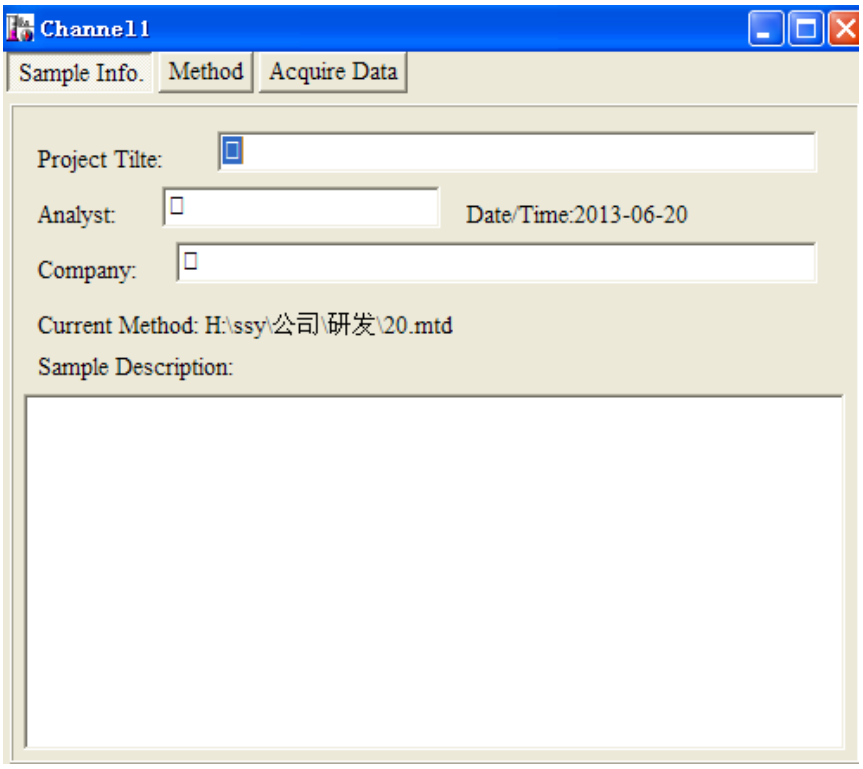


Figure D-015. Sample information

Instrument condition can be edit in the below dialogue:

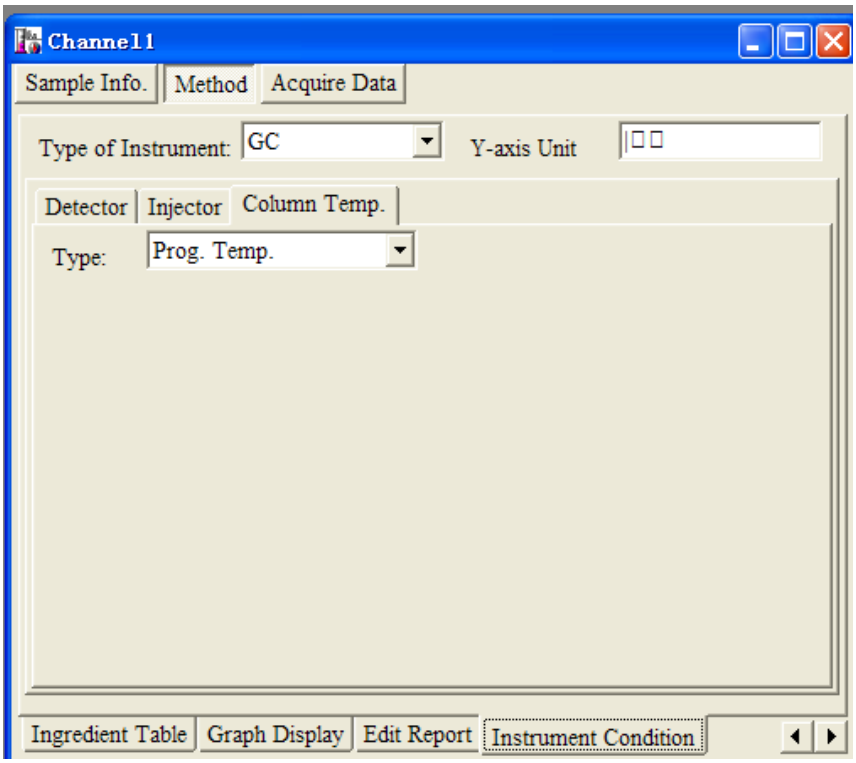


Figure D-016. Instrument Condition

2. Report output

Report can be output to other place in the below window path.

