

4500 POLYMER PACKAGE VERIFY POLYMER IDENTITY AND COMPOSITION

The Measure of Confidence

POLYMER IDENTIFICATION AND ANALYSIS - FAST, ACCURATE, EASY

Subtle changes in formulation and structure of polymers can make significant differences in product performance. That makes determining and verifying the chemical identity of polymers absolutely critical, especially in highly demanding environments.

The Agilent 4500 Polymer Package enables you to determine, in seconds, the chemical composition of a polymer to ensure its viability in a given application. In addition to identification, the 4500 Polymer Package can automatically measure the amount of total phthalates present in polyvinyl chloride (PVC) polymers using Agilent's proprietary on-board calibrated method.

The package is based on Agilent's battery powered, fully portable 4500 FTIR spectrometer. This powerful spectrometer brings the power of FTIR to the sample, regardless of location, and delivers lab-quality results. The spectrometer in this package is equipped with a triple reflection diamond ATR sample interface and an in-depth ATR polymer library. An extended spectral polymer library is also available. ([View the OnDemand application webinar and demonstration video](#))



The Agilent 4500 Polymer Package is ideal for:

- ✓ The verification of polymer for QA/QC, recycling, supply chain management
- ✓ Rapidly measuring restricted phthalates in PVC

Learn more by visiting the Polymer ID Package webpage agilent.com/chem/polymer-id



Agilent Technologies

Measure the total phthalate level in PVC

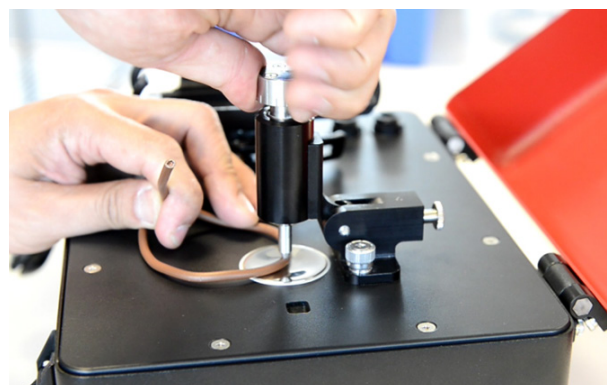
Phthalates are widely used additives in thermoplastic polymers such as PVC. The level of phthalates in the toys and children's products, however, cannot exceed 0.1 percent. GC/MS systems are typically used to check the level, but FTIR spectrometers can do the job much more rapidly—and portable FTIR spectrometers give you the ability to do so without bringing the sample to the lab.

Agilent scientists have developed a proprietary method based on the 4500 portable FTIR and three reflection diamond ATR. This innovative method includes a set of comprehensive calibrations to analyze a range of vinyl polymers. The calibrations enable you to make accurate measurements of total phthalates to the 0.1% (LOQ) level in the presence of various fillers and other additives, including carbon black.

The lab-quality performance of the 4500 portable FTIR, the longer pathlength afforded by the multi-reflection ATR, and Agilent's exclusive algorithms and calibration method combine to make the 4500 Polymer Package the optimal system for fast screening of total phthalates in PVC.

Features of the 4500 Polymer Analyzer

- The 4500 portable spectrometer is designed to deliver lab-quality results in the field.
- The three reflection diamond ATR provides greater pathlength for more accurate quantitative measurements and lower detection limits. Diamond ensures that sample does not abrade or otherwise compromise the sensor surface.
- Agilent Mobile MicroLab software is highly intuitive and requires little training. Push button methods enhance ease-of-use and speedy results.
- Results are presented in custom report style and offer color-coded alerts to warn you if a sample is out of specification.



- Our extensive ATR-based spectral library contains polymer spectra and enables you to add polymer spectra to the library.
- Our exclusive spectral search algorithm and conditional reporting deliver accurate results for specific polymer formulations.
- An optional Polymer and Additives spectral library (ST Japan) is available, further enhancing the range of the system for identification.

Features for Phthalate Analysis

- Agilent's exclusive calibrated method affords highly accurate measurement of total phthalates in PVC to 0.1% LOQ—even in PVC that contains fillers or carbon particles.
- The speed, accuracy, portability, and ease of analysis of the 4500 Polymer Package enable the system to rapidly screen large numbers of samples for phthalates. This is particularly useful for reducing the demand on GC/MS equipment.
- The 4500 Polymer Package provides positive identification of polymers, which helps you properly prepare samples for GC/MS analysis, protecting sensitive columns and injectors from contamination by unknown materials.

Ordering Information



Part# G8182AA Agilent 4500a Polymer Package



Agilent 4500 Polymer Package Includes:

- 4500a Portable FTIR
- Three reflection diamond ATR sample interface
- ATR polymer library
- Phthalates in PVC analysis and calibrated model

Optional: ST Japan Polymer and Polymer Additives Library

[Request a Quote: Visit the product detail page today to request a quotation or more information.](#)

