Efficiency Meets Compliance in **Spectroscopy**

Spectroscopy Suite

Scan.
Match.
Result.

**Quick identification and verification of substances with Cora 5001
and/or Lyza 7000 with Anton Paar's Spectroscopy Suite**

Cora 5001 and/or Lyza 7000, in combination with Anton Paar's Spectroscopy Suite software, is the solution tailored to incoming goods inspection and R&D in the regulated environment.

You need results, not spectra: The system takes all complicated spectroscopy aspects out of the daily measuring routines. Predefined workflows and settings speed up measurements and avoid errors before they can even occur.

All workflows, like running samples, setting up methods, and generating reference libraries, are specifically designed to adhere to stringent compliance regulations.

Your challenges:

✓   I operate in the regulated environment and can never compromise on lifetime data integrity

✓   I must always be able to demonstrate that the system adheres to 21 CFR Part 11 and EU GMP Annex 11

✓   I need a system that avoids errors in the first place instead of making me chase them afterwards on the basis of audit trail entries

✓   I need to check 100 % of the supplied goods, so no incorrect or contaminated raw materials are used in production, which could ruin the entire batch

✓   It's my job to increase the efficiency of the QC laboratory, and I'm looking for a quick test to verify the chemical composition

Cora 5001 and/or Lyza 7000 with Anton Paar's Spectroscopy Suite – the solution to your needs.
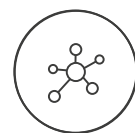
FIND OUT MORE

**www.anton-paar.com/
apb-spectroscopy-suite**

The Solution to
Optimize QC

Simple – fast – audit-proof

The best match of hardware and software: Take out complexity to perform in the regulated environment.

Sample verification – the daily routine
The day-to-day running of samples is safe and efficient: It can only follow clear and predefined methods. No measuring settings can be made. 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.

Be sure no data sets are ever deleted, as these are securely stored in the SQL database. The electronic signing process ensures proper submission, review, and approval of data.

Method development
The method defines all sample-specific measuring settings. Methods can only be created or changed by user groups with the corresponding privileges. The system aids the user in finding the optimal settings.

Methods are automatically versioned. They undergo a review and approval process with electronic signatures, automatically ensuring that only approved methods can be used for analysis.

Reference library generation
Just like the methods, reference data sets can only be generated by users with the rights to do so. The process is guided and straightforward. Displaying multiple spectra assists in selecting the right reference data sets.

Also, the reference libraries are automatically versioned. Again, the review and approval process ensures that only approved library entries can enter a library and that only approved libraries can be used for analysis.

Avoiding Errors

The system's responsibility, not the user's job

Lifetime data integrity ensured from the point of installation.

Access control

→ Choose from user management via active directory or locally managed user credentials

→ Local user management provides:

  → Comprehensive password complexity settings

  → Password expiry dates

  → Auto logoff after a customizable idle time

Electronic signing process

→ Choose from a 2- or 3-step signing process depending on your company policies

→ Signing of measuring results, newly created methods, and newly created library entries and libraries, as well as checks and adjustments

User group administration

→ User groups can be defined according to specific company standards

→ Privileges can be defined specific to a user group

Audit trail

→ Signing and commenting of audit trail entries

→ Full-text search and filter functionality via data explorer

Pharma Qualification Package*

→ The Pharma Qualification Package (PQP) 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 via data explorer

→ No deletion of data possible

→ Lifetime data retention

Export, backup, and restore

→ Back up and restore functionality

→ Full SQL backup possible

→ Export of results incl. spectra (.pdf/.csv)

Traceability and data reprocessing

→ Versioned methods and libraries provide full traceability: For each measurement result, the version of method and library can clearly be traced back

→ Reprocessing of original measuring data creates a new entry in the results database (no existing measurement result can be deleted or modified)

Libraries

→ Factory library tailored to instrument's characteristics

→ S.T. Japan library available with up to 16,000 spectra**

→ User-generated libraries specific to user samples

* For Cora 5001 785 nm and Lyza 7000

** For Cora 5001

Cora 5001 Series:
## Make Your Choice

Small and easy to transport
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

