Access to your success
SHIMADZU

225-18487

Quick Navigation

For (GCMS-QP2010 Ultra / SE)

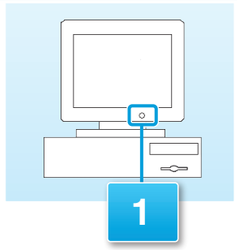
This document provides quick and easy operational guidelines for GCMSsolution Ver. 2.6. Please keep this document beside your GC/MS in order to quickly confirm operational procedures. For more detailed operational procedures, please refer to the "Gas Chromatograph Mass Spectrometer GCMS-QP2010 Series Operation Guide for GCMSsolution Ver. 2.6".

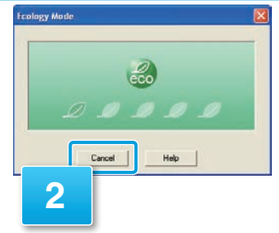
1 Daily Startup and Shutdown

GCMS Data Acquisition Program

Please do not shut down GC/MS system because several hours will be required for starting-up. The PC can be switched off except during analysis. The CRT can be switched on and off whenever required.

No.	Operation	Description
1	ON	Turn the CRT ON.
2	Click	Cancel the ecology mode.





2 Executing Autotuning

GCMS Data Acquisition Program

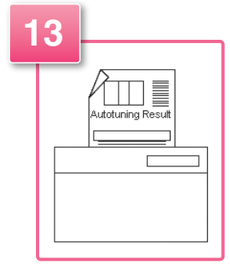
Set the method file you are going to use for the analysis. After the GC/MS system is ready for the analysis, perform autotuning.*1*2

●Loading Data Acquisition Conditions

No.	Operation	Description
1	Check	Check that the window is the [Acquisition] sub-window.
2	Double-click	Load the method file to be used.
3	Click	The setup parameters are sent to the instrument.
4	Check	The instrument is ready if the values are the set values.
5	Click	Open the [Tuning] sub-window.

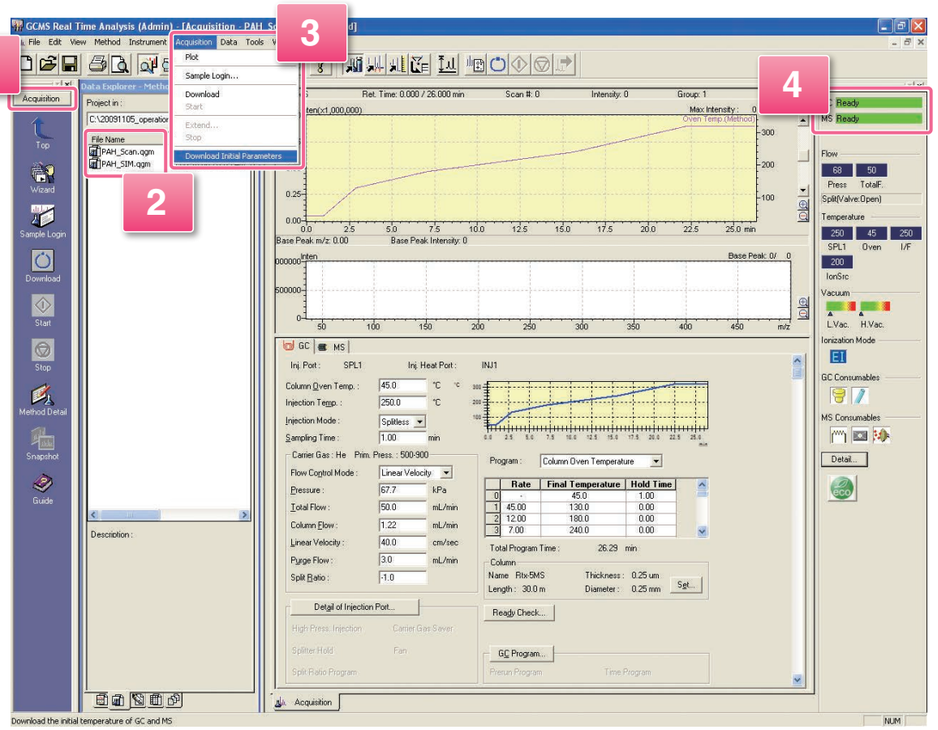
●Executing Autotuning

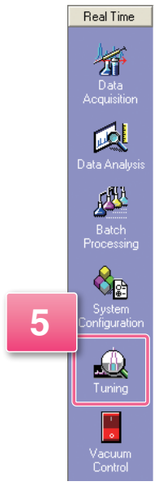
No.	Operation	Description
6	Click	Open the [Peak Monitor] sub-window.
7	Click	Create a new tuning file.
8	Click	Select the tuning mode.
9	Click	Select the filament as required.
10	Click	Start autotuning.
11	Input	Enter the file name.
12	Click	Save the tuning file.
13	Check	Check the report that is output.*3

