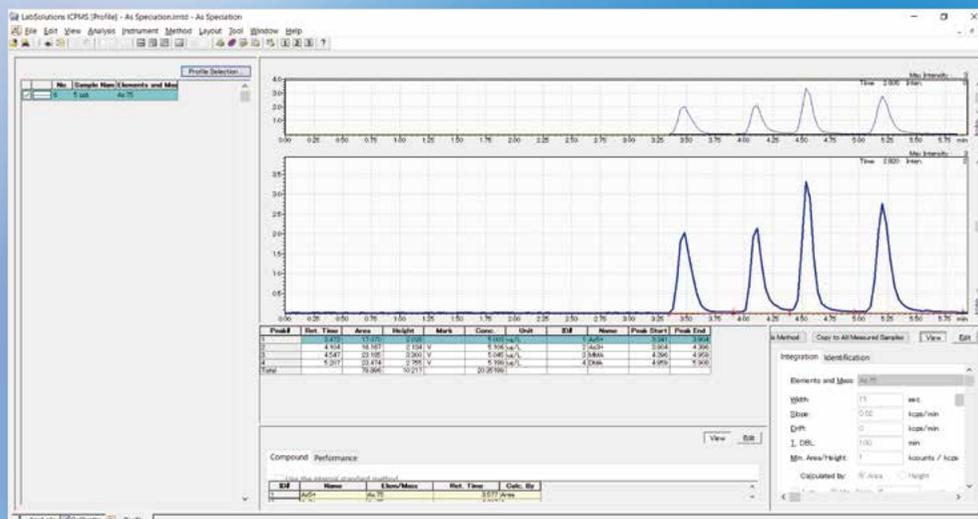


For ICP Mass Spectrometers

LC-ICP-MS Method Package for Arsenic Speciation Analysis Type 2



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 Six Types of Arsenic Compounds

This method uses formic acid as the mobile phase. It can separate six types of arsenic compounds: arsenic (As⁵⁺), arsenic trioxide (As³⁺), monomethylarsonic acid (MMA), dimethylarsinic acid (DMA), arsenobetaine (AsB), and arsenocholine (AsC).

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

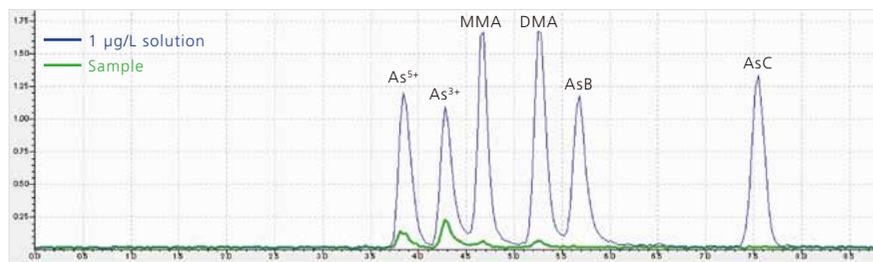
No Method Development Necessary

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. 1.62, LabSolutions ICPMS TRM Ver. 1.62, or later versions.

If the analysis methods included in this method package are used in an ICPMS-2030 Series system, then the rotary pump included standard in the system must be replaced. For details, contact a Shimadzu representative.

Separates and Quantitates Six Types of Arsenic Compounds



Chromatogram of Standard Arsenic Solution

Analytical Conditions

Column : Sigma-Aldrich Discovery HS F5 (4.6 mm I.D x 250 mm L, 5 µm)
 Mobile Phase : 0.1 % formic acid (including 1 % methanol and 0.025 % tetramethylammonium hydroxide solutions)
 Flowrate : 0.75 mL/min
 Injection Volume: 10 µL
 Retention Time: 10 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.

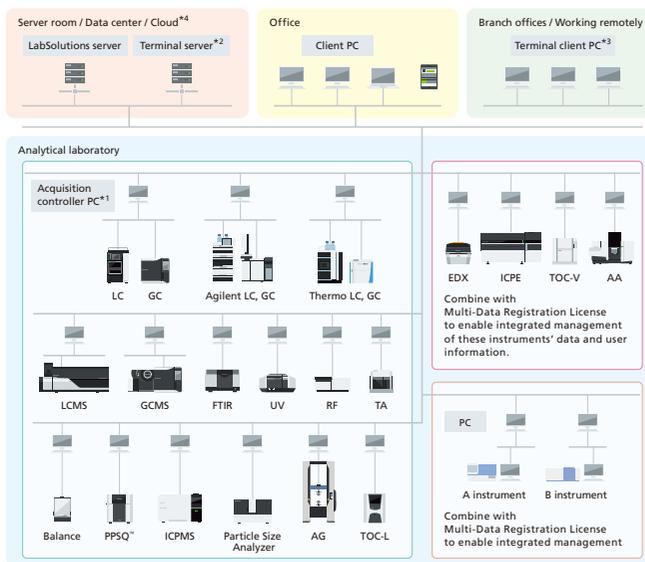
Users can choose either a standalone system (LabSolutions DB) or a networked system (LabSolutions CS) based on their operating environment.

*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 post-run 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™).



LabSolutions CS Network

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