SHIMADZU
Excellence in Science

Multi-Analyte Quantitation Software

LabSolutions Insight

LabSolutions Insight™

Faster Data Review for Dramatically Higher Productivity

Mass spectrometry laboratories can acquire thousands of chromatograms per day. Insight provides tools to streamline data review and focus on the chromatograms that need critical attention. Insight automatically applies your peak detection criteria to data and flags any deviations, allowing you to analyze data more efficiently. 1.6.2

Reduce your data review bottleneck with Insight's customizable review screens and automated QA/QC flagging. Combined with Shimadzu's ultra-high-speed acquisition, a complete solution is offered to the high-throughput mass spectrometry laboratory.

By using LabSolutions Insight with Shimadzu's GC/MS (/MS) and LC/MS (/MS), the time needed to acquire and analyze data can be significantly shortened and quality data can be easily created.

Furthermore, by using a combination of databases and application-specific method packages, you can easily perform measurement and data analysis without optimizing analysis conditions.

Lastly, LabSolutions Insight can be equipped with a wide range of options, such as compound identification workflows, peak detection using AI, and special software that enables compliance with environmental regulations.

❯ Intuitive Operation

An easy-to-use and configurable interface allows new users to be productive quickly.
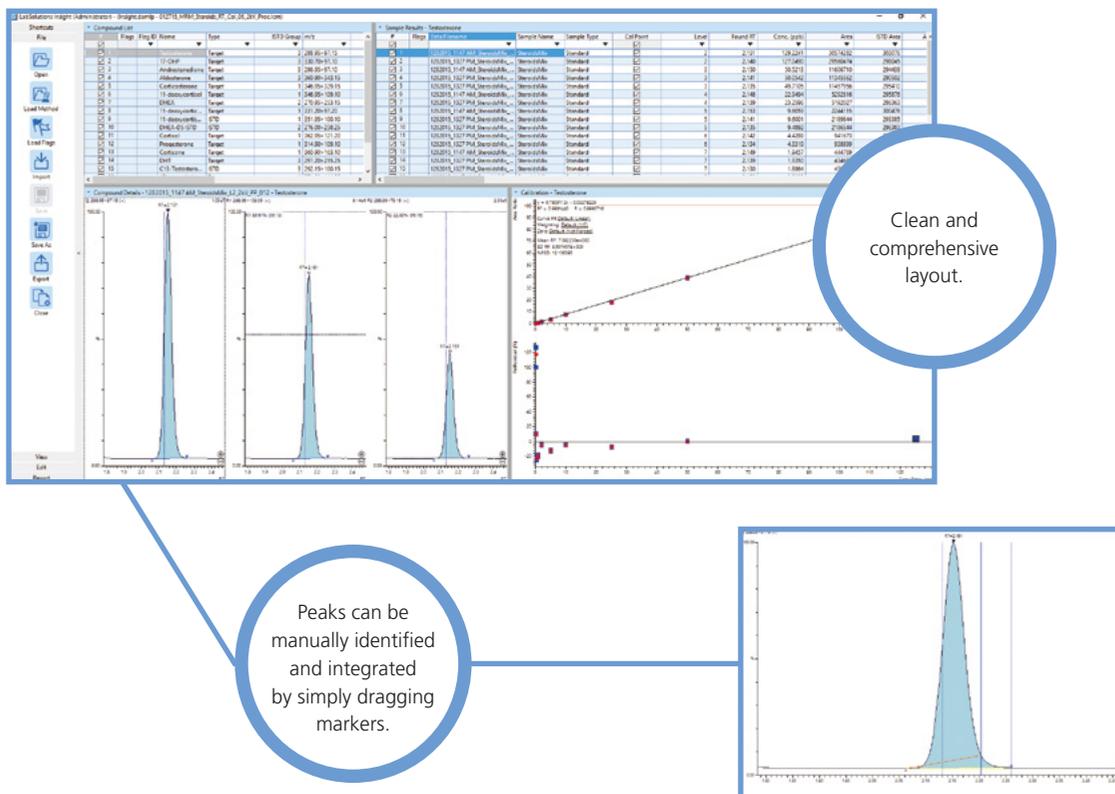
❯ Automated QA/QC Flagging and Peak Comparison

