

Confidence Meets Efficiency in Spectroscopy

AP Spectroscopy Suite



Scan. Match. Result.

Quick identification, verification, and quantification of substances using FTIR and Raman spectroscopy with Anton Paar's Spectroscopy Suite.

Anton Paar's Spectroscopy Suite software, used in combination with the Raman instrument Cora 5001 and the FTIR Lyza series instruments, is designed for incoming goods inspection and R&D in both regulated and non-regulated environments.

You need results, not spectra. Simplify your lab team's complex spectroscopy tasks by providing predefined workflows and settings that accelerate measurements and ensure consistent, high-quality results in quality control and research.

Both FTIR and Raman molecular spectroscopy methods can be controlled by the same software. You can use the AP Spectroscopy Suite individually as Raman analysis software or FTIR analysis software, or combine both instruments for a powerful analytical workstation.

Your challenges:

- ✓ I want to help my team members succeed by streamlining their daily spectroscopy tasks
- ✓ I need a system that prevents errors so I don't have to fix them afterward
- ✓ I must always be able to demonstrate that the system adheres to key regulations such as 21 CFR Part 11 and EU GMP Vol. 4 Annex 11
- ✓ I need to be confident that no incorrect or contaminated raw materials are used in production
- ✓ It's my job to increase the efficiency of the QC laboratory, and I'm looking for a quick test to verify and quantify chemical composition

Cora 5001 and the Lyza series with Anton Paar's Spectroscopy Suite – the solution to your needs.



Find out more

The Solution to Optimize QC

The best match of hardware and software: Remove complexity and improve performance in your QC lab.

Secure data architecture for every lab

Don't compromise on data security and user rights management. Both AP Spectroscopy Suite variants, Premium and Professional, store all data in a secure SQL database that remains unchanged through updates, keeping your investment secure.

Standardized daily sample analysis: Verify, identify, quantify

Only approved and released methods for verification, identification, and quantification can be executed, ensuring safe and standardized daily operation. Measurement parameters cannot be changed by unauthorized users.

Guided workflows ensure optimal conditions and eliminate human influence on results. The system automatically compares the measured spectra with the reference spectra library prescribed in the method and gives a pass/fail answer.

A valid system suitability test is a prerequisite for starting a measurement, ensuring reliable and accurate results.

Method development and reference library generation

All sample-specific measuring settings and reference data are defined by methods, which makes it easy for everyday operators to achieve high-quality results even for complex spectroscopy tasks. Methods can only be created or changed by user groups with the corresponding rights.

As with the methods, reference datasets can only be generated by users with the rights to do so. Reference libraries are supplied by Anton Paar but can also be created by the user or imported from existing spectrometers. Overlaying multiple spectra assists in selecting the right reference datasets.

Made for pharma compliance

Choosing AP Spectroscopy Suite Premium ensures full compliance in the pharmaceutical regulatory environment. All actions and data are traceable and searchable for audit readiness, with measurements, methods, and libraries reviewed and approved via electronic signatures. Only approved elements can be used for future analysis.

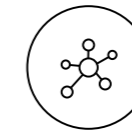
Professional version
Premium version



Fast sample verification and quantification with trusted reference data



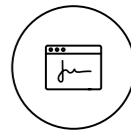
Additional Premium version features
for users in regulated environments



Lifetime data integrity



100 % traceable audit trail with search function



Configurable two- and three-step secure electronic signing



Avoiding Errors

A clear user interface ensures short runtimes and high-quality data to support the success of your spectroscopy team.



Access control

- Choose between user management via Active Directory with user group syncing or locally managed user credentials
- Local user management provides password complexity settings, including switch-off, password expiry dates, and auto logoff after a customizable idle time

Electronic signing process¹⁾

- Choose from a two- or three-step signing process depending on your company policies
- Supports distributed signing in lab and office via the AP Connect lab execution system
- Available for measuring results, newly created methods and library entries, libraries themselves, and checks and adjustments

User group administration

- User groups can be defined according to specific company standards
- Privileges can be defined for a specific user group

Audit trail¹⁾

- Signing and commenting of audit trail entries
- Full-text search and filter functionality via data explorer

Analytical Instrument and System Qualification Package^{1), 2)}

- The Analytical Instrument and System Qualification Package (AISQ+) qualifies your instrument three times quicker. Enjoy a complete package of DQ/IQ/OQ/PQ, a risk analysis, and a 21 CFR Part 11 checklist.