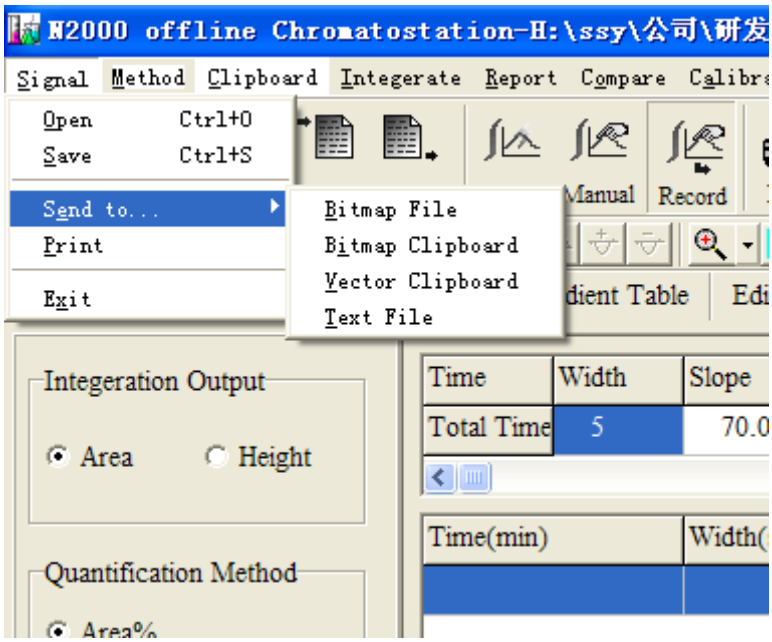


Figure D-017. Report output

3. Clipboard

Press Clipboard to out put relevant contents.

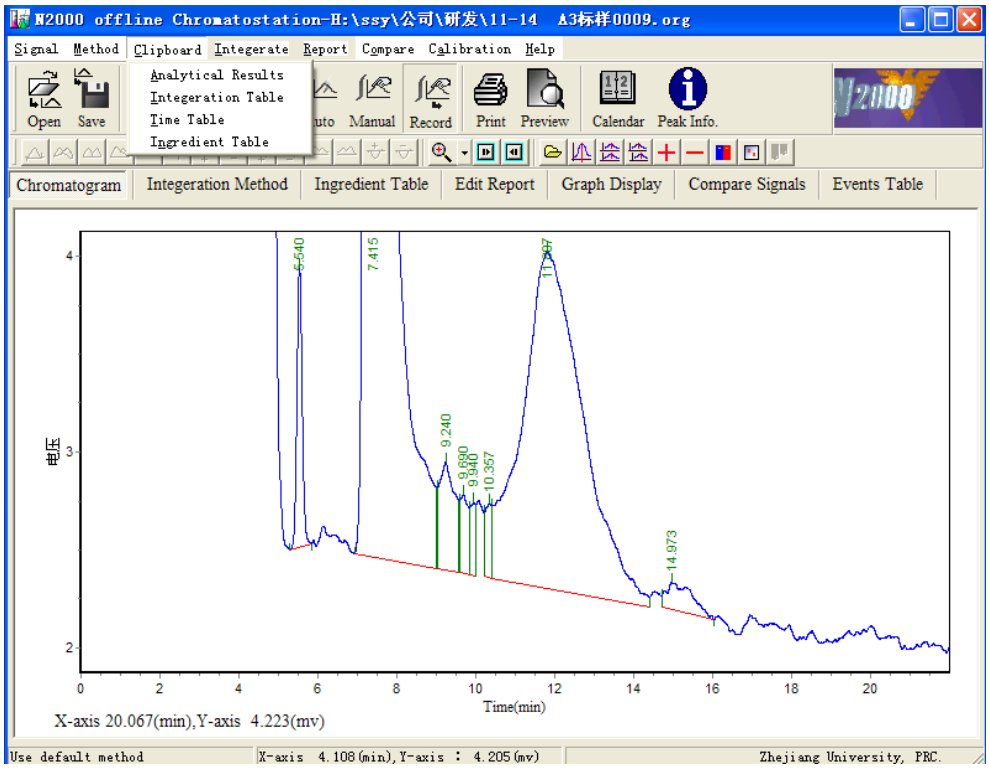


Figure D-018. Clipboard

4. Calibration curve output

Calibration curve can be output in the below menu.

