VACUUM RESEARCH FT-IR SPECTROSCOPY

VERTEX NEO R

The Next Generation for Vacuum FT-IR Research

Innovation with Integrity

VERTEX NEO R represents the entry-level of Bruker's FT-IR vacuum spectrometers. The well-proven RockSolid™ technology and the MultiTect™ detector options set the new standard for high-end research spectrometers.

- Unique vacuum ATR accessory combined with full-vacuum optics
- MultiTect™ detector technology for up to 5 room-T detectors
- Permanently aligned RockSolid™ interferometer for easy beamsplitter exchange
- BRUKER FM technology covering MIR and FIR in one single scan
- VerTera extends the spectral range down to 3 cm^{-1} without cryocooling
- Outstanding performance for time-resolved spectroscopy
- 5 exit and 2 input beam ports for highest flexibility
- Compatible with all VERTEX accessories and external modules

Vacuum Platinum ATR

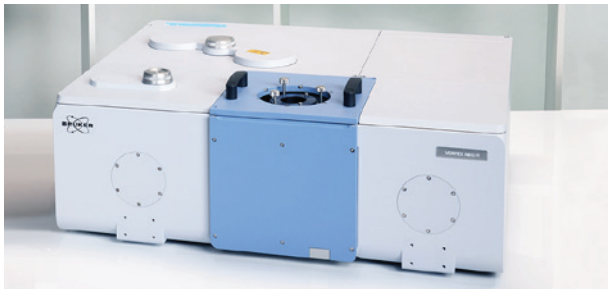
With VERTEX NEO R and its innovative vacuum ATR accessory the entire optical path can be maintained under vacuum, eliminating atmospheric interference while keeping your sample in ambient lab air. All kinds of sample forms, no matter liquid, fine powdered, or volatile, can be measured without any issues.

MultiTect™ and DigiTect™ Detectors

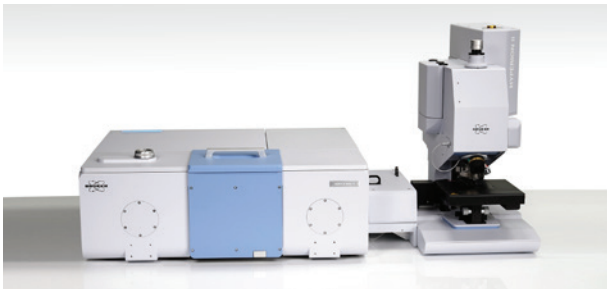
MultiTect™ and DigiTect™ detector options are both available for VERTEX NEO R and can be freely combined and equipped in a single instrument, for example, the MultiTect™ unit with a DigiTect™ position, DigiTect™ with a single RT detector, or two DigiTect™ positions. Furthermore, MCT detector with 12 h holding time fits directly without the need for a raised lid. This versatility ensures optimal setup for any of your demanding research applications.

Temporal Resolution

Evaluate your research with the advanced time-resolved spectroscopy options of the VERTEX NEO R. More than 70 spectra per second at a spectral resolution of 16 cm^{-1} can be measured using the impressive rapid scan option. A time resolution of 6 µs (with internal ADC) or even 4 ns (using transient recorder boards) can be achieved using the powerful and precise step scan feature.

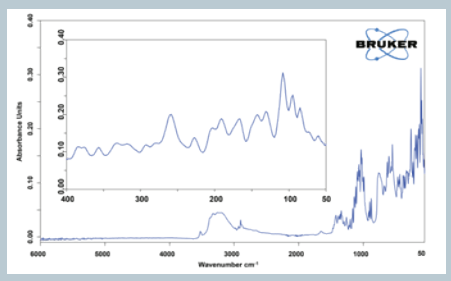


The sample compartment provides sufficient space for many customized accessories, for example the vacuum compatible reflection unit for spectroelectrochemistry studies (battery research).

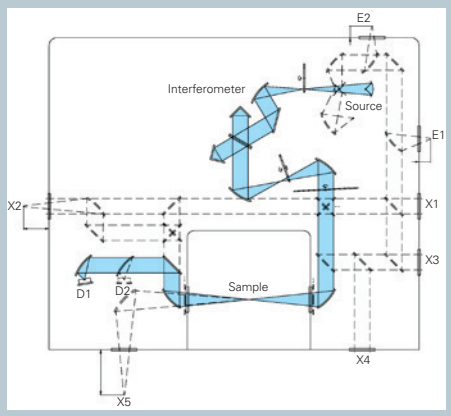


By combining HYPERION II and VERTEX NEO R, microscopic ATR, transmission, reflection and even emission measurement of tiny samples can be done.

BRUKER FM Technology



IR spectrum of lactose in MIR and FIR region from 6000-50 cm^{-1}, measured with BRUKER FM Technology and the vacuum ATR unit in one go.



VERTEX NEO R optical beam path

Spectral Resolution

The spectral resolution of the VERTEX NEO R is better than 0.16 cm^{-1}, which fulfills the requirements for almost any measurements. No matter condensed phase samples, or low temperature crystalline samples, or even gaseous samples, VERTEX NEO R can handle them.

Spectral Range

The VERTEX NEO R standard configuration covers the spectral range of 8,000 cm^{-1} to 350 cm^{-1}. With spectral range extension packages for FIR, NIR and VIS/UV regions, the spectral range can be expanded to cover from 28,000 cm^{-1} to 10 cm^{-1}. Additionally, the VerTera option, combining vacuum FT-IR with continuous-wave terahertz technology, extends the spectral range further down to an astonishing 3 cm^{-1}.

The Revolutionary Vacuum Spectrometer

Designed with cutting-edge technology and well-proven unique features, VERTEX NEO R will push the boundaries of scientific discovery and set new standards for vacuum research FT-IR spectrometers in the future. Full-vacuum optics bench for upmost stability and sensitivity, highest adaptability for sample accessories and external measurement modules to suit your experimental needs, electronically coded windows, 8 pos. filter wheel, 5 pos. attenuator wheel, new generation electronics, and many more great features make VERTEX NEO R stand out.

Bruker Optics is continually improving its products and reserves the right to change specifications without notice.
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Laser class 2 product.

Bruker Optics GmbH & Co. KG
info.bopt.de@bruker.com

bruker.com

Bruker Optics is ISO 9001, ISO 13485, ISO 14001 and ISO 50001 certified.

Worldwide offices
bruker.com/bopt-offices

Online information
bruker.com/VERTEX