Insight contains multiple QA/QC flagging criteria for retention times, reference ion ratios, concentration limits, and more. Compare all peaks against a reference peak or reference ions.
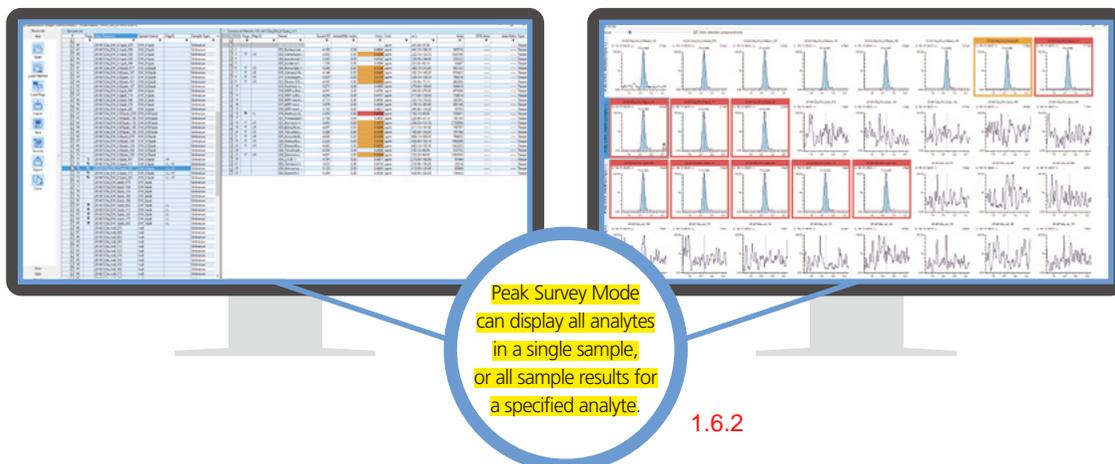
❯ Data Integrity

LabSolutions Insight is compatible with LabSolutions™ DB, enabling traceability, audit trail, and user management capabilities.

Intuitive Operation

Create custom configurations accommodating your unique requirements. Generate intuitive and meaningful reports, reduce costs, and improve the efficiency of your data processing environment.

Clean and comprehensive layout.

Peaks can be manually identified and integrated by simply dragging markers.

Configurable layouts can be displayed on multiple monitors. Switching quickly between sample centric and compound centric views enables analysts to work according to their preference.

Peak Survey Mode can display all analytes in a single sample, or all sample results for a specified analyte.

1.6.2

Automated QA/QC Flagging and Peak Comparison

1.6.2

Highlight Peaks According to Your Limits

Insight contains over 75 user-controlled QA/QC flagging criteria for retention times, reference ion ratios, concentration limits, and more. Configurable color-coding enables highlighting results that are near or outside of limits.

1.6.2
Results that approach or exceed your limits are automatically color-coded.

Results can be filtered with a single click to show only outliers.

| Warning	Caution		Caution	Warning
0.2 ppm	0.3 ppm		0.52 ppm	0.55 ppm

1.6.2

Peak Data Comparison

Insight allows the user to view many chromatograms at once. To make data review easier, each chromatogram can be overlaid with a reference peak, such as the reference ion chromatogram or a low-level standard. 1.6.2

Peak intensities can be assessed at a glance by using the reference peak overlay feature.
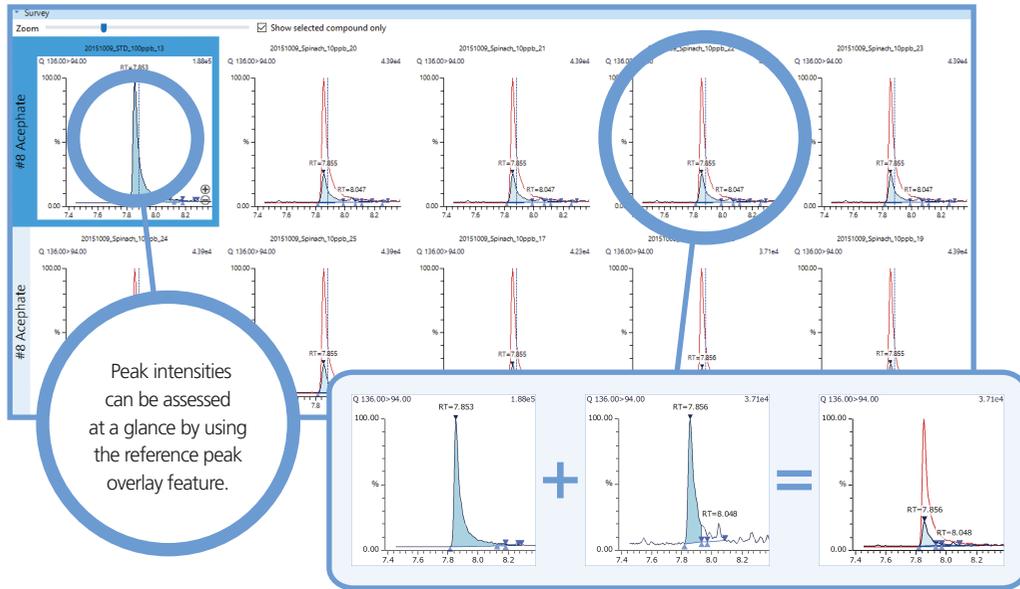
MS/MS Libraries and Compound Identification

