SHARPER INSIGHTS. SMART DECISIONS.

Spotlight™ Aurora FTIR Microscope

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FROM UNKNOWN TO UNDERSTOOD

Analyzing unknown or complex samples is a growing challenge—variations in size, shape, and composition make accurate identification difficult. Labs are under pressure to deliver faster insights without compromising quality, all while ensuring repeatability and reducing manual effort. At the same time, the risk of releasing non-compliant products threatens both brand reputation and regulatory standing.

Introducing the **PerkinElmer Spotlight™ Aurora FTIR Microscope.**

Designed to simplify handling of unknown samples, accelerate contaminant identification, and ensure accurate, reproducible results.

It combines rapid automated contaminant recognition, real-time spectral matching, and guided troubleshooting workflows to deliver fast, actionable insights with high confidence.

With integrated compliance support, robust Attenuated Total Reflectance (ATR) performance, and modular automation, Spotlight Aurora streamlines analytical workflows, reducing risk and maximizing efficiency for labs managing diverse, challenging samples.

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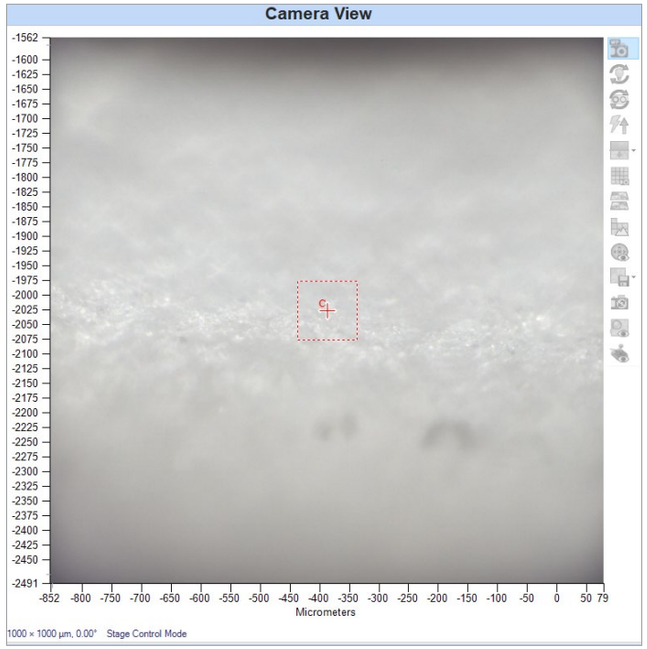
VISUALIZE WITH MORE CLARITY AND DETAIL



Quickly and efficiently identify your region of interest for IR analysis. Finding your region of interest is now faster and easier with our novel widefield viewing system, seamlessly overlaid with high-definition detail through advanced optics and software.

Achieve **precise visual imaging of uneven and curved samples** with advanced depth-focus tuning, while high-definition objectives reveal the finest details.

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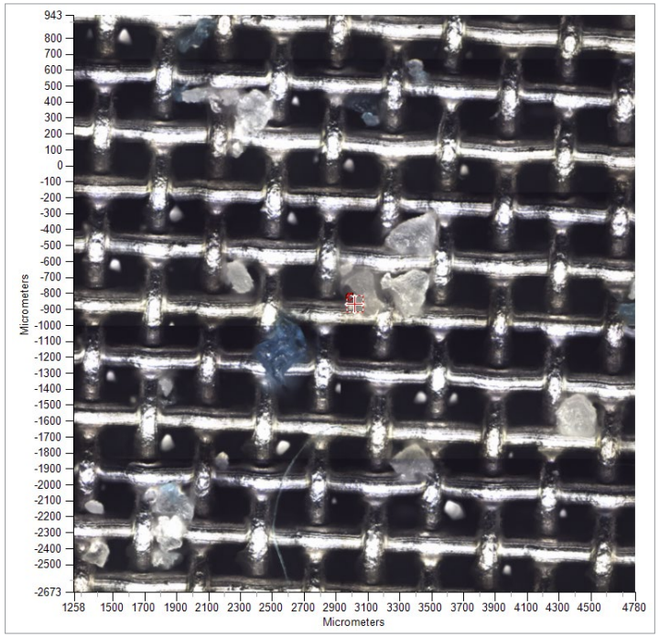