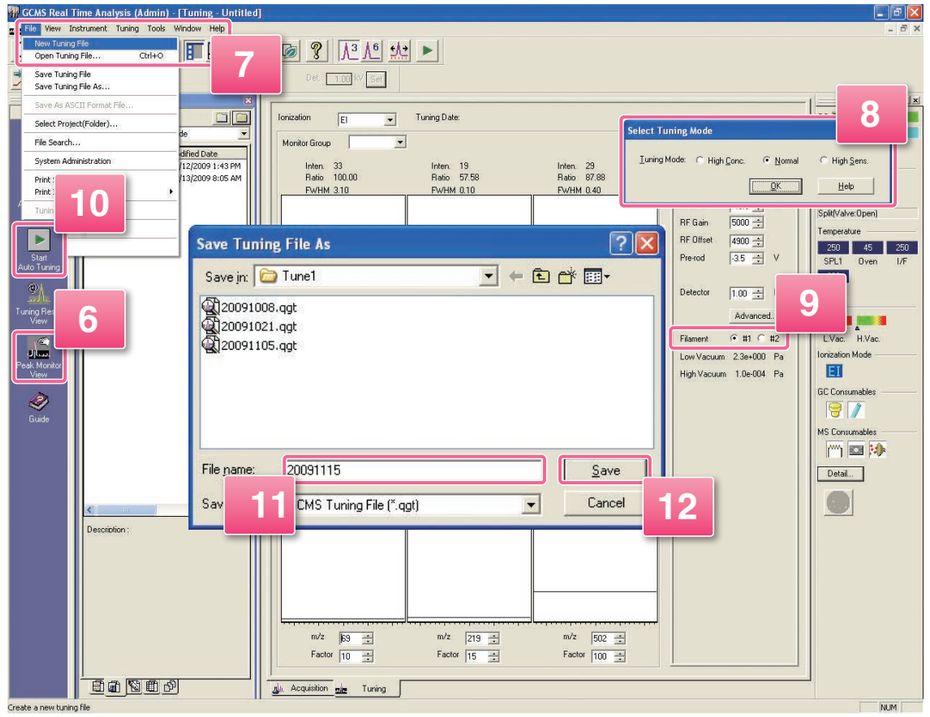


*1 Execute autotuning after creating the method file if it has not already been created.
*2 Whenever autotuning is executed, calibration curves must be newly created.

*3 To check the results of autotuning, refer to the Operation Guide "2.7.3 Checking Autotuning Results".







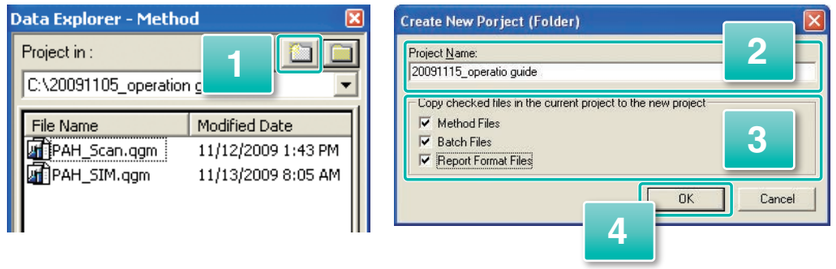
3 Creating Folders

GCMS Data Acquisition Program

Files with file types in the figure on the right will be created after analysis.
Create a new folder in order to save those files in the same folder.

No.	Operation	Description
1	Click	Open the [Create New Project (Folder)] sub-window.
2	Input	Enter the folder name.
3	Click	Select the files to copy to the new folder.
4	Click	The new folder is created.*1

*1 A new folder is created on the same level of the currently opened folder in Data Explorer.
For detailed procedure to open the target folder, please refer to the Operation Guide "Appendix C Using Data Explorer".