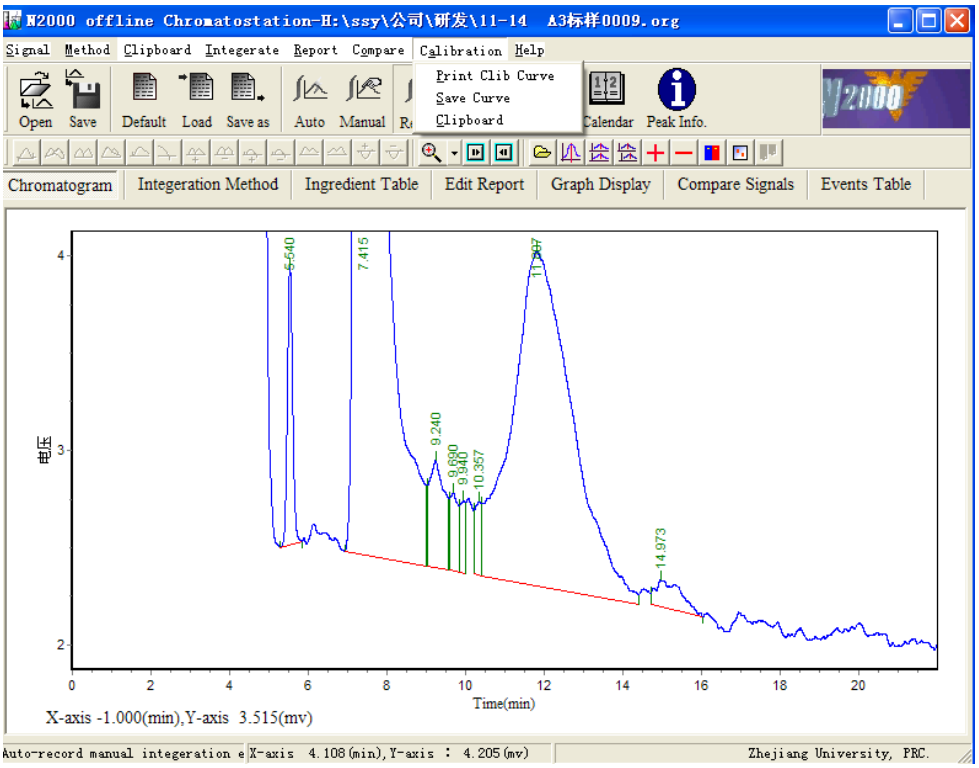


Figure D-019. Calibration curve output

D11. Manual Integral

1. Manual integral

Sometimes we need manual integral to have better effective result.
Choose Manual as below:

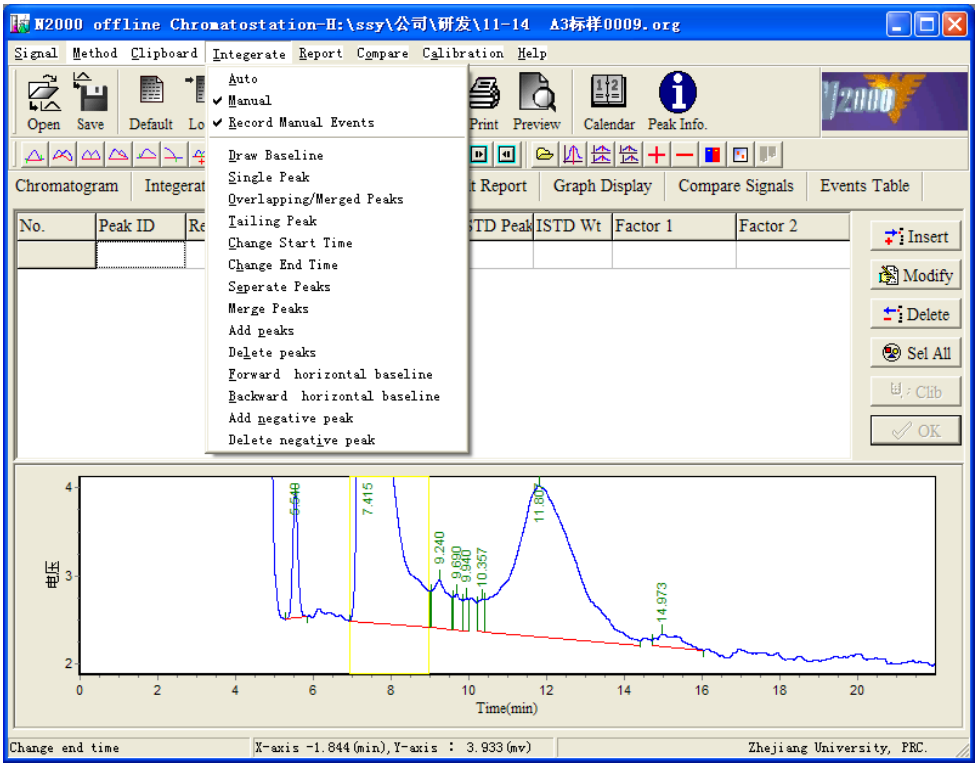


Figure D-020. Manual Integral

2. Manual to have the baseline

Choose  to click the start and finish points on spera.