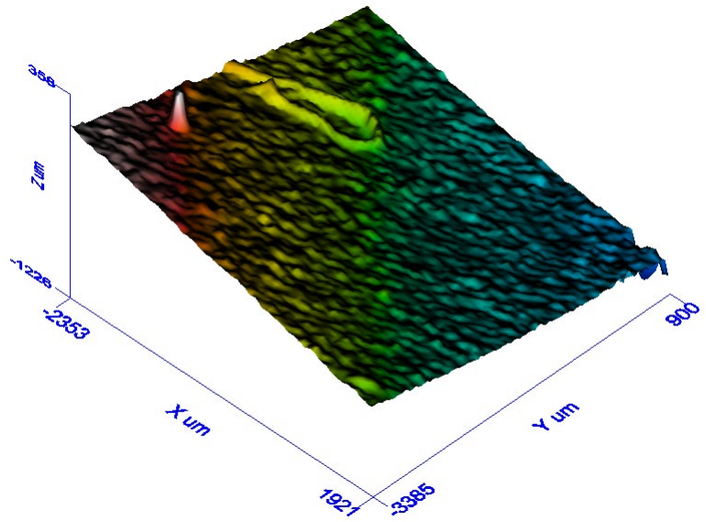

Maintain consistent image quality across large sample areas with adaptive visual image correction. Seamlessly **integrate IR and visible displays** using our software visualization tools. Gain **enhanced depth of field** and **a wider field of view** with multiple visible objectives, along with superior visualization of surface topography through bright and dark field illumination options.

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MAXIMIZE RETURN ON INVESTMENT

The Spotlight Aurora FTIR microscope combines full FTIR capabilities with advanced IR microscopy, delivering unmatched configurability to tackle future challenges beyond conventional microscopy systems. **Easily enhance your existing PerkinElmer FTIR** with our multirange and multiple detector options, compatible with models from the past 15 years.

- Benefit from **high-quality FTIR/NIR sampling for samples larger than 50 microns,** ensuring no compromise on quality or sampling convenience.
- Gain flexibility with the **compact and transportable Spectrum Two FTIR** that can be quickly decoupled for out-of-lab use.
- Maximize your investment with basic models that are **upgradeable to IR and NIR hyperspectral imaging** or multirange systems and enjoy the convenience of the new Thermoelectrically cooled Mercury Cadmium Telluride (TE-MCT) point detector that operates without liquid nitrogen.

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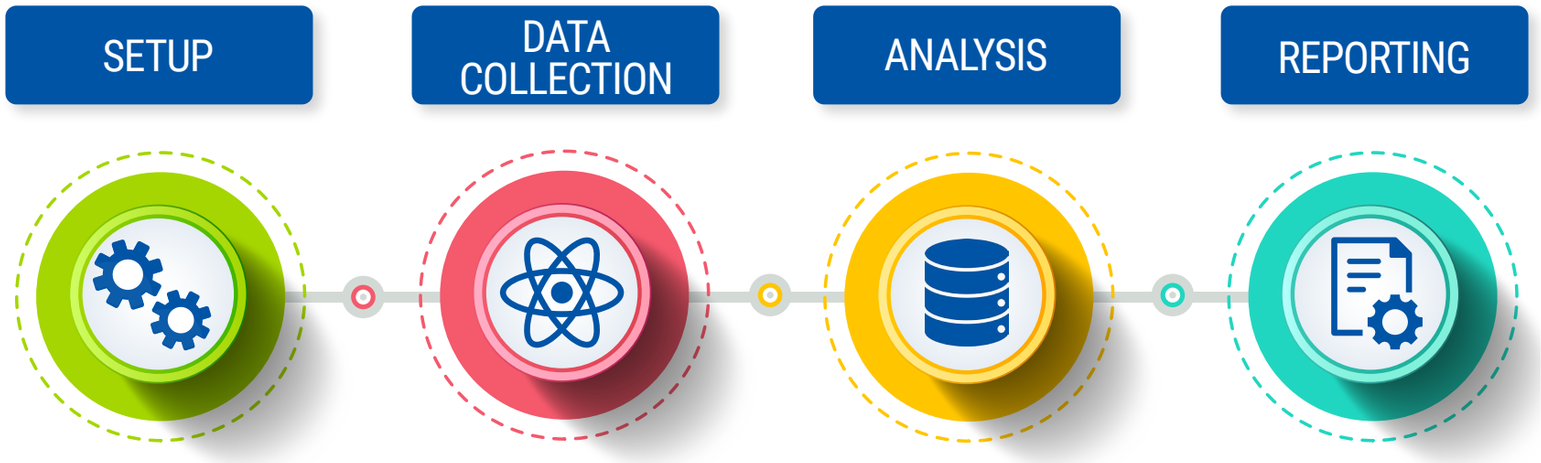
CUT ANALYSIS TIME WITH SMART WORKFLOWS



New assisted workflows provide context-sensitive guidance, offering step-by-step support throughout your analysis.