Displayed Icons and File Names

Icon	File type
	Data file
	Method file
	Report format file
	Batch file

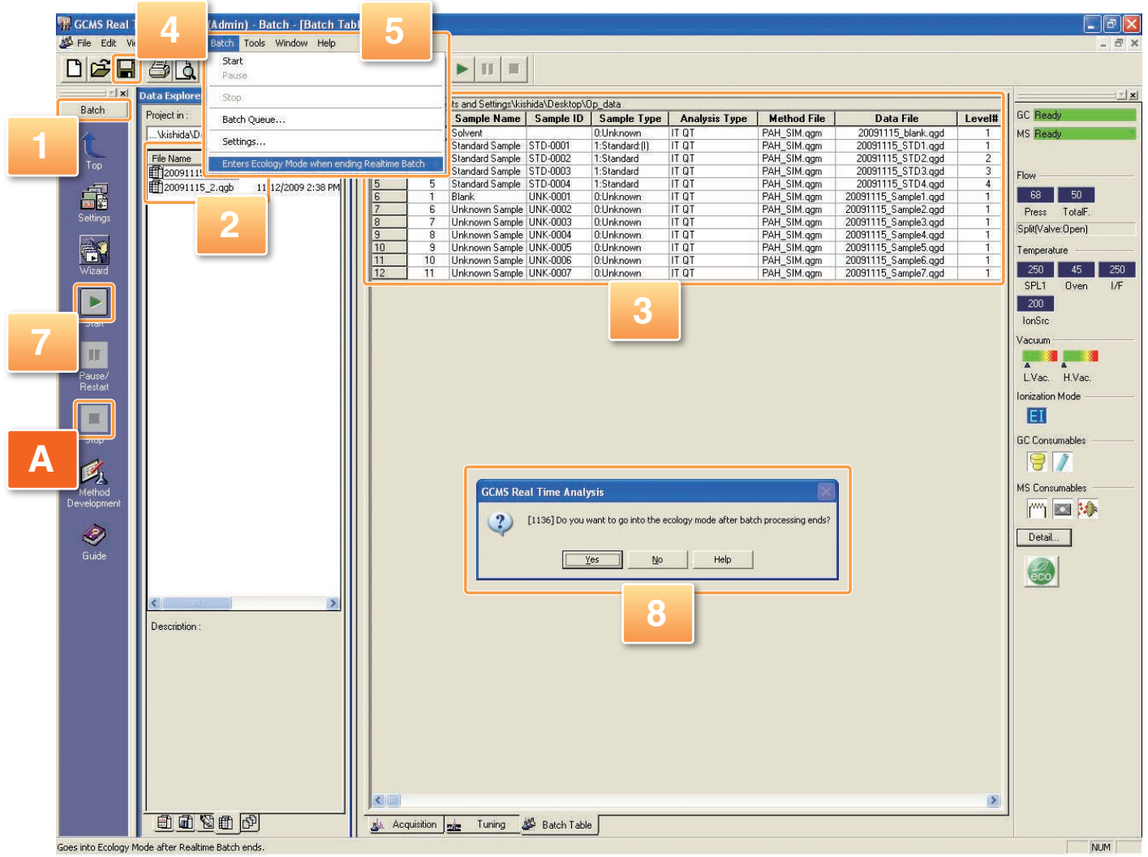
4 Performing Data Acquisition

GCMS Data Acquisition Program

Please modify the previously created batch file for easy operation.
For details on how to create method files and batch files, refer to the Operation Guide “4.1 Creating a Method File”, “5.1 Creating a Method File”, “4.3.1 Creating a Batch File”and “5.2.1 Creating a Batch File”.

No.	Operation	Description
1	Check	Check that the window is the [Batch Table] window.
2	Double-click	Open the batch file to be used.
3	Check	Check and edit the batch table.*1
4	Click	Overwrite and save any edits.
5	Click	The instrument enters the ecology mode after data acquisition ends.*2
6	Check	Set the rinsing solvent and sample in place.
7	Click	Display the confirmation message.
8	Click	Start data acquisition.
A	Click	Cancel data acquisition.

*1 For details on how to edit batch table, refer to the Operation Guide “4.3.2 Editing a Batch File”.
*2 This setting can be cancelled by repeating operation 5, but always leave it set.