Data management

- Full-text search and filter functionality
- Versioning and data retention to match your requirements
- Update-proof SQL database
- Integration with AP Connect

Export, backup, and restore

- Back up and restore functionality
- Full SQL backup possible
- Export of results including spectra (.pdf/.csv/.spc)

Available languages

- English, German, Chinese (simplified), Chinese (traditional), French, Spanish, Italian, Japanese, Korean, Polish, Turkish

Traceability and data reprocessing

- Versioned methods and libraries ensure full traceability for every measurement result
- Original measurement data can be reprocessed to create a new database entry, enabling reuse while maintaining quality

Libraries

- Factory libraries measured by our specialists for high-quality results
- S.T. Japan library available with up to 76,000 unique spectra
- User-generated libraries specific to user samples
- User libraries imported from existing Anton Paar instruments or those of other vendors

¹⁾ Available with AP Spectroscopy Suite Premium

²⁾ For Cora 5001 785 nm and Lyza series

Cora 5001 and AP Spectroscopy Suite

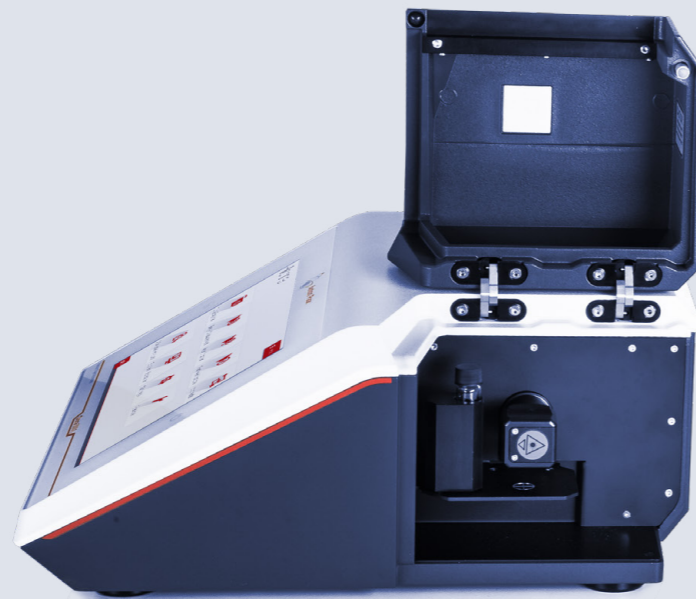
Cora 5001 is ready for use in the field, in your lab, and in the warehouse. If you need to analyze substances at their location, choose the battery option and measure on-site.

Discover the benefits of Raman technology with Cora 5001

- ✓ Comfortable desktop operation and optional pharma compliance with AP Spectroscopy Suite
- ✓ Results within seconds: 300 times faster than alternative methods
- ✓ Non-invasive and non-destructive
- ✓ Save time: No sample preparation needed
- ✓ No influence of water on results
- ✓ Measure samples through packaging or vials to avoid any risk of contamination

Cora 5001 Direct

- **Reproducible conditions for your sample:**
Cora 5001 Direct analyzes samples in a closed measuring compartment. No sample preparation is required. Holders for tablets, vials, and more can be placed precisely onto the motorized sample stage.
- **Laser Class 1 for maximum user safety:**
Cora 5001 Direct instruments are certified as Laser Class 1. There is no need for laser safety measures – the instrument is as safe as a DVD player.
- **Autofocus for the strongest signal:**
Manual focusing on thin or opaque samples with a weak Raman signal can be tricky. Cora's autofocus finds the spot with the best Raman signal within seconds.



Cora 5001 Fiber

- **Flexible probe for external measurements:**
With Cora 5001 Fiber, the sample no longer needs to be taken to the instrument. You can analyze substances regardless of the sample's shape or size. The fiber probe can even be used in situ.
- **Safe, one-handed measurements:**
Cora 5001 Fiber probes are the safe solution for one-handed measurements. Thanks to the remote trigger on the handle and redundant laser safety features, the user is securely in control of the process each and every second.