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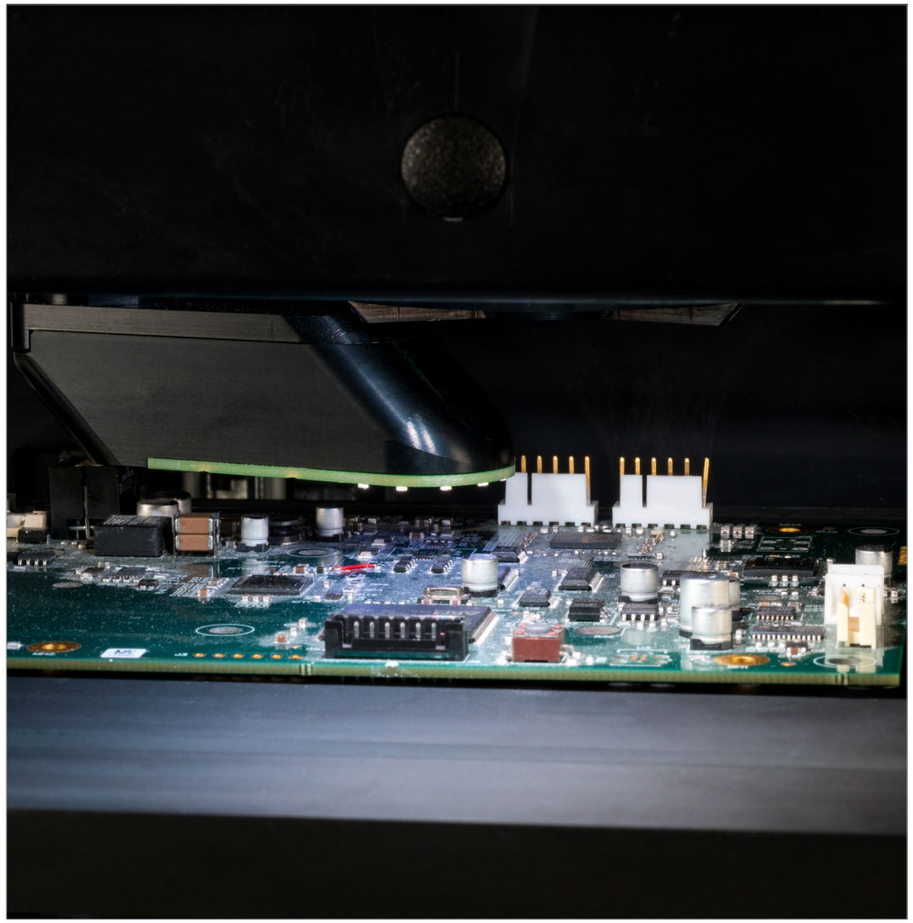
INSTANT CLARITY, TRUSTED RESULTS

When analyzing extremely small samples or areas of interest, it's often difficult to get the kind of data that enables better understanding of each sample's material properties.

Spotlight Aurora brings cutting-edge innovation from PerkinElmer to your lab, combining a dual-camera system, multiple viewing modes, and flexible range options for unmatched versatility. Built-in image optimization delivers faster insights, while advanced ATR technology enables high-quality spectral analysis down to 10 microns -empowering precise results across a wide range of industries and applications.

Achieve uncompromised optical performance with high performance detectors that offer superior signal-to-noise ratios and a broad spectral range, allowing you to obtain maximum information from challenging samples in the shortest time possible.