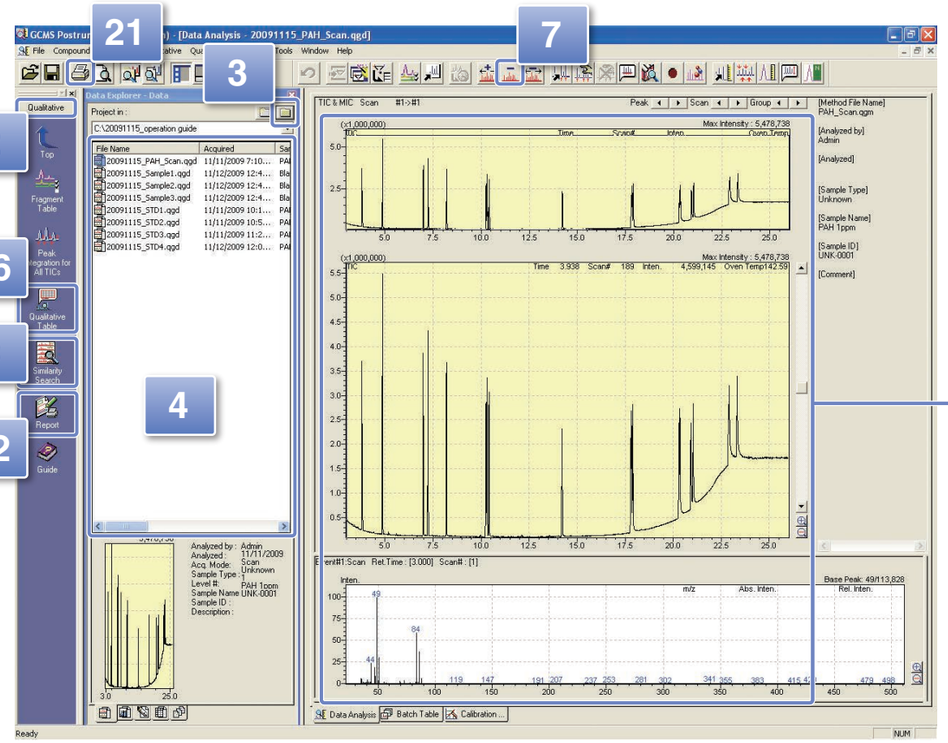
5 Data Processing for Qualitative Analysis

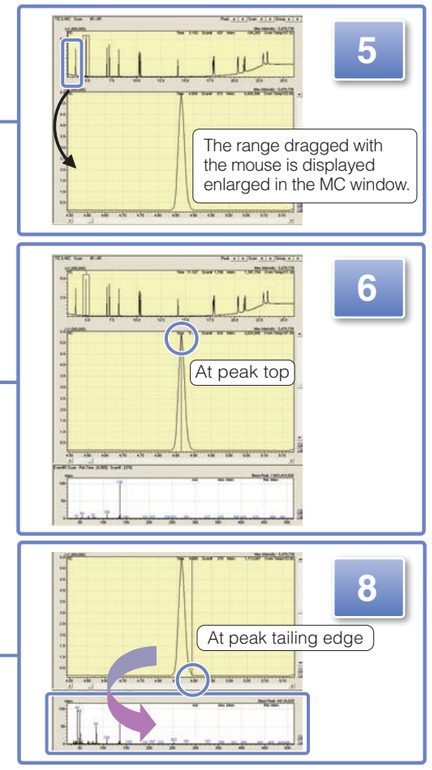
GCMS Postrun Analysis Program

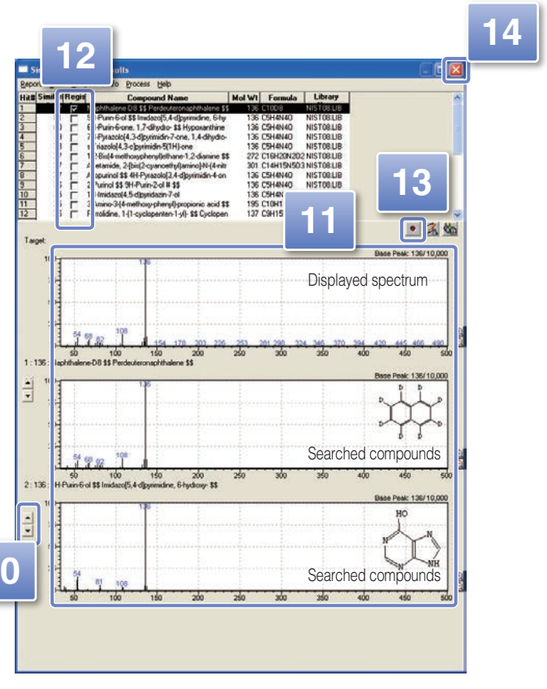
Display the mass spectra for chosen peak and perform library search. Register the results in the spectrum prodcess table. It allows referencing the results later or printing out the report.

