

Robust Solution for Routine Monitoring of Arsine and Phosphine in Olefin Production

Agilent Arsine Phosphine GC/MS Analyzer



Metallocene catalysts used in the polymerization of ethylene (or propylene) to polyethylene (or polypropylene) are preferred for their very high activity but are very sensitive to impurities, even at low levels. Degradation of the catalyst can cause the production process to be shut down earlier than planned in order to replace the deactivated catalyst.

To monitor and maximize the lifetime of the catalyst, both ethylene/propylene producers and consumers need to monitor impurities at the lowest possible levels, such as low part-per-billion (ppb) concentrations for arsine and phosphine. Detection of these impurities at low-ppb levels is typically only achievable with a GC/ICP-MS (or GC/ICP-MS/MS), and labs often send samples to contract labs for analysis.

Measure impurities with confidence, in-house

Agilent's Arsine Phosphine GC/MS analyzer provides a robust solution for routine monitoring of arsine and phosphine impurities in olefin production at single-digit ppb concentrations. Based on 8890 GC and 5977B mass spectrometry platforms, each system is factory pre-tested and pre-configured to perform sensitive analysis in monomer-grade ethylene and propylene. No specialized training is required for operation, allowing labs to quickly implement the system for low-level detection of impurities in olefins, in-house and with short turn-around times.



Use of innovative technology leads to excellent analytical performance:

- Single-digit ppb detection limits for arsine and phosphine in monomer-grade ethylene and propylene
- Innovative High Efficiency Source maximizes the number of ions that are transferred into the quadrupole analyzer, for highest sensitivity
- Patented JetClean Self-Cleaning Ion Source ensures long-term stability and high precision, along with reducing manual source cleaning frequency
- Agilent Inert Flow Path solutions ensure better results, and allow you to process more samples without unplanned maintenance and recalibration
- Fully automated calibration system ensures simplified operation using G-Cal style permeation tubes

Agilent Arsine Phosphine GC/MS Analyzer

Analyzers are pre-configured and factory tested

The GC/MS Analyzer is configured and tested for the analysis of arsine and phosphine in olefins, and can also be used to test for hydrogen sulfide and carbonyl sulfide. Verified chromatographic performance with installed consumables and methods provides easy out-of-the-box operation and reduces the time you spend configuring individual components. A calibration system using G-Cal style permeation tubes, provides automated calibration in the range of 5–50 ppb by running a simple 5 run sequence.

Each analyzer arrives ready to perform your application

On-site installation and check out of the Analyzer by a factory-certified technician confirms that your instrument and the application meet Agilent's analytical performance criteria. System familiarization ensures that your team is "ready to go" on day one and you can start calibration and validation work immediately following system installation

Ordering information for the Agilent 5977B Single Quadrupole GC/MS with an Agilent 8890 GC analyzer system:

Part Number	Description
M7484AA	Arsine Phosphine Analyzer complete with built-in calibration system



Optional:

MassHunter Software is a single powerful software solution for all Agilent MS platforms, saving training costs in multi-instrument labs.



Optional:

End to end laboratory support from the Agilent CrossLab service experts to deliver valuable insights and keep your instruments running at peak performance with minimal downtime. We offer solutions and service agreements that include transition services, application consulting, repair, preventative maintenance, compliance verification, education, and a host of other services tailored to meet your needs. Ask us how we can support your laboratory today!

Put your lab on the productivity fast track.

Contact your local Agilent representative
or Agilent authorized distributor

www.agilent.com/chem/arsine-phosphine

DE44210.5264467593

This information is subject to change without notice.

© Agilent Technologies, Inc. 2021
Published in the USA, January 19, 2021
5991-7608EN