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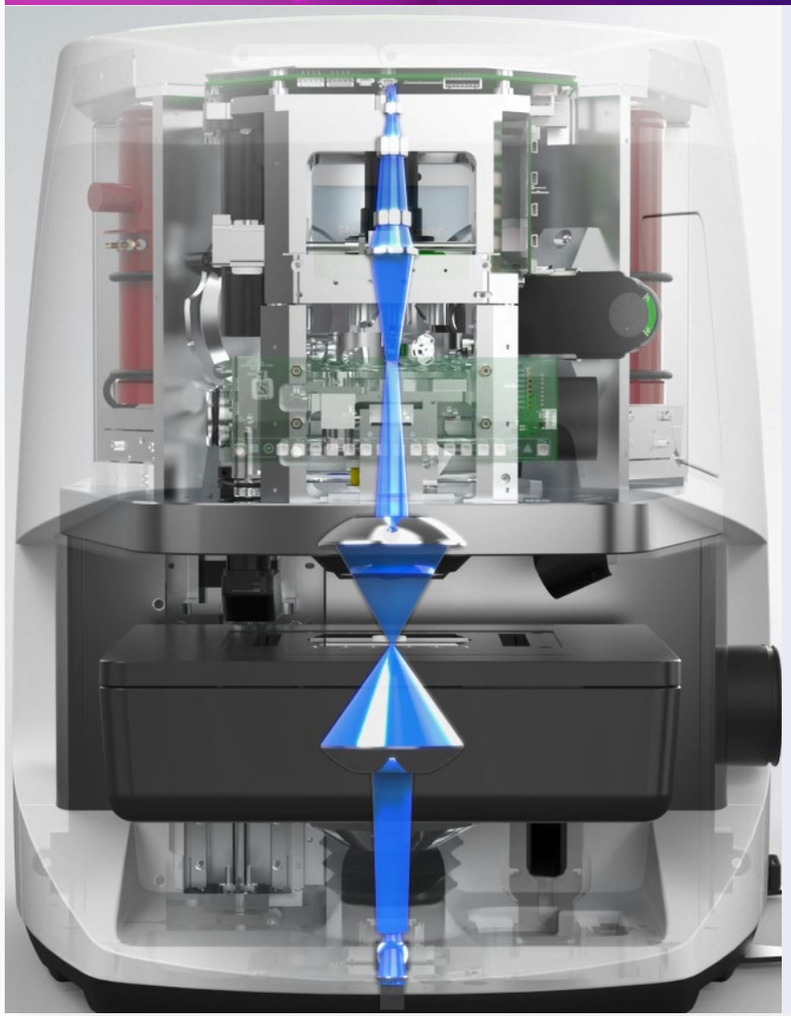
TRANSFORM COMPLEXITY INTO CLARITY



uATR SAMPLING

VISIBLE IMAGING SYSTEM

DETECTOR SWITCHING

AUTOMATED APERTURING & STAGING CONTROL

ADVANCED OPTICS

THE FTIR ENGINE

SEE SPOTLIGHT AURORA IN ACTION

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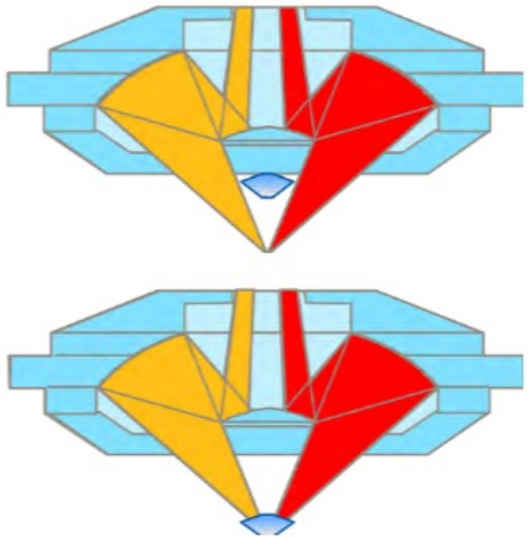
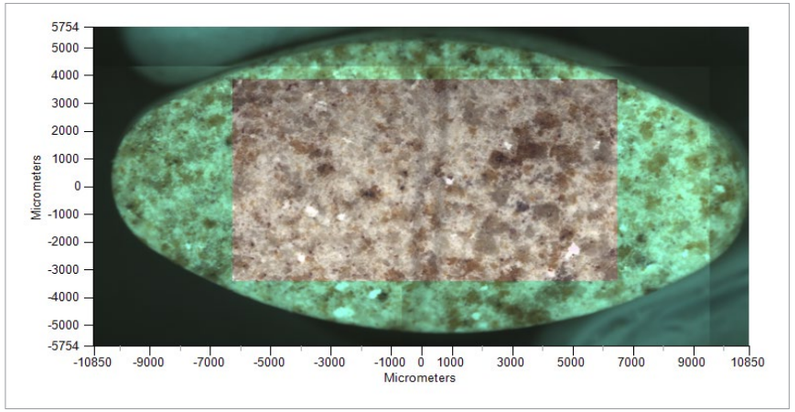
uATR SAMPLING



Our new ATR system is fully automatic, so you don't have to manually insert and realign the ATR crystal every time you use it. The built-in suspension support and fast-feedback pressure sensor preserve sample integrity with delicate samples and provides faster auto pressure adjustment with multiple sample runs.

VISIBLE IMAGING SYSTEM



Unique dual camera/dual optics systems provide simple automated switching between widefield and hi-definition views of the sample, to simplify and accelerate region of interest location. Full sample auto-illumination and auto-focus routines with new dynamic field correction to flatten overall optical response across the sample to provide improved mosaicing of hi definition images for more complete sample visualization. New depth tuning routines provide improved sample imaging over irregular, sloped or curved surfaces deliver more accurate visualization.

