

# For LabSolutions™ LCMS and GCMSsolution™ Metabolites Method Package Suite



GCMS-TQ8050 NX



LCMS-8060NX

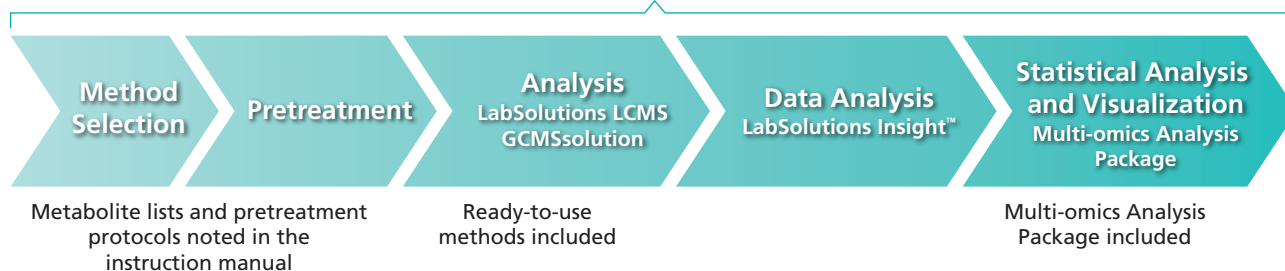
## Provides ready-to-use methods for over 1900 metabolites

This suite allows comprehensive analysis of over 1900 metabolites without the need for investigation of separation conditions, MRM optimization or parameter settings. The range of metabolites spans both hydrophilic and hydrophobic compounds, including amino acids, short-chain fatty acids, sugars, nucleotides, bile acids, and lipids.

The suite consists of five LC/MS/MS Method Packages including ready-to-use methods for the LCMS-8050/8060 series, the LC/MS/MS MRM Library for Phospholipid Profiling, the Smart Metabolites Database™ for GC/MS(GC/MS/MS), and a Multi-omics Analysis Package.

The Multi-omics Analysis Package included in this product supports not only regular analysis but also large volume data analysis and interpretation. The Multi-omics Analysis Package includes metabolic pathways and other contour maps corresponding to the Method Packages. This makes it easy to visualize fluctuations in the quantitative values of metabolites across metabolic pathways. Data filtering functions and statistical analysis can be applied to the network of compound relationships, providing a total solution for metabolite analysis.

### Metabolites Method Package Suite = A Total Solution from Analysis to Interpretation



### LC/MS/MS Method Packages/Database/MRM Library Included in this Product

LC/MS/MS Method Packages for

- Primary Metabolites
- Short Chain Fatty Acids
- D/L Amino Acids
- Bile Acids
- Lipid Mediators

LC/MS/MS MRM Library for Phospholipid Profiling

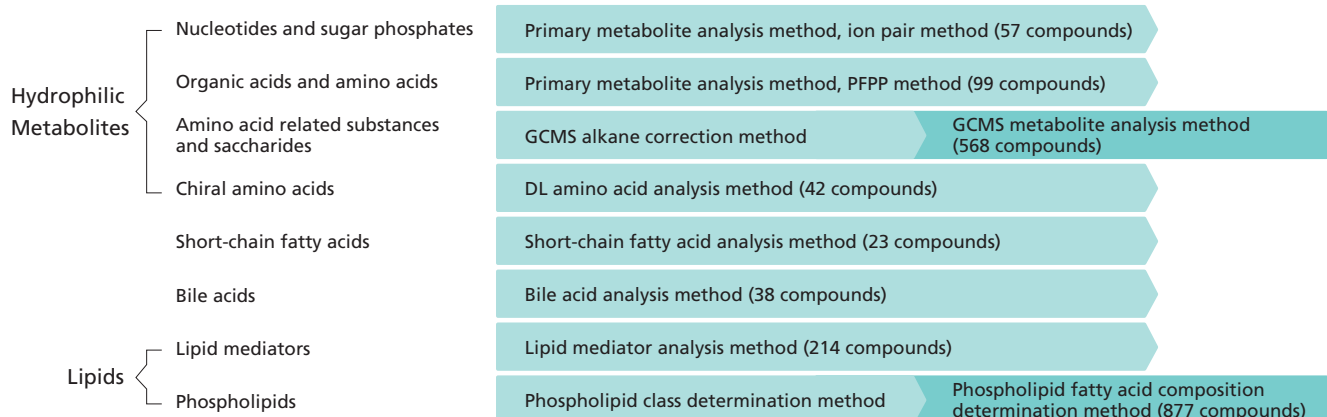
GC/MS(GC/MS/MS)  
Smart Metabolites Database



# Metabolites Method Package Suite

## Method Selection and Registered Compounds

To start analysis without an investigation of measurement conditions, select a method suited to the analysis aims and the relevant compounds. Protocols are also included for extraction from biological tissue, plasma, and feces, as well as derivatization and other pretreatments.



## Example Analysis: Intestinal Flora Research

Recently the analysis of metabolites in the field of intestinal flora has expanded in scope. Comprehensive analysis includes not only general primary metabolites, but D-amino acids and other chiral molecules as well as lipids and bile acids.

Measurements of mouse feces using this product can detect 554 compounds, as shown in the table.

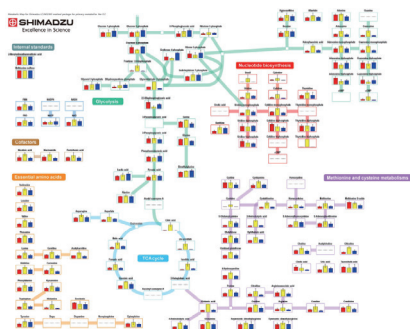
Number of compounds detected by each method

LCMS Primary Metabolites	PFPP Method: 71 compounds
	Ion Pair Method: 35 compounds
GCMS Primary Metabolites	132 compounds
DL Amino Acids	D-Amino Acids: 17 compounds
	L-Amino Acids: 21 compounds
Short-Chain Fatty Acids	14 compounds
Bile Acids	14 compounds
Lipid Mediators	61 compounds
Phospholipids	189 compounds

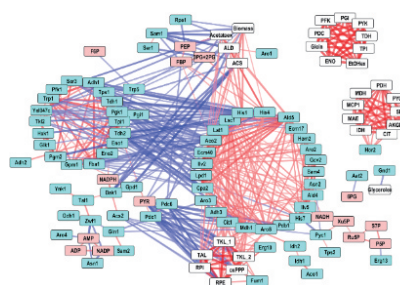
Note: This application was developed together with the Osaka University Shimadzu Omics Innovation Research Laboratories.

## Multi-omics Analysis Package

With the included Multi-omics Analysis Package, it is possible to display quantitative fluctuations in metabolites on a metabolic map, and to visualize relationships between metabolites.



Quantitative fluctuations in metabolic pathways



Visualization of relationships between metabolites

LabSolutions, LCMS, GCMSsolution, GCMS-TQ, Smart Metabolites Database and LabSolutions Insight are trademarks of Shimadzu Corporation.



**For Research Use Only. Not for use in diagnostic procedures.**

This publication may contain references to products that are not available in your country. Please contact us to check the availability of these products in your country.

Company names, products/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation, its subsidiaries or its affiliates, whether or not they are used with trademark symbol "TM" or "®".

Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services, whether or not they are used with trademark symbol "TM" or "®".

Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

The contents of this publication are provided to you "as is" without warranty of any kind, and are subject to change without notice. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.

Shimadzu Corporation

[www.shimadzu.com/an/](http://www.shimadzu.com/an/)