

# Agilent

## 4500 Series FTIR spectrometers



### Fully integrated, portable FTIR.

The Agilent 4500 Series FTIR are mid-IR spectrometers specifically designed for analysis outside of laboratory environments. The system is compact and packaged in a weather-resistant housing making it ideal for outdoor use. It is perfect for obtaining fast, high quality answers about your liquid and solid samples on-site.

At the heart of the system is a unique, rugged interferometer, field-proven to be used in challenging environments. The internal components are mounted on shock-dampening platforms to protect the components from damage in the field, making this one of the most rugged spectrometers available.

Use the 4500 Series FTIR to easily perform spectroscopic analyses on a range of liquids, powders, pastes and gels. MicroLab PC software, operating on a standard laptop or ruggedized tablet, is designed for simple push button, method driven operation to obtain valuable information about the identity and amount of chemical substances present in a material.

Using the 4500 Series FTIR, you can:

- Monitor product quality.
- Determine if ingredients in a mixture are at the proper levels.
- Assess quality of incoming raw materials.
- Identify contaminants.

### Simple to use — no training required

With the innovative sampling interface of the 4500 Series FTIR, no sample preparation is required. Perform measurements in less than 2 minutes and clean up in seconds — so you can spend your valuable time doing other things. The software and user interface are intuitive, with no technical training required to use the system.

## Specific systems for your samples.

The 4500 Series FTIR offers three sampling systems tailored to different types of analysis.

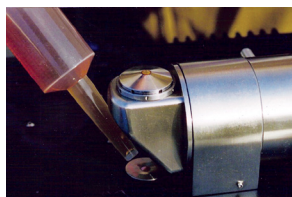
To quickly and easily determine the identity and/or quantity of components in a liquid, choose the 4500t TumbIR or 4500 DialPath, containing unique Agilent technology and configured pathlengths between 30 to 1000  $\mu\text{m}$ .

Simply place a drop on the lower window and rotate the top window into place to encompass the liquid and get a reproducible pathlength every time. The 4500t is ideal for quantifying minor components in a liquid sample.

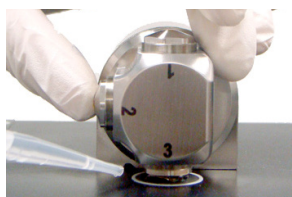
For analyzing and measuring virtually any type of solid, paste or gel substance, select the 4500a, featuring a diamond ATR (Attenuated Total Reflectance) sampling system.

Just place the substance on the diamond window and take the measurement. A pressure device ensures that powders and solids uniformly contact the diamond, providing the best possible quality information.

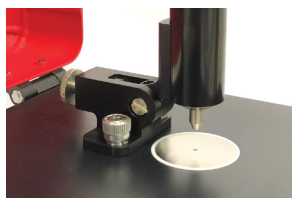
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product highlights</b>    | <ul style="list-style-type: none"> <li>• Small and lightweight</li> <li>• Highly accurate mid-IR analysis</li> <li>• No to little sample preparation</li> <li>• Designed for field use</li> <li>• Internal 4 hour battery</li> <li>• Available with general purpose and specific methods</li> <li>• USB or Bluetooth computer connection to any computer</li> <li>• Integrated sampling interfaces</li> <li>• Water-resistant for inclement weather conditions designed to IP54 specifications</li> </ul>                                                                                 |
| <b>System specifications</b> | <ul style="list-style-type: none"> <li>• Size: 22 x 29 x 19 cm (8.5 x 11.5 x 7.5 in)</li> <li>• Weight: 6.8 kg (15 lb)</li> <li>• Operating ranges: 0 to 50 °C (32 to 122 °F)</li> <li>• Power: Internal battery (4 h), 100/120/240 V AC, 50/60 Hz</li> <li>• Spectral range: 4000–650 <math>\text{cm}^{-1}</math></li> <li>• Resolution: 4–32 <math>\text{cm}^{-1}</math></li> <li>• Controller: Handheld or Laptop computer with Microsoft® Windows® 10 Professional</li> <li>• Software: Agilent MicroLab PC</li> <li>• Warmup time: 10 min</li> <li>• Response time: 2 min</li> </ul> |



Effortlessly determine the amount of minor components in your liquids with the TumbIR sampling system of the Agilent 4500t FTIR



Get reproducible pathlengths every time, between 30 and 1000  $\mu\text{m}$ , using the Agilent 4500 DialPath FTIR



Measure all your solid, paste and gel samples with the diamond ATR sampling system of the Agilent 4500a FTIR

|                     |                                                                                                                                                    |                                                                                                                                                     |                                                                                                                     |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Sample types</b> | <ul style="list-style-type: none"> <li>• Polymers</li> <li>• Oils</li> <li>• Gels</li> <li>• Greases</li> <li>• Pastes</li> <li>• Dairy</li> </ul> | <ul style="list-style-type: none"> <li>• Acids</li> <li>• Gasoline</li> <li>• Bases</li> <li>• Diesel</li> <li>• Liquids</li> <li>• Wine</li> </ul> | <ul style="list-style-type: none"> <li>• Foodstuffs</li> <li>• Powders</li> <li>• Solids</li> <li>• Soil</li> </ul> |
| <b>Applications</b> | <ul style="list-style-type: none"> <li>• Food adulteration</li> <li>• Soil analysis</li> <li>• Incoming QA/QC</li> </ul>                           | <ul style="list-style-type: none"> <li>• Final product QA/QC</li> <li>• Petrochemical blending</li> <li>• Regulatory compliance</li> </ul>          | <ul style="list-style-type: none"> <li>• Fine chemicals</li> <li>• Recycling</li> </ul>                             |

[www.agilent.com/chem/4500](http://www.agilent.com/chem/4500)

This information is subject to change without notice.

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