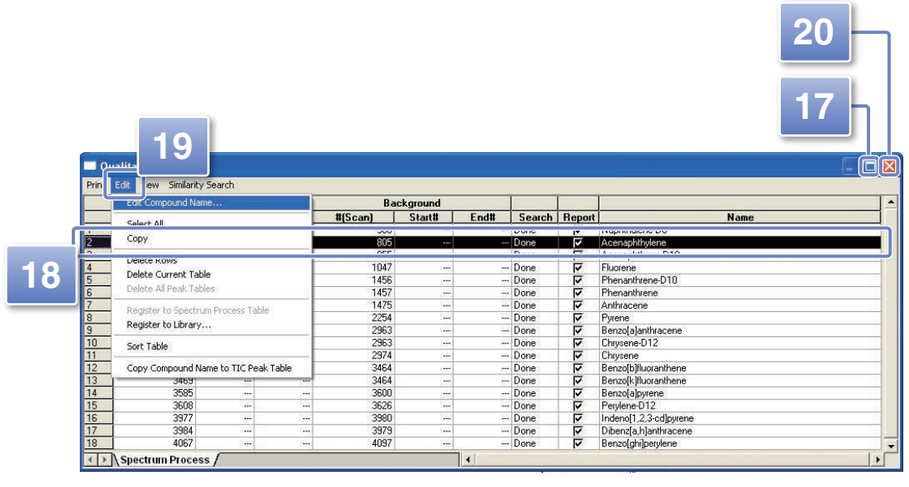
*1 For details on how to create reports, refer to the Operation Guide “4.5 Printing Qualitative Analysis Reports”.

No.	Operation	Description
1	**Double-click**	Start up the [GCMS Postrun Analysis] program.
2	**Check**	Check that the window is the [Data Analysis] window in the qualitative processing mode.
3	**Click**	Select the created folder.
4	**Double-click**	Open the data file.
5	**Drag**	Display the peak enlarged.
6	**Double-click**	Display the mass spectrum of the peak top.
7	**Click**	Switch to the background processing mode.
8	**Double-click**	Perform background subtraction.
9	**Click**	Open the [Similarity Search Results] sub-window.
10	**Click**	The searched compounds are switched.
11	**Check**	Check while comparing the compounds.
12	**Click**	Select the compound considered to be correct.
13	**Click**	Register the selected compound to the spectrum process table.
14	**Click**	Close the [Similarity Search Results] sub-window.
15	**Operations 5 to 14**	Repeat these operations to register all target components.
16	**Click**	Open the qualitative table.
17	**Click**	Maximize the table.
18	**Click**	Select the row to edit.
19	**Click**	Edit the row (e.g. correct compound name).
20	**Click**	Close the qualitative table.
21	**Click**	Overwrite and save the data file.
22	**Click**	Create a report.*1









6 Data Processing for Quantitative Analysis

GCMS Postrun Analysis Program

Create a calibration curve and calculate the concentration of target compounds.

*1 For details on how to create reports, refer to the Operation Guide “5.4 Printing Quantitative Analysis Reports”.