✓ 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 the results

✓ In situ, live reaction monitoring

✓ Safe measurement through packaging

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:** The 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 – gets 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.
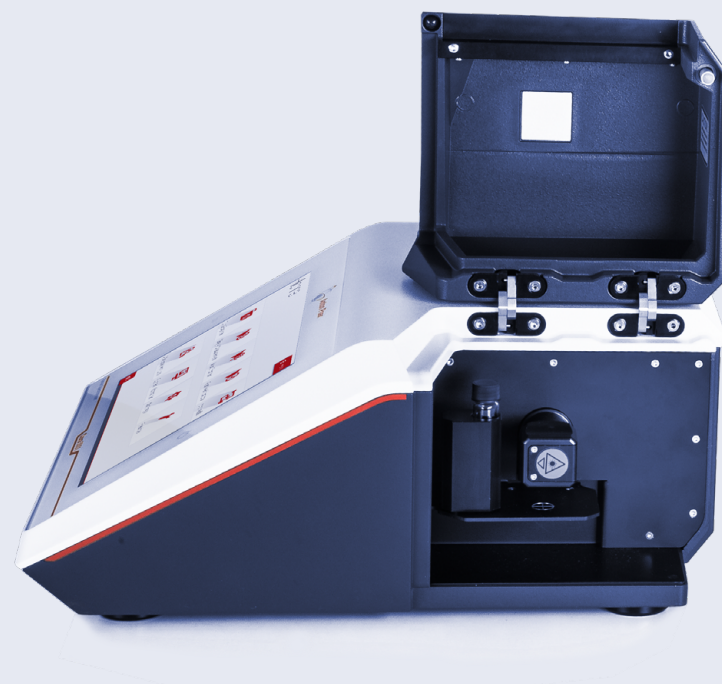
Cora 5001 Fiber

→ **Flexible probe for measurements outside the instrument:** 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.

→ **Safeguarded, one-handed measurements:** Cora 5001's 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

www.anton-paar.com/
apb-spectroscopy-cora

Accessories
for Efficient Work

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

Cora 5001 Direct

→ **Use your own vials:** We have the right holder for you – use your own round or rectangular vials or cuvettes of different sizes.

→ **For pills or other small solid samples:** The pill holder positions small solid samples like pills and tablets.

→ **For foils and microscope slides:** Thin samples like foils and slides can be inserted easily with the substrate holder.

All sample holders are equipped with magnets that snap into place precisely and allow reproducible analysis without refocusing.

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:** If you need to analyze substances with a defined distance to the probe, use the adjustable spacer tip. This ensures consistent focusing and optimum signal acquisition.

→ **The ultimate solution for addressing any sample:** The xyz stage positions the Fiber probe precisely where needed. Micrometer screws for alignment in all three dimensions enable on-spot measurements even with samples of small size or a high level of inhomogeneity.

Cora 5001

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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	2048 px CCD
Laser 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, .txt, .png, .spc, .aps, .pdf
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 7000:
A World of Samples

Elevating spectroscopy, simplifying science

Lyza 7000 is the most reliable, user-friendly FTIR spectrometer on the market, way beyond industry standards. Quality control with FTIR spectroscopy has never been easier.

Discover the benefits of FTIR technology with Lyza 7000

✓ Easy as 1-2-3: Fast pass/fail spectral analysis helps optimize quality and maximize efficiency

✓ Conduct complex measurement routines with ease

✓ Check incoming goods, identify unknown substances and ensure the quality of your final product

✓ Data management software AP Connect brings your lab data together, boosting productivity

Lyza 7000 and Spectroscopy Suite

→ Tailored for detailed and accurate analysis across a broad spectrum of samples

→ Designed to ensure strict adherence to pharmaceutical standards and regulations

→ Offers seamless integration for a streamlined workflow, from data acquisition to analysis, within a fully compliant environment

→ Simplifies complex measurements with user-friendly interfaces and automated processes, making spectroscopy accessible to all proficiency levels

→ Additionally, combined with our lab execution software AP Connect, the data from all your lab instruments are streamlined and retrievable from one spot

FIND OUT MORE

www.anton-paar.com/apb-spectroscopy-lyza

Lyza 7000:
A Benchmark of Excellence

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

Reliable
The automatic calibration ensures optimal performance with every cell and 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
Lyza 7000's spectrometer core is hermetically sealed and desiccated to protect all optical components and ensure stable conditions.
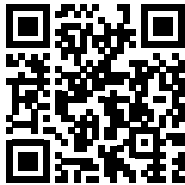
Performance
Equipped with a high-performance pyroelectric DLaTGS detector, the instrument delivers an exceptional signal-to-noise-ratio of 55,000:1.

Cost-efficient
The innovative "Eco Mode" not only helps you save energy but also ensures the longevity of core components in your system like the IR source.

Reliable.
Compliant.
Qualified.

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

Maximum uptime | **Warranty program** | **Short response times** | **A global service network**

Lyza 7000
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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}, 1,900 cm^{-1} to 2,250 cm^{-1})
Spectral range	350 cm^{-1} to 7,500 cm^{-1}
Spectral resolution	1.4 cm^{-1} to 16 cm^{-1}
Wavenumber accuracy	<0.05 cm^{-1} @ 900 cm^{-1} to 3,000 cm^{-1}
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	365 mm x 315 mm x 382 mm (D x W x H)
Cell compartment width	152 mm
Weight	12.8 kg
Power supply	DC 24V, 40 W
Communication interfaces	4 x USB 2.0 / CAN / Ethernet
Data export formats	.csv, .pdf
Data management	AP Connect
Display	10.1", PCAP-Touchscreen, multi-touch
Spectral libraries	Factory library, user-built
Regulatory Compliance	21 CFR Part 11 including installation, operation qualification and performance qualification (DQ/IQ/OQ/PQ)

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