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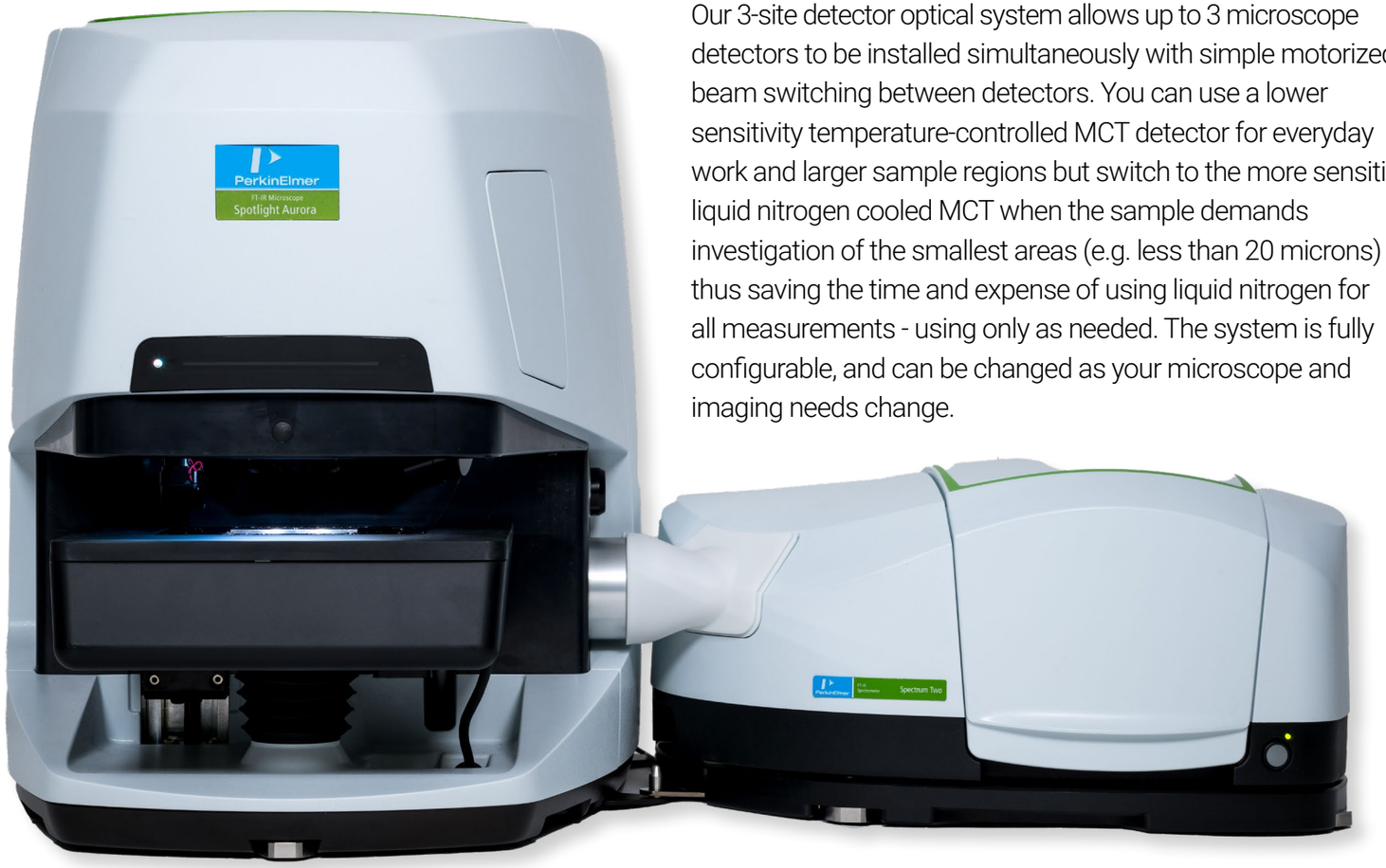
DETECTOR SWITCHING



Our 3-site detector optical system allows up to 3 microscope detectors to be installed simultaneously with simple motorized beam switching between detectors. You can use a lower sensitivity temperature-controlled MCT detector for everyday work and larger sample regions but switch to the more sensitive liquid nitrogen cooled MCT when the sample demands investigation of the smallest areas (e.g. less than 20 microns) thus saving the time and expense of using liquid nitrogen for all measurements - using only as needed. The system is fully configurable, and can be changed as your microscope and imaging needs change.