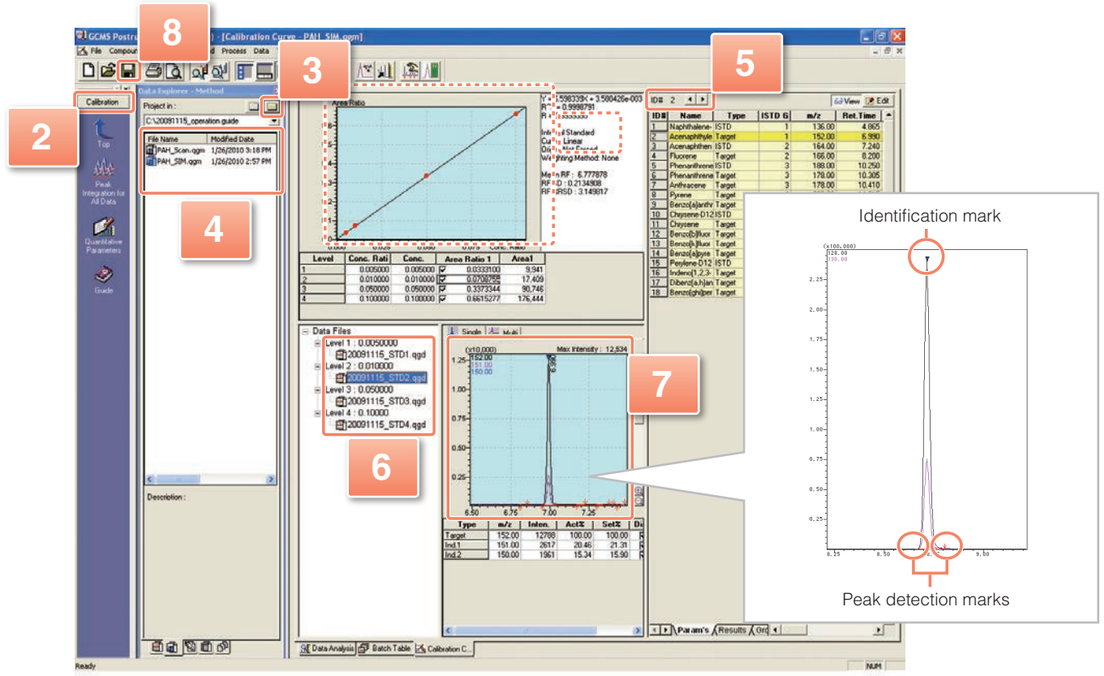
Checking and Modifying Calibration Curves

No.	Operation	Description
1	Double-click	Start up the [GCMS Postrun Analysis] program.
2	Check	Check that the window is the [Calibration Curve] window.
3	Click	Select a created folder.
4	Double-click	Open the method file used for data acquisition.
5	Click	Check the calibration curve of the target component.
6	Click	Check the chromatogram of the target component.*3
7	Modify	Perform manual peak integration and manual identification as required.*2
8	Click	Overwrite and save any corrections.

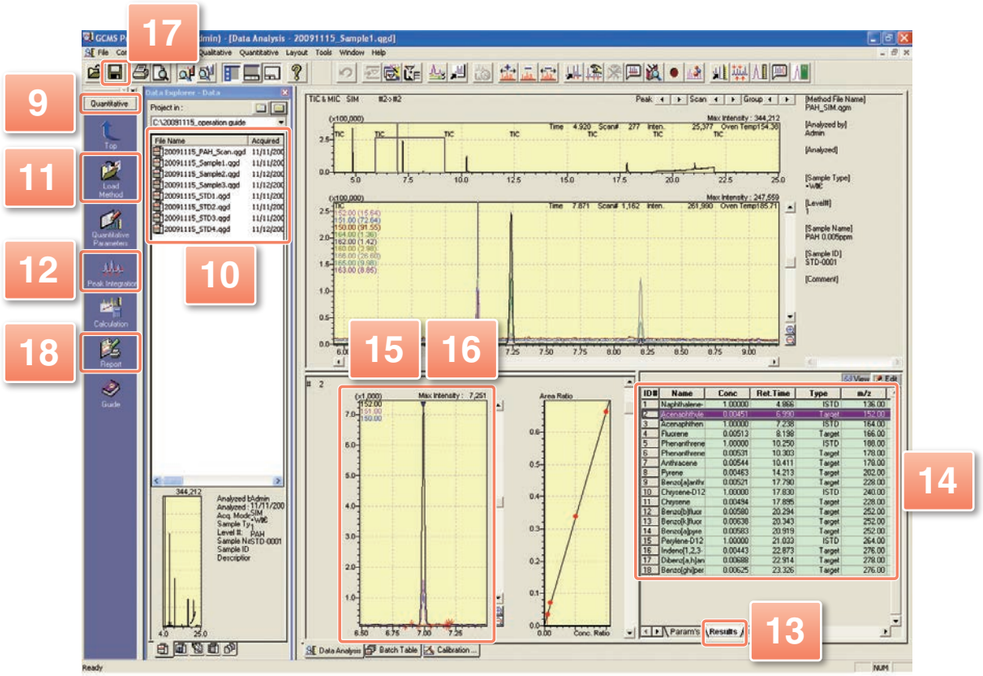
*2 For details on manual peak integration and manual identification, see page 9.