Optional LabSolutions Insight Library Screening software* offers MS/MS library search capabilities. Instrument parameters and MS/MS library spectra are available to deliver faster data acquisition, higher data quality, and enhanced identification. In addition, LabSolutions Insight Library Screening software offers easy viewing of your compounds of interest, including structural information, retention time, and library similarity score.
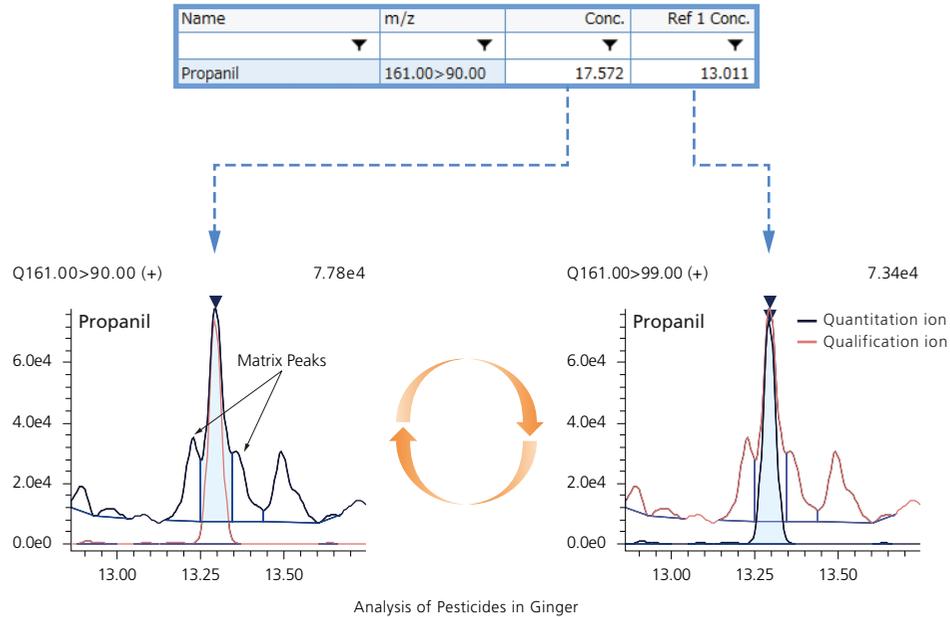

Components can be identified precisely from library search results.
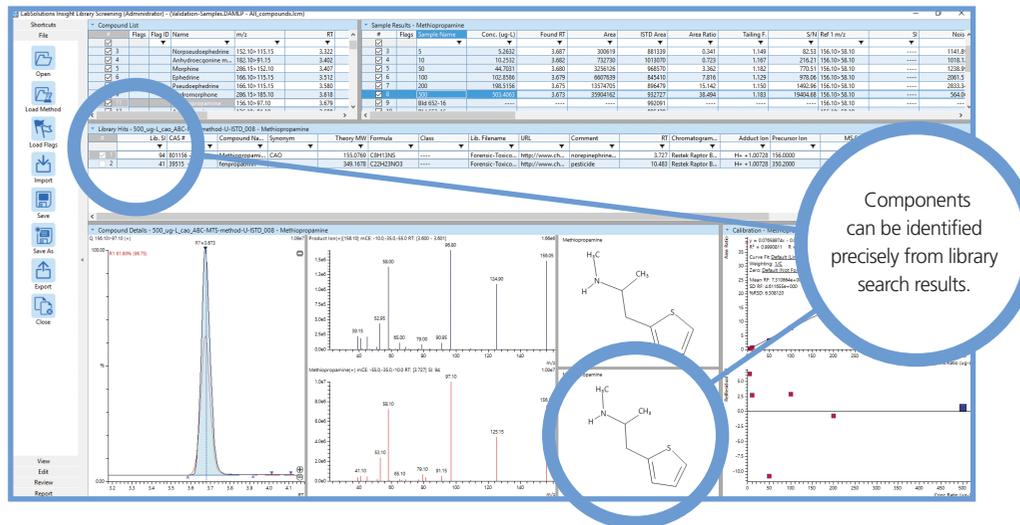
*By checking the library search result, you can quickly identify the compound.

