

Vista-R FT-NIR ANALYZER

Fast. Accurate. Reliable.
Powered by FT-NIR.



www.ias-glb.com

PRODUCT INTRODUCTION

● Innovative Leading Technology Ensures Precise Analysis

Patented interferometer technology significantly enhances the device's resistance to interference, delivering high-precision test results, reducing the frequency of failures, and ensuring stable performance. The highly sensitive InGaAs detector provides full-spectrum linear response, guaranteeing optimal accuracy and reproducibility.

● Full-Spectrum Ultra-Wide Wavelength Range for Comprehensive Multiple Industries Sample Coverage

The Vista-R Fourier Transform Near-Infrared (FT-NIR) Analyzer, with a wavelength range of 833-2597 nm, fully captures the vibrational absorption information of chemical bonds such as N-H, S-H, C-H, and C=O. It effectively meets the testing needs of diverse samples and parameters in various industries.

● Professional Software Configuration for Informed Decision-Making

The analysis software is user-friendly yet powerful, enabling one-click testing of multiple parameters with a tiered management design to ensure data security. The modeling software offers robust capabilities for model creation, evaluation, optimization, and maintenance, allowing users to quickly and easily develop professional near-infrared quantitative analysis models.

ADVANTAGES



833-2597 nm Full-Spectrum Range: Offers rapid analysis, detecting multiple component parameters simultaneously in under one minute.



User-Friendly Software Interface: Seamlessly integrates instrument control, data processing, and modeling, enabling efficient data collection, processing, and evaluation.



Integrating Sphere Diffuse Reflection Technology: Features a rotatable and translatable sample stage, significantly expanding the sampling area to ensure representative and reproducible spectral data.



Exceptionally Long Lifespan of Light Source: Meet the demands of daily customer use.



Built-In Unique Reference Material: Automatically performs reference calibration and wavelength monitoring, ensuring wavelength accuracy and stable measurement results.







Maintenance-Friendly Modular Design: Light sources, desiccant tubes and other consumables can be quickly replaced.






Versatile Sample Cup Options and Accessories: Accommodates testing of samples in various physical forms.



APPLICATIONS

Industry	Core Application Fields	Detection Indicators
 <p data-bbox="274 762 368 820">Palm Oil Industry</p>	<p data-bbox="442 471 723 536">For Palm Oil Mills and Refineries</p> <p data-bbox="442 564 822 699">Our FT-NIR technology works by measuring the overtones and combination vibrations of key molecular bonds—specifically C-H, O-H, and C-O—found in palm and palm kernel products</p>	<p data-bbox="863 413 1389 497">Crude Palm Oil (CPO): FFA (Free Fatty Acid), Moisture, DOBI (Deterioration of Bleachability Index), IV (Iodine Value), and Carotene content.</p> <p data-bbox="863 529 1409 594">Refined, Bleached & Deodorized (RBD) Oil: Moisture, FFA, and IV.</p> <p data-bbox="863 627 1268 657">RBD Palm Olein: Moisture, FFA, and IV.</p> <p data-bbox="863 690 1433 741">RBD Palm Stearin: Moisture, FFA, IV, and Melting Point.</p> <p data-bbox="863 773 1227 804">Spent earth : Oil content, Moisture</p>
 <p data-bbox="265 1243 376 1301">Palm Oil Plantation</p>	<p data-bbox="442 959 756 1024">For Sustainable Plantation Management</p> <p data-bbox="442 1052 811 1210">Recognizing that every operation is unique, our FT-NIR solutions are fully customizable. We collaborate with you to develop calibration models for additional parameters beyond the core list</p>	<p data-bbox="863 931 1425 1094">Fertilizer Analysis: Verify the composition of your fertilizers by measuring key nutrients like NPK (Nitrogen, Phosphorus, Potassium), Calcium (Ca), and Magnesium (Mg) to ensure precise and effective field application.</p> <p data-bbox="863 1159 1433 1243">Leaf / Stem Analysis: Monitor the health and nutrient uptake of your palm trees directly in the field, enabling proactive and targeted fertilization strategies.</p>
 <p data-bbox="261 1629 381 1659">Agriculture</p>	<p data-bbox="442 1401 811 1589">Quality analysis and component detection of agricultural products and raw materials such as grains, oilseeds, feed, fruits and vegetables, covering the whole-chain quality control of planting, processing and warehousing</p>	<p data-bbox="863 1447 1433 1559">Moisture, protein, fat, starch, fiber, ash, calcium, phosphorus, salt, acid detergent fiber (ADF), neutral detergent fiber (NDF), protein solubility (KOH), starch, acid value, freshness (VBN), 18 kinds of amino acids, fatty acids, etc.</p>
 <p data-bbox="244 1977 396 2035">Petrochemical Industry</p>	<p data-bbox="442 1791 811 1954">Component analysis and performance evaluation of crude oil, finished oil, lubricating oil, chemical raw materials and intermediates, realizing rapid batch detection and quality screening</p>	<p data-bbox="863 1715 1463 1822">1. Crude oil/finished oil: Density, viscosity, distillation range, octane number, cetane number, sulfur content, nitrogen content, aromatic hydrocarbon content, olefin content, colloid and asphaltene content;</p> <p data-bbox="863 1822 1463 1901">2. Lubricating oil: Base oil viscosity index, flash point, pour point, total acid number (TAN), total base number (TBN), additive content (e.g., antioxidant, detergent);</p> <p data-bbox="863 1901 1463 2007">3. Chemical raw materials: Purity of organic solvents such as methanol, ethanol and ethylene glycol, polymer molecular weight distribution, monomer residue, functional group content</p>