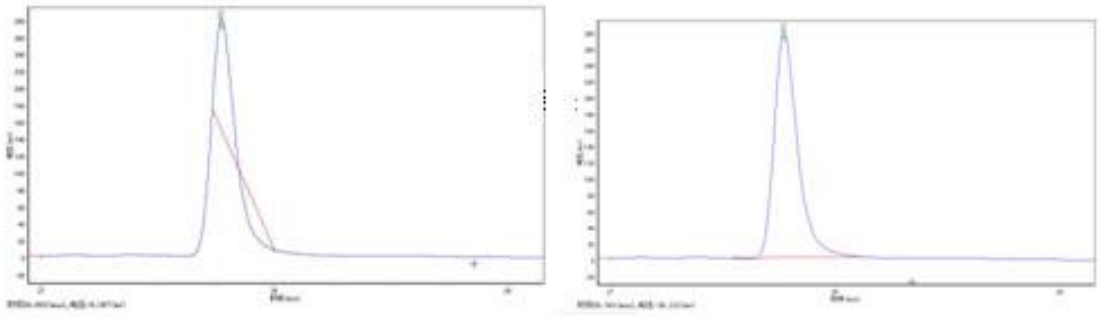


Figure D-021. Manual baseline

Result of Integral

3. Change the peak style mandatory

Single peak

Overlapping peak

Tail peak

Click the above bottons, then click the peak should be changed, choose the start and finish point to reintegral.