Find out more

Accessories for Efficient Work

Whatever substances you measure, in whatever form, these accessories enable analysis in just a few seconds.

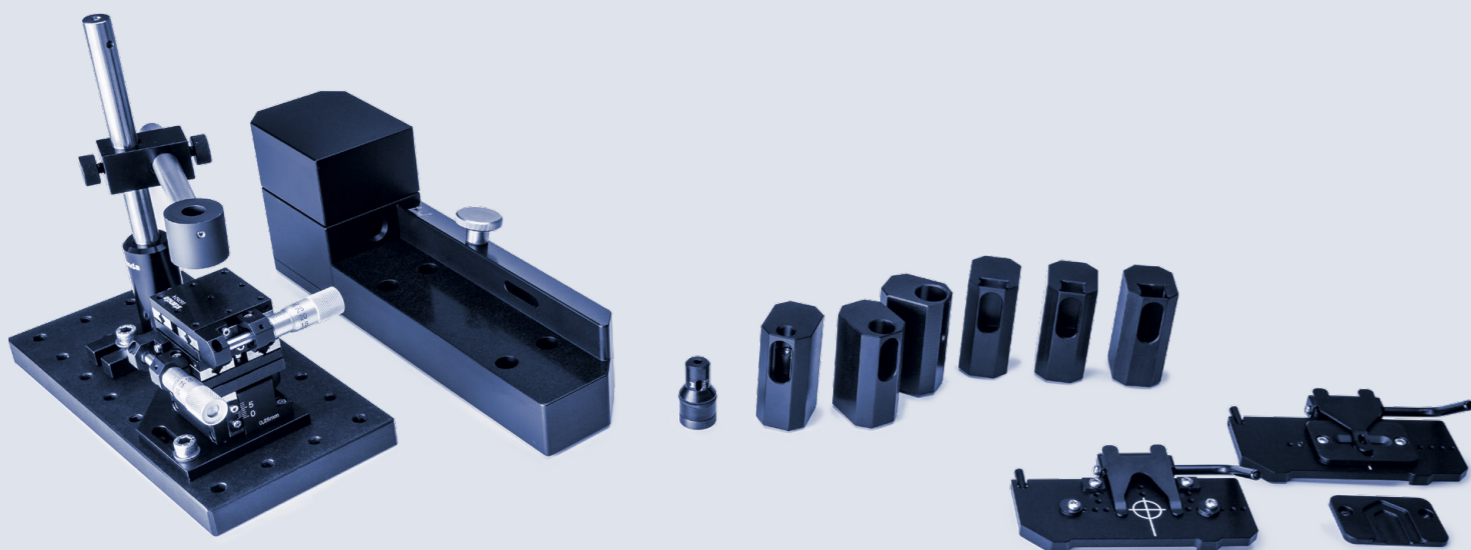
Cora 5001 Direct

Cora 5001 offers a range of dedicated sample holders to accommodate various sample types. All holders are equipped with magnets that securely snap into place for reproducible positioning without the need for refocusing between measurements.

- **Use your own vials:** Compatible with round or rectangular vials and cuvettes in various sizes.
- **For pills and small solids:** The pill holder securely positions tablets, capsules, and other small solid samples.
- **For foils and slides:** The substrate holder allows easy insertion of thin samples such as foils and microscope slides.

Cora 5001 Fiber

- **Fixed focus adjustment for your fiber:** The docking station holds the fiber probe and vials in place for reliable and reproducible results.
- **Accurate adjustment at the tip of the fiber probe:** When analyzing samples at a defined distance, the adjustable spacer tip ensures consistent focusing and optimal signal quality.
- **The ultimate solution for any sample:** The XYZ stage positions the fiber probe exactly where it's needed. Micrometer screws enable fine alignment in all three dimensions, allowing accurate, on-the-spot measurements, even for small or highly inhomogeneous samples.