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 <p>Food Industry</p>	Raw material acceptance, in-process quality monitoring, finished product quality evaluation and adulteration identification for subdivided categories including grain and oil products, dairy products, meat products, beverages and condiments	<p>1. Grain and oil products: Moisture, crude protein, crude fat, fatty acid value, peroxide value, amylose, ash, impurity content;</p> <p>2. Dairy products: Milk fat, milk protein, lactose, total solids, non-fat milk solids, acidity, melamine (trace);</p> <p>3. Meat products: Moisture, protein, fat, collagen, nitrite, water activity, volatile basic nitrogen;</p> <p>4. Beverages/condiments: Total sugar, reducing sugar, acidity, alcohol content, amino acid nitrogen, characteristic components of spices (e.g., gingerol, xanthoxylin)</p>
 <p>Pharmaceutical Industry</p>	Component analysis, authenticity identification, purity detection and stability evaluation of Chinese medicinal materials & decoction pieces, chemical drugs and biological preparations	<p>1. Chinese medicinal materials/decoction pieces: Active ingredient content (e.g., ginsenoside, astragaloside IV, tanshinone), moisture, ash, extract, heavy metals and harmful elements (lead, cadmium, arsenic, copper), pesticide residue, adulterated components (e.g., starch, sodium saccharin);</p> <p>2. Chemical drugs: Main component content, related substances (impurities), moisture, dissolution rate, content uniformity;</p> <p>3. Biological preparations: Protein content, polysaccharide content, active ingredient purity, degradation products</p>
 <p>Materials Industry</p>	Component characterization, structural analysis and performance-quality correlation detection of polymer materials, composite materials and inorganic materials, applicable to laboratory research and production quality control of plastics, rubber, fibers, coatings and other materials	<p>1. Polymer materials: Polymer components (e.g., polyethylene, polypropylene, PVC, etc.), monomer residue, plasticizer content (e.g., phthalates), flame retardant content, moisture, ash, crystallinity, molecular weight;</p> <p>2. Composite materials: Fiber content, resin content, interface bonding components, filler (e.g., calcium carbonate, talcum powder) content;</p> <p>3. Inorganic materials: Oxide content (e.g., SiO₂, Al₂O₃, CaO), moisture, loss on ignition, purity</p>

PRODUCT TECHNICAL PARAMETERS

Parameter	Description	Parameter	Description
Wavelength range	833-2597nm	Scan Speed	1 minute (adjustable)
Instrument Principle	Fourier Transform(FT)	Protection Rating	IP54
Detector	InGaAs Detector	Dimensions	L:405mm/W:330mm/H:290mm
Spectral Resolution	4 cm ⁻¹	Weight	30kg
Wavenumber Accuracy	Better than 0.05 cm ⁻¹	Power Supply	AC220V 50HZ
Wavenumber Repeatability	Better than 0.006cm ⁻¹	Operating Temperature / Relative Humidity	5-35°C / < RH80%
Absorbance Accuracy	Better than 0.1% T	Warm-Up Time	None, ready upon startup

*1-year warranty for the entire unit, 10-year warranty for the interferometer and laser source.

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