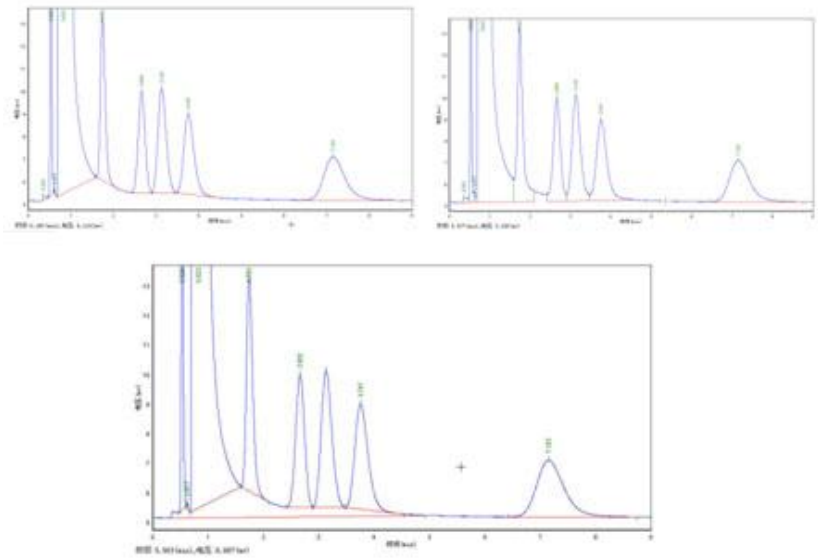


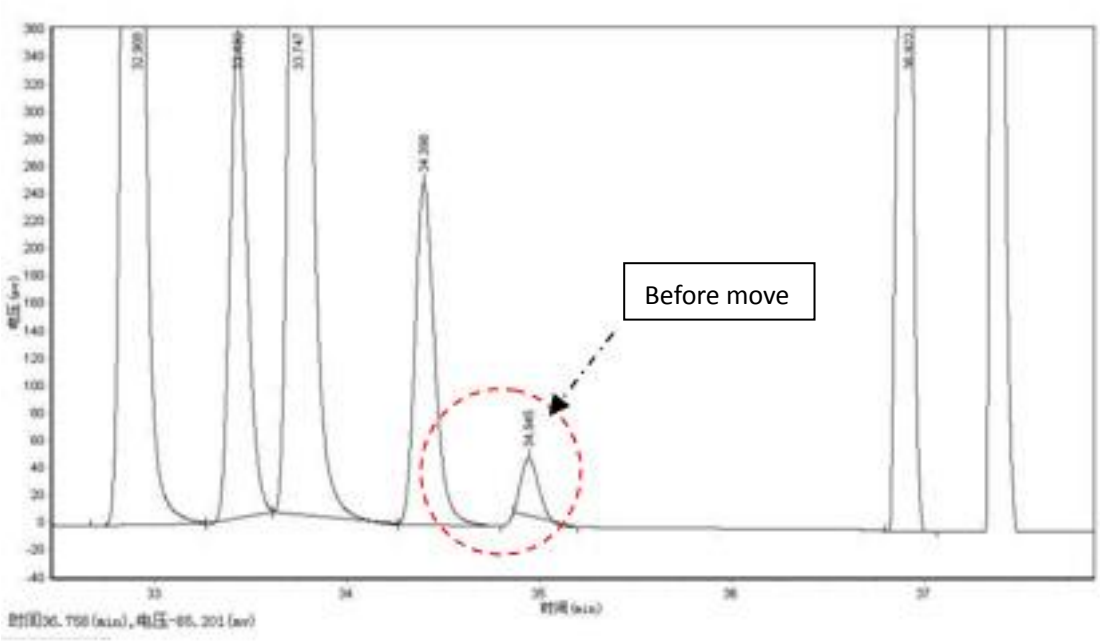
Figure D-022. Change peak style

4. Move the start and finish points of peaks.

 Move the start point

 Move the finish point

Click the above points , click the peak, then click the new points.



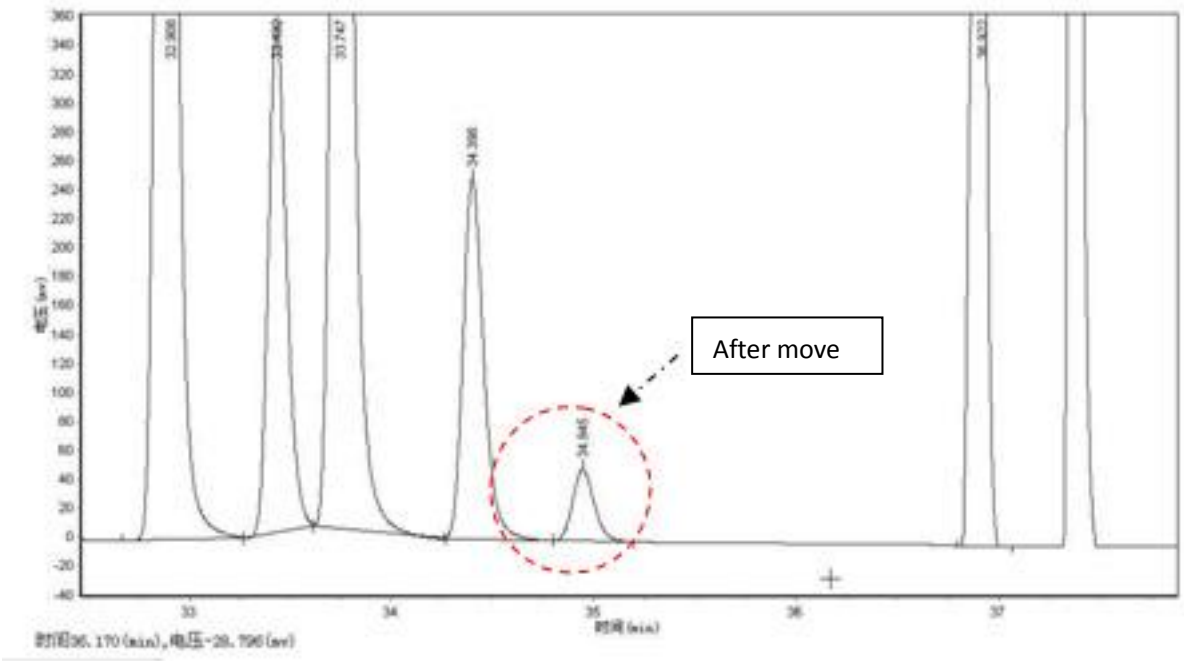
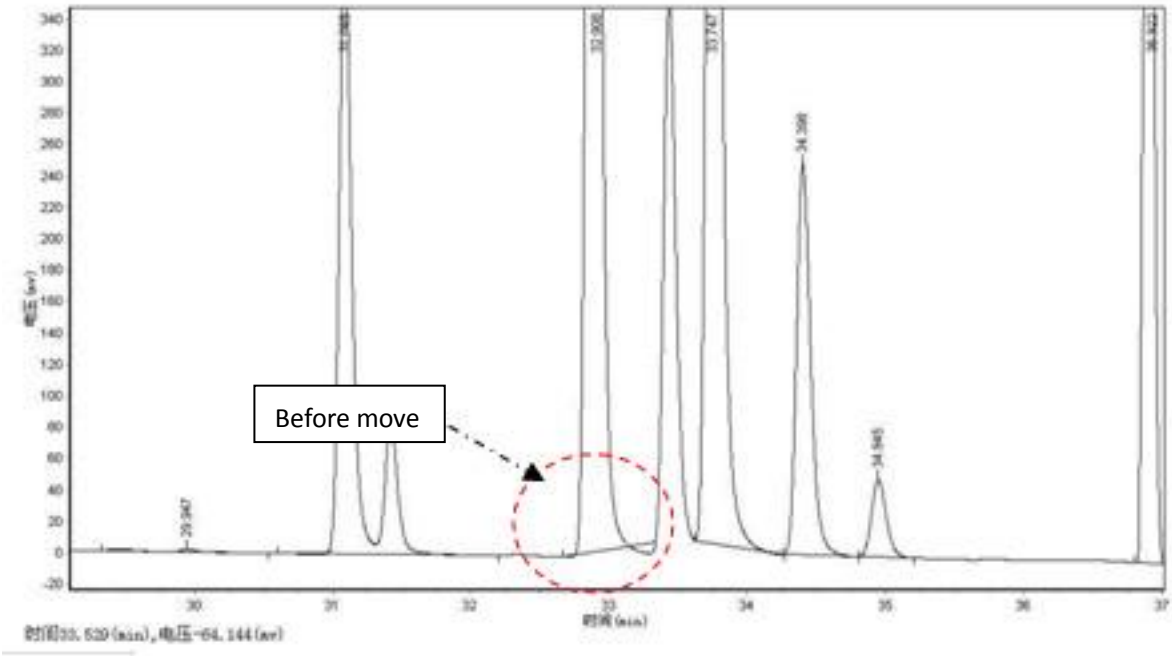


