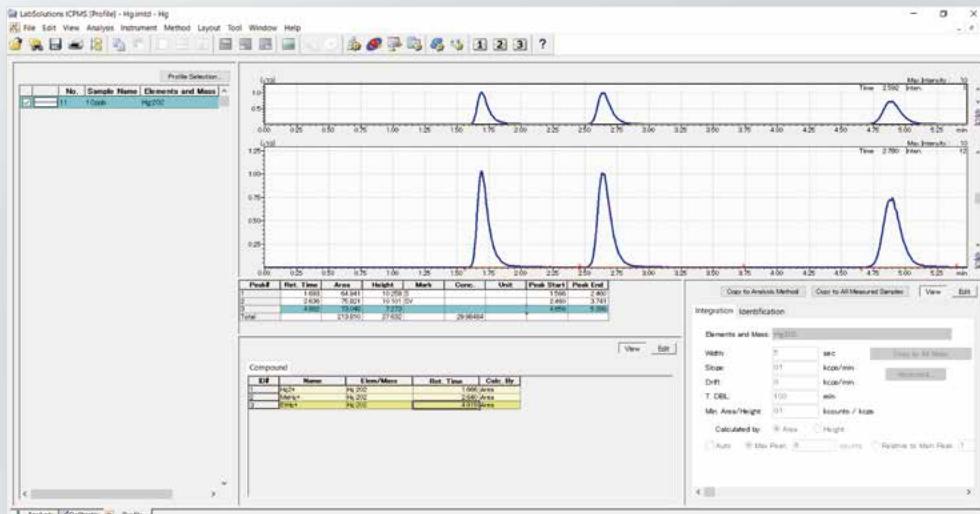


For ICP Mass Spectrometers

LC-ICP-MS Method Package for Mercury Speciation Analysis



This method package can only be used with a Shimadzu LC-ICP-MS system configured with an ICPMS-2040/2050 Series or ICPMS-2030 Series system in combination with a Nexera™ inert series or Prominence™ inert LC system. For details about LC system requirements, contact a Shimadzu representative.



Shimadzu LC-ICP-MS System

Separates and Quantitates Three Types of Mercury Compounds

The method specifies isocratic conditions using a Shim-pack Scepter™ C18-120 metal-free column and a methanol and 0.01 mol/L ammonium as the mobile phase. It can separate three types of mercury compounds: divalent mercury, methylmercury, and ethylmercury.

Data Integrity Compliance

LabSolutions™ ICPMS TRM (for time-resolved measurements), which is optional software for ICPMS-2040/2050 Series and ICPMS-2030 Series systems, can centrally control both the main ICPMS unit and LC system. LabSolutions ICPMS TRM can also be connected to a LabSolutions DB or CS analytical data processing system* to ensure full compliance with data integrity requirements.

* Compatible with ICPMS-2030 Series software, Ver. 1.60 or later

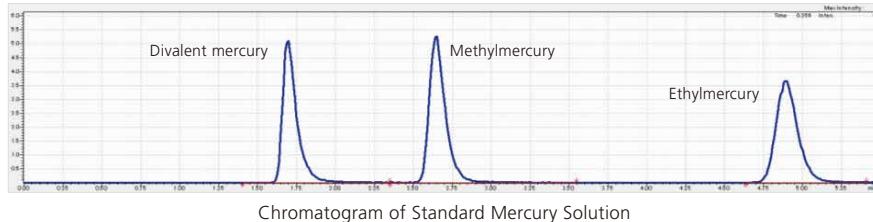
No Method Development Necessary

Analytical methods optimized for Shimadzu LC-ICP-MS systems are provided as method files*. Consequently, users do not need to develop analytical methods. That means users can start analysis immediately after instrument installation.

* ICPMS-2030 Series method files can be used in system environments with LabSolutions ICPMS Ver. 1.60, LabSolutions ICPMS TRM Ver. 1.60, or later versions.

Separates and Quantitates Three Types of Mercury Compounds

The method can separate and quantitate three types of mercury compounds: divalent mercury, methylmercury, and ethylmercury.



Analytical Conditions

Column : Shim-pack Scepter C18-120 metal-free column (150 x 4.6 mm, 5 μ m)
Mobile Phase : Methanol and 0.01 mol/L ammonium acetate solution (containing 0.12 % L-cysteine and adjusted the pH to 7.5 with aqueous ammonia) (8:92)
Flowrate : 1 mL/min
Injection Volume : 50 μ L
Retention Time: 7 min
Column Temp.: 40 °C

No Method Development Necessary

Package Contents

This method package contains method files, an instruction manual on how to prepare the mobile phase and standard solution on a CD-ROM so analysis can start immediately after the instrument has been installed. However, the column, reagents, and other supplies not included in the package must be obtained separately.

Compatible LC System

- Solvent Delivery Unit LC-40i / LC-20Ai
- System Controller CBM-40 / CBM-20A
- Degassing Unit DGU-403 / DGU-405 / DGU-20A3R / DGU-20A5R
- Autosampler SIL-40 XSi / SIL-20AC
- Column Oven CTO-40C / CTO-20AC

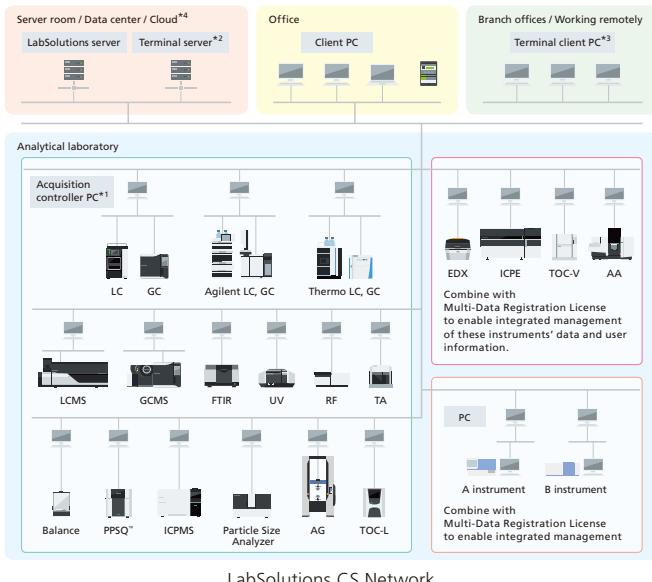
* For details, contact a Shimadzu representative.

Data Integrity Compliance

Supports Connection to LabSolutions DB/CS

LabSolutions ICPMS TRM (for time-resolved measurements) can be connected to a LabSolutions DB/CS analytical data processing system to achieve safe and secure data management.

Users can choose either a standalone system (LabSolutions DB) or a networked system (LabSolutions CS) based on their operating environment.



LabSolutions CS Network

*1 The acquisition controller PC controls analytical instruments.

*2 This server is for using Terminal Services. Terminal Services enable users to view data reports and perform electronic signature operations and is ideal for remote connections due to the low network load. Using Terminal Services for analysis and postrun analysis operations is only supported for LC, GC, LCMS, and GCMS instruments.

*3 Using Terminal Services does not require installing LabSolutions software in a client PC or tablet computer.

*4 It also functions properly when configured in any type of cloud (IaaS) server, such as AWS (Amazon Web Services), Microsoft® Azure®, or GCP™ (Google Cloud Platform™).

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