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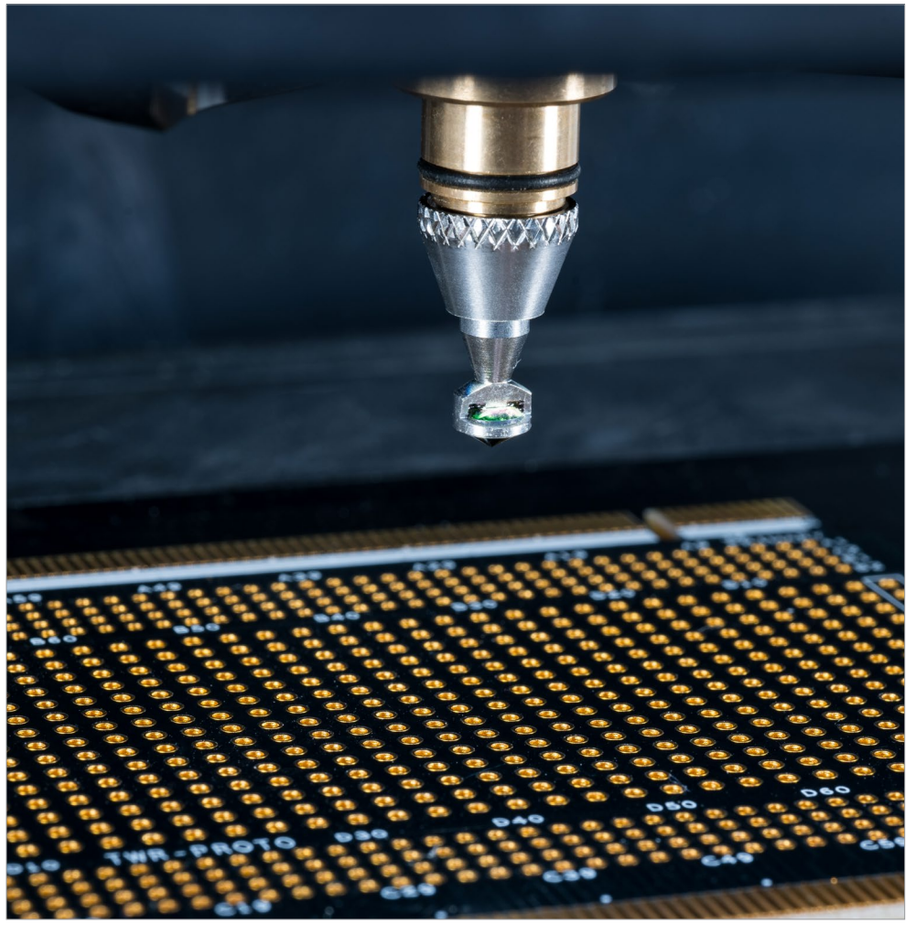
AUTOMATED APERTURING AND STAGE CONTROL

Our fully automated IR apertures have set the standard for automated IR microscopy and are now incorporated into particle finding and laminate workflows which automatically set the optimum aperture size to get the best quality IR data.

The fully automated microscope sample stage features a lower focusing optic with reciprocal movement, eliminating the need to remove the lower optics. This maximizes workspace and reduces setup time for larger samples and accessories.



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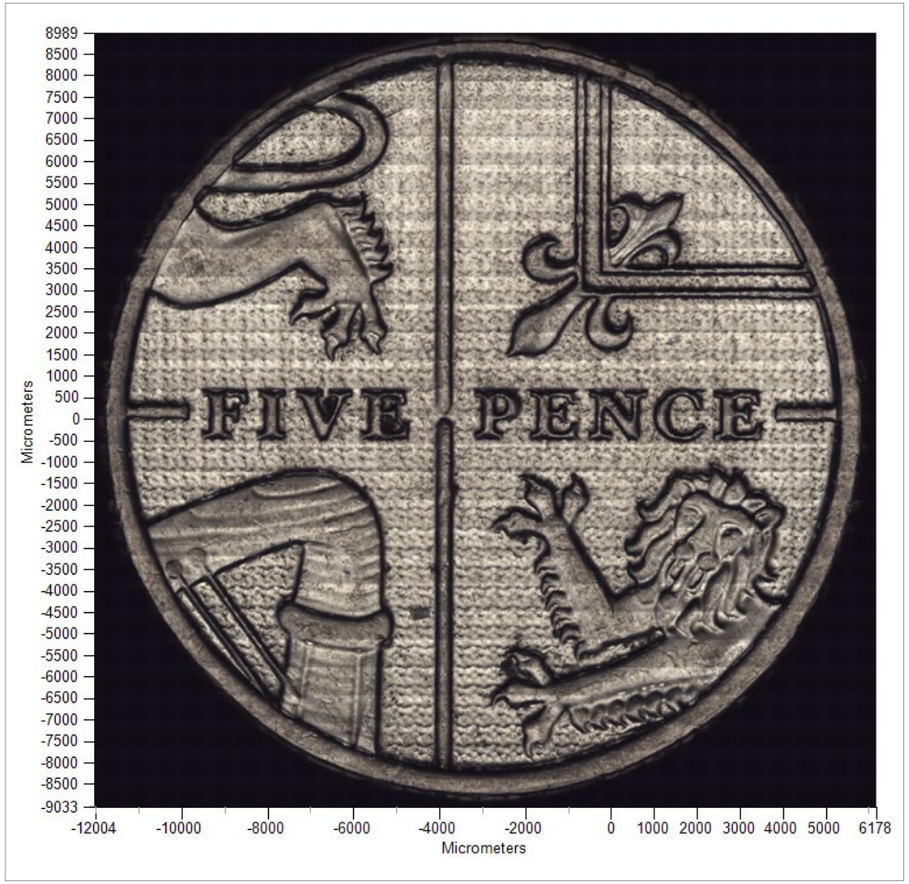
ADVANCED OPTICS