Figure D-023. Move the start point



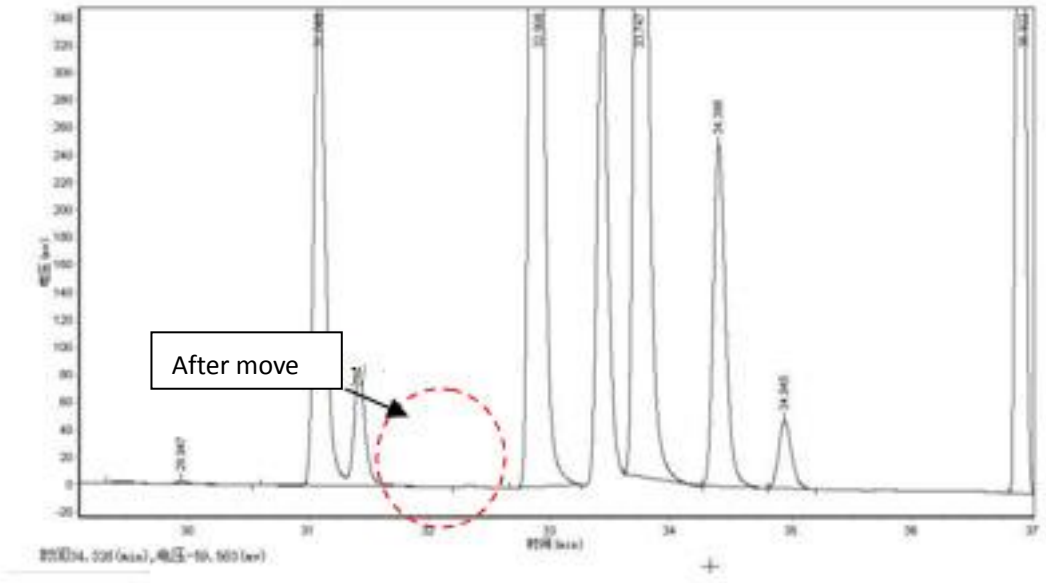
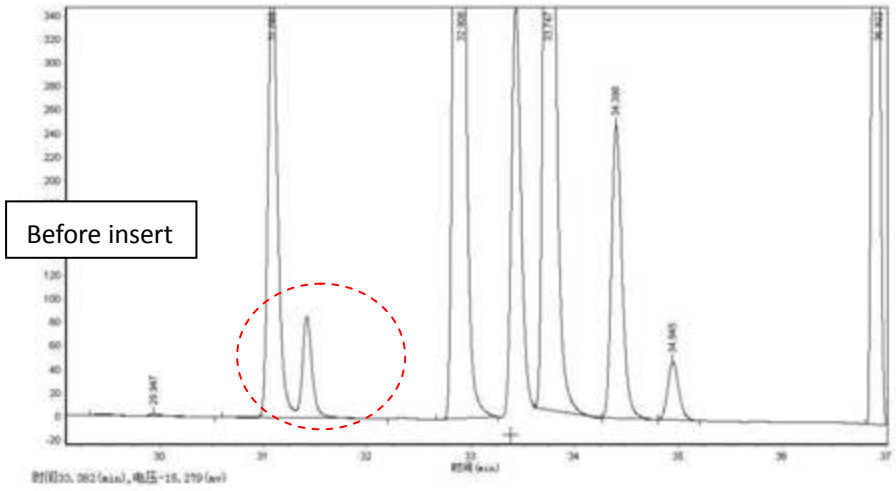