Quantitative Calculation of Unknown Samples

No.	Operation	Description
9	Check	Check that the window is the [Data Analysis] window in the quantitative processing mode.
10	Double-click	Open the data file.
11	Click	Load the method file used for creating the calibration curve.
12	Click	Perform quantitative peak integration.
13	Click	Check the quantitative results.
14	Click	Select the target row.
15	Check	Check the chromatogram of the target component.*3
16	Modify	Perform manual peak integration and manual identification as required.
17	Click	Overwrite and save the data file.
18	Click	Create a report.*1

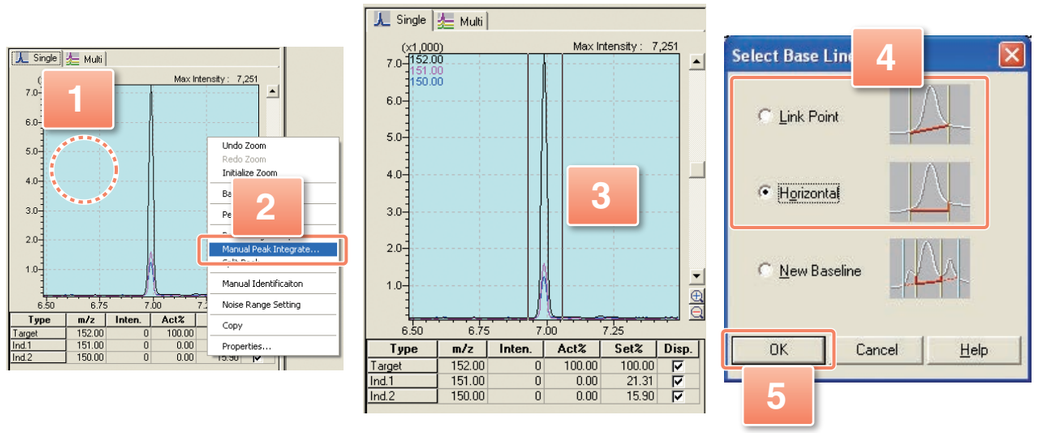


*3 The peak integration and peak detection are automatically performed on the chromatogram (↑↓peak detection marks).
Detected peaks are identified based on retention times and ion ratios (▼identification mark).



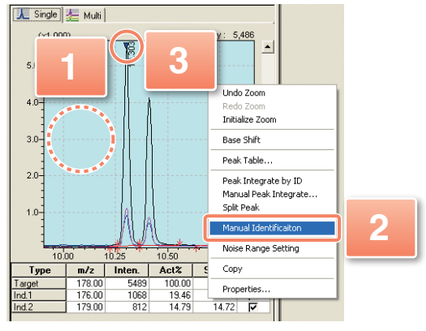
How to Perform Manual Peak Integration

No.	Operation	Description
1	Right-click	Open the popup menu.
2	Click	Switch to the manual peak integration mode.
3	Drag	Specify the start and end of the baseline.
4	Click	Select the baseline.
5	Click	The peak is integrated and identified.



How to Perform Manual Identification

No.	Operation	Description
1	Right-click	Open the popup menu.
2	Click	Switch to the manual identification mode.
3	Click	The peak is identified.



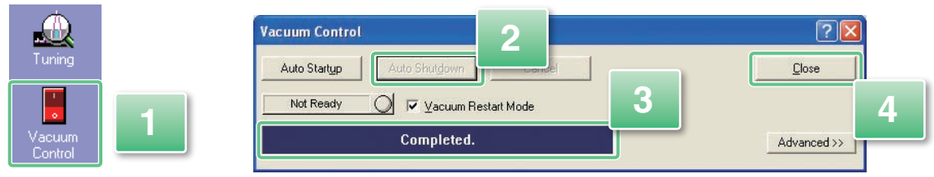
Appendix. Performing Maintenance

GCMS Data Acquisition Program

"Easy sTop" is a convenient function for exchange of septum and insert. It shortens the period for stabilizing the GC/MS system after the exchange.
Perform maintenance referring to the Operation Guide "Appendix D Maintenance" or MS Navigator.