Designed from the ground up for IR performance, our advanced microscope optics are perfectly matched to our FTIR optical engine, with use of aspheric optics to provide the highest quality image. For samples requiring ultra clean environments due to risk of airborne contamination, an optional sample purge enclosure is available to effectively enclose the entire sample and sample stage space and optical path for measurement.

Auto-recognized sample holder plates can guide the control system to ensure consistent sample loading with standard sample holders or Perkinelmer microscope accessories - this ensures reproducible, safe movements of the stage and faster setup.



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THE FTIR ENGINE

The key to robust, high performance IR microscopy - our system is loaded with a range of advanced innovations designed to provide optimal performance from whatever configuration you choose, including a fifth-generation, fixed mirror-pair Dynascan™ interferometer that's immune to the effects of tilt and shear and requires no dynamic alignment mechanisms.

And our proven electronic source hotspot stabilization increases measurement stability by maintaining the IR alignment stability over time and extends source longevity.

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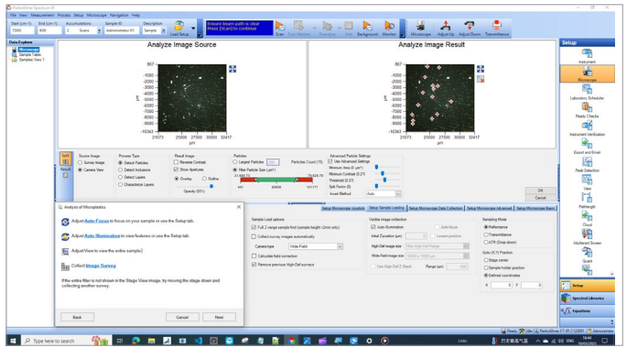
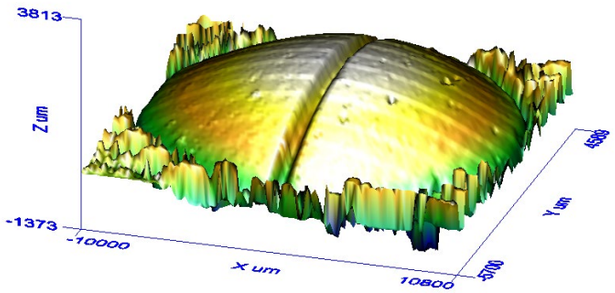
INTELLIGENT SOFTWARE BEHIND EVERY INSIGHT





The Spotlight Aurora system is powered by the latest Spectrum IR software - delivering a unified, intuitive platform that simplifies everything from setup to reporting. With built-in automation, smart imaging, and guided workflows, it empowers users to get accurate, reproducible results faster and with less effort.

With 21 CFR Part 11 compliant software, our latest version provides everything from automated setup to complete characterization – in record time.

Complete Workflow Automation: Extend macros to include microscope setup, data collection, and reporting.

Configurable Validation RoutinesOne-Click Smart Routines: Speed instrument performance validation tests, so you're always ready for operation.

Assisted Workflows: Step-by-step guidance for tasks requiring manual adjustments, like illumination tuning.

Smart Image Analysis: Automatically find particles, boundaries, and features for fast, accurate targeting.

Built-in Validation & Checks: Automated system performance checks with auto-recognized validation holders.

Customizable & Secure: Tailor the interface to your workflow; deploy with Standard or Enhanced Security (ES) options.