Figure D-024. Move the end point

5. Insert or delete the divider

Insert

Delete



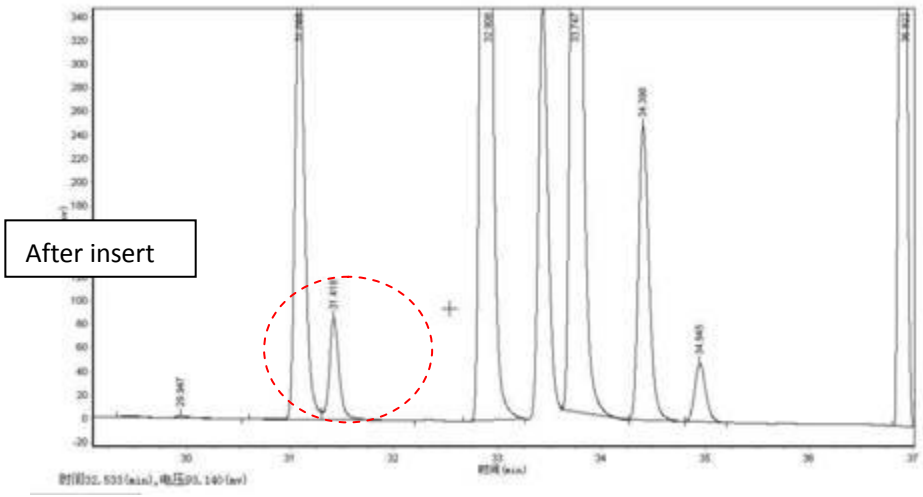
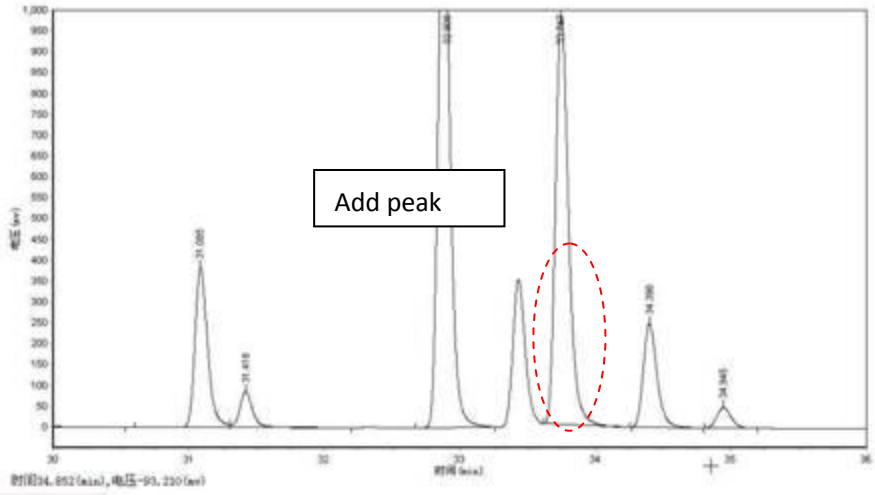