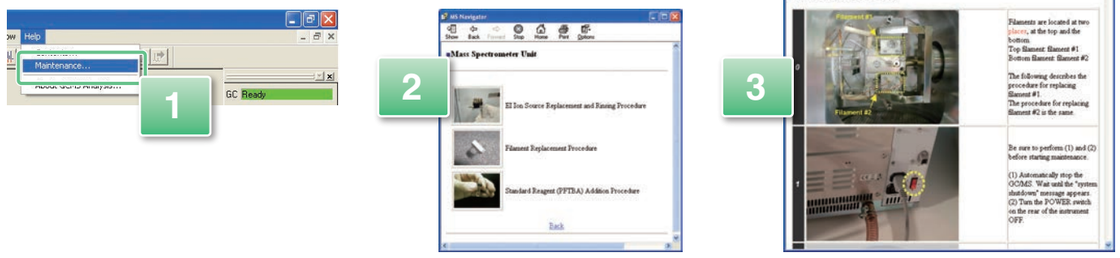
Stopping the Vacuum System

No.	Operation	Description
1	Click	Open the [Vacuum Control] sub-window.
2	Click	Start automatic stop.
3	Check	[Completed.] is displayed.
4	Click	Close the [Vacuum Control] sub-window.



Starting Up Maintenance Help

No.	Operation	Description
1	Click	Open the MS Navigator.
2	Select	Display the maintenance procedure for the selected part.
3	Check	Perform maintenance as described in the procedure.



Main Maintenance Parts and Frequency of Maintenance

No.	Maintenance Item	Recommended Replacement Cycle	Instrument State
1	Syringe	Thoroughly rinse with solvent before data acquisition.	During operation
2	Septum	Replace every 100 data acquisitions.	Easy sTop
3	Insert	·Replace according to the injection mode (split, splitless). ·Replace when the peak shape has deteriorated or peak intensity has decreased.	Easy sTop
4	Column	·Check separation between the target component and other peaks, and replace the column with the ideal column. ·Perform maintenance when the peak shape has deteriorated or peak intensity has decreased.	Vacuum system stopped
5	Filament	·Replace when the trap current insufficient message is displayed. ·Replace burned out filaments.	Vacuum system stopped
6	Oil for the rotary pump	Replace every 3000 hours of operation.	Vacuum system stopped

SHIMADZU CORPORATION

SHIMADZU CORPORATION. International Marketing Division
3. Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan
Phone: 81(3)3219-5641 Fax. 81(3)3219-5710
Cable Add.:SHIMADZU TOKYO

SHIMADZU SCIENTIFIC INSTRUMENTS, INC.
7102 Riverwood Drive, Columbia, Maryland 21046, U.S.A.
Phone: 1(410)381-1227 Fax. 1(410)381-1222 Toll Free: 1(800)477-1227

SHIMADZU EUROPA GmbH
Albert-Hahn-Strasse 6-10, 47269 Duisburg, F.R. Germany
Phone: 49(203)7687-0 Fax. 49(203)766625

SHIMADZU (ASIA PACIFIC) PTE LTD.
16 Science Park Drive #01-01 Singapore Science Park, Singapore 118227, Republic of Singapore
Phone: 65-6778-6280 Fax. 65-6779-2935

SHIMADZU SCIENTIFIC INSTRUMENTS (OCEANIA) PTY. LTD.
Units F, 10-16 South Street Rydalmere N.S.W. 2116, Australia
Phone: 61(2)9684-4200 Fax. 61(2)9684-4055

SHIMADZU DO BRASIL COMÉRCIO LTDA.
Avenida Marquês de São Vicente, 1771. Barra Funda CEP : 01139-003-São Paulo-SP, Brasil
Phone: (55)11-3611-1688 Fax. (55)11-3611-2209

SHIMADZU (HONG KONG) LIMITED
Suite 1028 Ocean Center, Harbour City, Tsim Sha Tsui, Kowloon HONG KONG
Phone: (852)2375-4979 Fax. (852)2199-7438

SHIMADZU INTERNATIONAL TRADING (SHANGHAI) CO., LTD. PUXI BRANCH
Block E, No.570 West Huaihai Road, Shanghai, 200052 P.R. of China
Phone: 86(21)2201-3888 Fax. 86(21)2201-3666

Overseas Offices
Istanbul, Moscow

URL http://www.shimadzu.com