Cora 5001

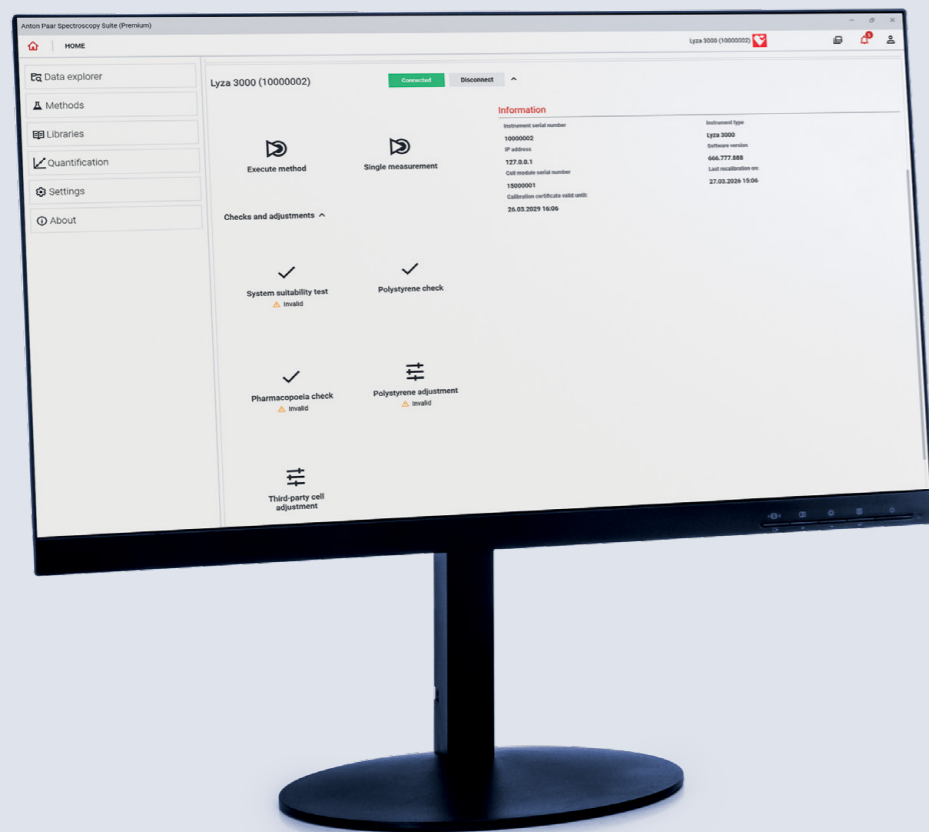
Optical specifications	
Excitation wavelength	785 nm
Spectral range	100 cm ⁻¹ to 2,300 cm ⁻¹
Resolution (according to ASTM E2529)	6 cm ⁻¹ to 9 cm ⁻¹
Laser power	0 mW to 450 mW, adjustable
Spectrograph	f/2; transmission volume phase grating (VPG)
Integration time	0.005 s to 600 s
Wavelength calibration	Automatic via software
Detector array	2,048 px CCD
Laser class	Class 1 for Direct model; 3B for Fiber model
Physical specifications	
Dimensions (D x W x H)	355 mm x 384 mm x 168 mm (14.0 in x 15.1 in x 6.6 in)
Weight	9.8 kg
Operating temperature range	10 °C to 35 °C (non-condensing)
Fiber probe dimensions	Cable length: 1.50 m
Battery (optional)	Lithium-ion
Battery run time	>1.5 h
Power supply input	Inline power supply input: 115/230 V AC, 50/60 Hz Car power adapter input: 9 V to 32 V DC
Power consumption	Inline power supply input: max. 100 VA
Additional specifications	
Display	10" touchscreen
Data ports	4 x USB 2.0, 1 x Ethernet, 1 x CAN out, and 1 x USB to PC
Data export formats	.csv, .pdf, .spc
Internal storage	8 GB
Wireless connectivity	WiFi stick (optional)
Spectral libraries	Factory library, user-built, third-party options
Security	User roles with customizable permissions, user password logins

Lyza Series and AP Spectroscopy Suite

The Lyza FTIR spectrometer series transforms industry standards: Guided workflows allow users with minimal training to perform quick QC measurements. Premium optical components ensure consistently high performance and longevity for years to come.