Easily Control of Quantitation and Reference Ions

Analysts can update retention times and reference ion ratios quickly and easily from a single standard or a group of standards. It is also easy to reassign quantitation ions as needed for method development purposes or because of unexpected matrix interferences.

Name	m/z	Conc.	Ref 1 Conc.
Propanil	161.00>90.00	17.572	13.011

Q161.00>90.00 (+)   7.78e4   Q161.00>99.00 (+)   7.34e4

Analysis of Pesticides in Ginger

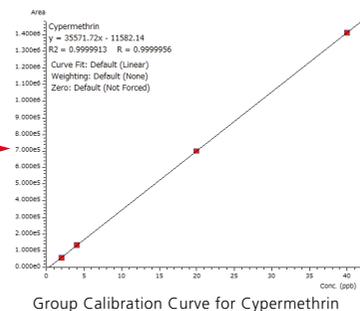## Concentration Summation for Isomers

Some methods require the summation of multiple peaks to be reported as a single value. Insight easily allows compound grouping, as in the case of pesticide isomers below.

#	Name	m/z	Group #	Area	Conc.
	'BHC'				
49	alpha-BHC	180.90>144.90	2	1990616	9.72734
61	beta-BHC	180.90>144.90	2	1588946	174.79865
68	gamma-BHC (Lindane)	180.90>144.90	2	1733257	9.61008
84	delta-BHC	180.90>144.90	2	996980	9.81085
389	BHC	----	2	6309799	203.94692

Group Quantitation of α,β,γ, and δ-BHC (Concentration Sum)

#	Name	m/z	Group #	Area	Conc.
	'Cypermethrin'				
355	Cypermethrin-1	163.10>127.10	1	549034	10.14215
357	Cypermethrin-2	163.10>127.10	1	184422	9.49396
358	Cypermethrin-3	163.10>127.10	1	239856	9.58511
361	Cypermethrin-4	163.10>127.10	1	402696	9.47377
388	Cypermethrin	----	1	1376009	39.00826

Group Quantitation of Cypermethrin (Group Calibration Curve)

Cypermethrin
y = 35571.72x - 11582.14
R2 = 0.9999913   R = 0.9999956
Curve Fit: Default (Linear)
Weighting: Default (None)
Zero: Default (Not Forced)

Group Calibration Curve for Cypermethrin

Compliance with Environmental Regulations

The U.S. Environmental Protection Agency (EPA) has announced testing methods for the analysis of toxic substances in the environment. However, implementation of accurate analyses requires accurate control of the validity of the calibration curves and the recovery rates for example. LabSolutions Insight performs the data processing and outputting of reports required for accurate control, enabling compliance with these testing methods.

Validity of calibration curves

Calculation of recovery rates

The recovery rate is flagged if it has exceeded a standard value.

Recovery rate pass/fail report

*Separately available environmental software must be purchased.

Data Integrity

LabSolutions Insight is compatible with LabSolutions DB, enabling traceability, audit trail, data management, and user management capabilities.

Database Security

Compliance with 21 CFR Part 11 type regulations in a GxP environment requires that data be authenticated and secure. Insight is compatible with LabSolutions DB/CS to facilitate these tasks.

Management of Records

LabSolutions Insight and LabSolutions DB/CS enable compliance with regulations regarding user login, assignment of user rights, and accessibility to data.
You can also login to LabSolutions Insight using your Windows® account.

Easily Understood Audit Trails

The new workflow offered by LabSolutions Insight manages all information related to data analysis as a single file, resulting in simple and easy-to-understand audit trail functionality.

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Conditions

Operating system : Microsoft® Windows® 10 Professional/Microsoft® Windows® 11 Professional
Workstation software : GCMSsolution™ Ver. 4.54 or later
LabSolutions LCMS Ver. 5.123 or later
LabSolutions GCMS Ver.5.125 or later
LabSolutions DB LCMS Ver.6.123 or later
LabSolutions DB GCMS Ver. 6.125 or later
LabSolutions CS Ver. 6.122 or later

Compatible Models

GCMS-TQ™ series, GCMS-QP series
LCMS-9050, LCMS-9030 , LCMS-8060(NX), LCMS-8050, LCMS-8045,
LCMS-8040, LCMS-8030, LCMS-2050, LCMS-2020

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