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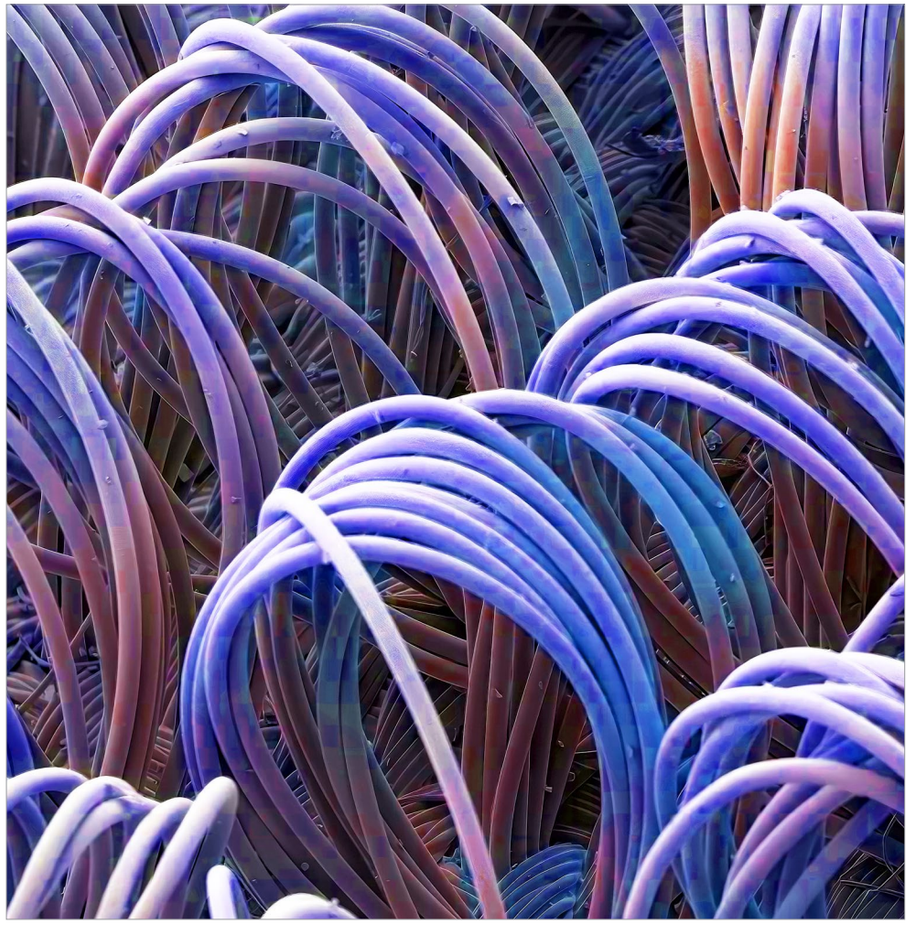
DETERMINING POLYMER COMPOSITION

Our Spotlight Aurora IR microscopy systems streamline your analytical testing, providing fast and accurate chemical composition visualization for products like food packaging and consumer goods. Spotlight Aurora significantly boosts lab efficiency by streamlining visual exploration and automating contaminant identification -freeing up valuable resources and accelerating decision-making without compromising accuracy.

- Detect material defects
- Identify and characterize polymer layers
- Analyze compositions
- Troubleshoot efficiently to accelerate product development



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THE RIGHT MATERIALS MAKE ALL THE DIFFERENCE

In pharmaceuticals, precision is everything - from consistent Active Pharmaceutical Ingredient (API) dispersion in tablets to accurate characterization of biosimilars. That's why leading drug developers rely on advanced materials analysis to ensure product quality, safety, and regulatory compliance. Our Spotlight Aurora IR microscope systems scan and automatically detect impurities in the visible image of a sample and collect the IR spectrum for rapid material identification.

Spotlight Aurora IR microscope systems automatically scan pharmaceutical samples, detect impurities or inconsistencies in the visible image, and collect high-quality IR spectra for rapid, reliable chemical identification - supporting confident decisions in drug development, tablet uniformity testing, and biosimilar bio-characterization.

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EVERY PARTICLE TELLS A STORY

When it comes to identifying microplastics, our Spotlight systems are commonly used in laboratories across the globe. Scientists have begun developing routine methods to characterize microplastic particle samples down to 10 microns or less.

Our Spotlight Aurora system provides the ability to perform both automated single-particle analysis and IR imaging, allowing every particle to be identified and characterized.

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YOUR PARTNER IN SOLVING CRIME

IR microscopy is an important technique for evidence analysis at the scene of a crime. Samples including single fibers, paint chips, and other residues come in many different shapes and sizes, and adaptable sampling and analysis methods – coupled with dependable performance – are keys to success.

Spotlight Aurora systems with micro- and macro-sampling enable you to choose the optimum method for your unique sample. This ensures dependable results, every time

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For more information visit www.perkinelmer.com/spotlightaurora

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