Figure D-025. Insert divider

6. Insert or delete the peak

Insert the peak

Delete the peak



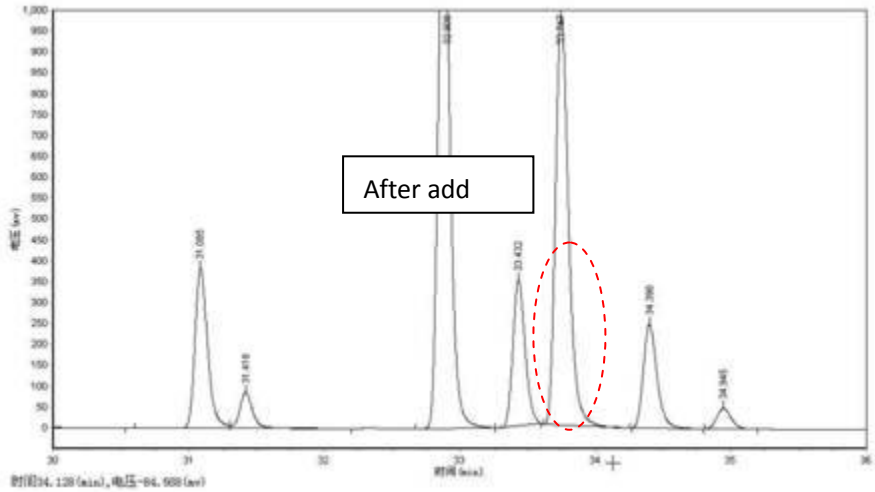


Figure D-026. Insert peak

7. Make the horizontal baseline

Make the before horizontal baseline

Make the after horizontal baseline

Click the above buttons, then choose the start and end point of baseline in spectra.

8. Add or Delete Negative Peak

Add negative peak

Delete negative peak

Click the above buttons, then choose the location you want to add.

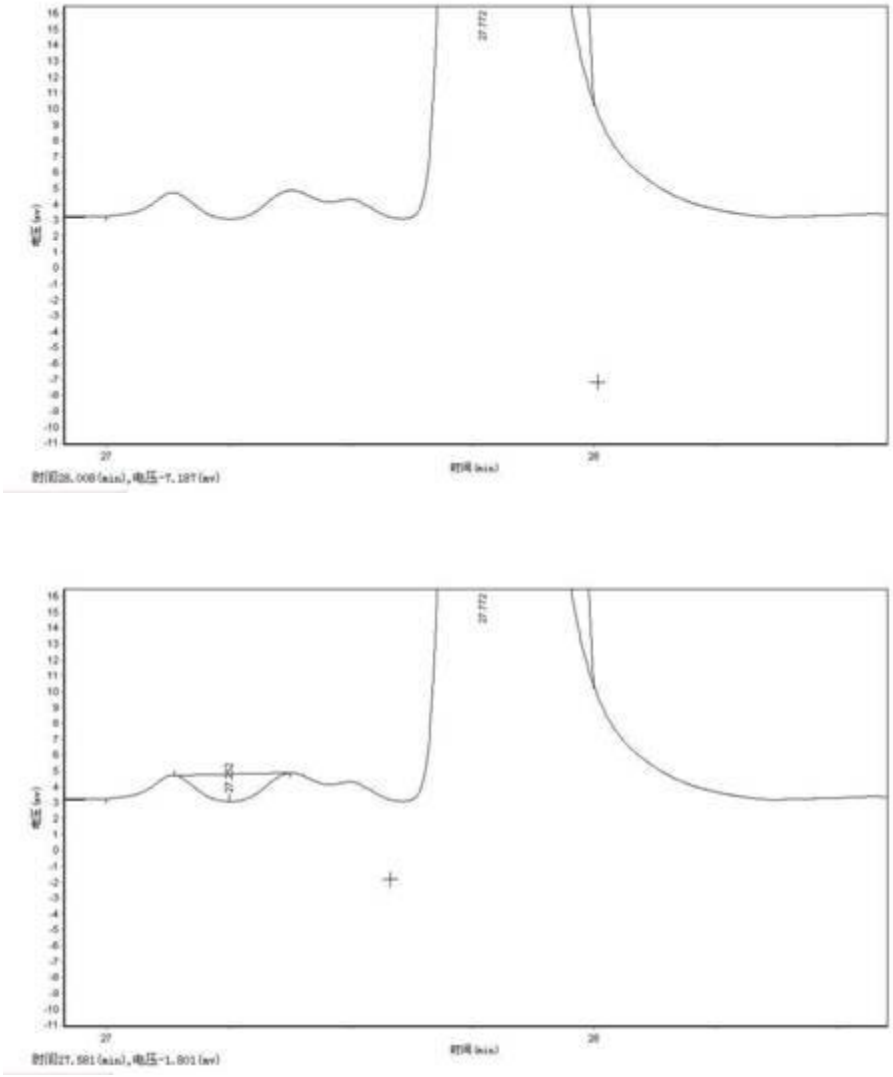


Figure D-027. Horizontal baseline

E. Service Instruction

E1. We provide one year warranty period to oversea customer. During this time, exchangeable can be adoped when buyer is responsible for shipping costs.

E2. For any problems, please contact the below way to our company.

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