Discover the benefits of FTIR technology with the Lyza series

- ✓ Fast pass/fail spectral analysis helps optimize quality and maximize efficiency
- ✓ Perform complex measurement routines at the push of a button
- ✓ Check incoming goods, identify unknown substances, and ensure the quality of your final product
- ✓ Modular cell concept for hundreds of sample types
- ✓ 15-year warranty on IR source, laser, and interferometer



Lyza Series and AP Spectroscopy Suite

- Simplifies complex measurements through user-friendly interfaces and automated workflows, making spectroscopy accessible at any skill level
- Delivers detailed and accurate analysis across a broad range of sample types
- Integrates seamlessly into your lab for a streamlined workflow from data acquisition to final analysis
- Ensures full compliance with pharmaceutical standards and regulations when using AP Spectroscopy Suite Premium
- Enables centralized access to connected lab instrument data via integration with AP Connect, our lab execution software



Find out more

Lyza Series: Remarkably Powerful

Pharmacopoeia check*

Fully automated performance verification check according to Pharmacopoeias (EP, USP, IP, JP, CP) with the internal traceable polystyrene film.

Reliable

Automatic calibration ensures optimal performance with every cell, while the permanently aligned cube-corner interferometer prevents alignment errors.

Modular

The exchangeable cell module allows for quick and easy measurement cell exchange. The instrument auto-detects the module and loads your calibration.

Hermetically sealed

The Lyza series' spectrometer core is hermetically sealed and desiccated to protect its optical components and ensure stable conditions.

Performance

Equipped with a high-performance pyroelectric DLaTGS detector, the instrument delivers an exceptional signal-to-noise ratio of 55,000:1.

Cost-efficient

The innovative "Eco Mode" not only helps you save energy but also ensures the longevity of core system components such as the IR source.



* Available with AP Spectroscopy Suite Premium

	Lyza 3000	Lyza 7000
Technical specifications		
Detector	Pyroelectric DLaTGS detector	
Optics	Hermetically sealed aluminum casing with gold-coated mirrors, KBr windows and beamsplitter	
Signal-to-noise ratio	55,000:1 (1 min, 8 cm ⁻¹ , 2,100 cm ⁻¹ to 2,200 cm ⁻¹)	
Spectral range	350 cm ⁻¹ to 7,500 cm ⁻¹	
Spectral resolution	1.4 cm ⁻¹ to 16 cm ⁻¹	1.0 cm ⁻¹ to 16 cm ⁻¹
Wavenumber accuracy	<0.05 cm ⁻¹ @ 900 cm ⁻¹ to 3,000 cm ⁻¹	
Wavenumber precision	Repeatability <0.0005 cm ⁻¹ at 2,000 cm ⁻¹ (standard deviation of 10 repeated measurements)	
Measurement time	<30 seconds	
Laser type	Single-mode vertical cavity surface emitting laser (VCSEL)	
Laser class	Class 1, enclosed hermetically	
IR source	SiC composite	
Interferometer	Permanently aligned cube corner interferometer	
Desiccant	Molecular sieve with color indicator, user-replaceable	
Operating temperature range	10 °C to 30 °C (non-condensing)	
Instrument dimensions	363 mm x 315 mm x 204 mm (D x W x H)	365 mm x 315 mm x 382 mm (D x W x H)
Cell compartment width	152 mm	
Weight	11.7 kg	12.8 kg
Power supply	DC 24 V, 40 W	
Communication interfaces	4 x USB 2.0 / CAN / Ethernet	
Data export formats	.csv, .pdf, .spc	
Data management	AP Connect	
Display	No touchscreen	10.1", PCAP-Touchscreen, multi-touch
Spectral libraries	Factory library, user-built, third-party options	
Regulatory compliance	21 CFR Part 11, EU GMP Annex 11, and others – including installation, operation qualification, and performance qualification (DQ/IQ/OQ/PQ)*	

* Available with AP Spectroscopy Suite Premium

Reliable. Compliant. Qualified.



Our well-trained and certified technicians are ready to keep your instrument running smoothly.

Maximum uptime | Warranty program | Short response times | Global service network

