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New! ICP-MS MassHunter 4.4 Software

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ICP-MS MassHunter 4.4 (G7201C C.01.04) was introduced in July 2017. Coming a year after MassHunter 4.3, this new release demonstrates Agilent's commitment to continuous development of the ICP-MS software.

The look and feel of ICP-MS MassHunter 4.4 will be familiar to users of earlier MassHunter 4.x revisions. It is also compatible with methods and data from earlier MassHunter 4.x revisions.

A key priority in the development of MassHunter 4.4 was the elimination of the requirement for Microsoft Excel. By removing the need for Excel, any compatibility issues between the laboratory IT supported version and the MassHunter supported version of Excel are eliminated. Functions previously delegated to Excel (mainly specialized reporting functions) are now handled by MassHunter's Report Designer. The new Report Designer permits much more powerful and simple customization of all report templates. ICP-MS MassHunter 4.4 no longer includes a copy of Excel. Users who have developed Excel custom report templates for MassHunter can still use them if they provide their own copy of Excel.

In addition to eliminating the need for Excel, the Agilent design team, with input from the field advisory team, has continued to review and simplify the user interface and workflow. New functions and enhancements include:
- Intelligent Sequencing support for ESI prep*FAST* autodilution.
- The Nanoparticle Application Module now offers optional support of fast TRA mode for the 7800, and permits multi-element nanoparticle screening in a single run.
- Improvements to Autotune and support for the Teledyne CETAC XLR-860 Extended Rack Autosampler.

Operating System Compatibility

ICP-MS MassHunter 4.4 is compatible with 64 bit versions of Windows 7 or Windows 10.

Availability

Revision 4.4 is available free of charge to ICP-MS MassHunter users who have a current software maintenance agreement (SMA) subscription.

Fully Control the MVX-7100 μL Workstation with ICP-MS MassHunter

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In collaboration with Agilent, Teledyne CETAC Technologies has developed a software plug-in that integrates control of the MVX-7100 μL Workstation from within ICP-MS MassHunter. All MVX-7100 functions can now be operated from within the ICP-MS MassHunter Batch software. This compatibility allows users of Agilent ICP-MS and Agilent ICP-QQQ systems to benefit from the micro-sampling capabilities of this advanced automation system.

What is the MVX-7100 μL Workstation?

The MVX-7100 μL Workstation is a syringe driven, low and 'sub-mL' volume sample introduction system for ICP-MS instrumentation that can deliver samples at any required flow rate from total consumption (single μL/min flow rates) to mL/min level flows. This innovative technology can be used to support low sample volume requirements or to intentionally reduce the sample volume being introduced to the ICP-MS (by at least an order of magnitude compared to standard methods) while maintaining precision and accuracy. With an appropriate nebulizer, low volume analysis can be performed without compromising the number of analytes or sample measurement replicates. A non-metallic sample flow path ensures low detection limits when using the system. The MVX-7100 μL Workstation offers the analyst the following capabilities:
- Syringe driven uptake, sample introduction, and flow path rinsing: a specified sample volume is pulled onto a loop and the entire aliquot injected, enabling analysis of sample volumes as low as 5 μL.
- Sample introduction flow rate control.
- Septum piercing for sealed sample vials or sealed well microplates.
- Optional temperature control (4–40°C).
- Precise sampling from 96 well and 384 well microplates for low volume, biological applications, or cell-based experimentation.
- Internal and external sample probe rinsing in opposing directions with separate solutions.
- No peristaltic pump tubing involved in the sample introduction process.

Applications

The MVX-7100 system provides a solution to the challenge of limited sample volumes in ICP-MS applications across various scientific disciplines. For example, analysis of biological sample types (such as bloods, urines and biological cells), geological materials (such as low mass digests from micro drilling of rocks, speleothems, or shells), and samples of high value (such as may be the case in pharmaceutical or other industrial applications). The MVX-7100 also supports ICP-MS analysis in petrochemical applications and solvent-based samples where sealed vial septum piercing and optional temperature control can be employed to minimize sample evaporation and prolong analytical batch integrity. The system has also been shown to be beneficial for applications requiring accurate control of sample introduction flow rate (such as nanoparticle work). Working with the MVX-7100's low sample volumes also has the potential to reduce the analyst's exposure to hazardous sample types such as radioactive or pyrophoric materials.

Software Availability and Compatibility

The MVX-7100 μL Workstation plug-in for ICP-MS MassHunter is available from Teledyne CETAC Technologies, and is compatible with ICP-MS MassHunter 4.3 with patch 3 and ICP-MS MassHunter 4.4 onwards.

More Information

www.teledynecetac.com/products/ automation/mvx-7100