Raman Spectroscopy Analyzer For Ultra-low Temperature Nitrification Reactions

Our Product Introduction

Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE
- Model Number: RS2100
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: International Shipping Package
- Delivery Time: 60-80 working days
- Payment Terms: TT
- Supply Ability: 80 PCS/70-90 days

Product Specification

- Laser Wavelength: 1064nm
- Wavelength Accuracy: 0.2nm
- Wavelength Stability: 0.01nm
- Connectivity Interface: USB 2.0
- Output Data Format: Spc Standard Spectrum, Prn, Txt And Other Formats Are Optional
- Communication Protocols: Modbus
- Power Supply: 100 ~ 240 VAC 50 ~ 60 Hz
- Operating Temperature: 0 ~ 40
- Power Consumption: 50W
- Detection Accuracy: 0.5%
- Highlight: **ultra-low temperature Raman Spectroscopy Analyzer**

More Images

Product Description

RS2100 Online Process Raman Spectroscopy Analyzer for Liquid Reactions

The RS2100 redefines process analytical technology (PAT) with military-grade durability meeting MIL-STD-810G. Its pressurized optical train maintains measurement stability even during exothermic runaway events (-20°C to 450°C cycling), while laser wavelength optimization minimizes fluorescence interference in complex matrices.

Where traditional QC creates data voids between infrequent sampling, JINSP's solution constructs high-definition reaction narratives. Chemical manufacturers achieve unprecedented batch consistency using our AI-powered endpoint prediction models, reducing off-spec production by 68% through millisecond-level composition alerts.

Technical Advantages:

- Fast: Results provided within seconds
- In-situ: No sampling required
- Universal: Multi-specification detection accessories compatible with different reactors
- Intuitive: Real-time display of multi-component trend changes such as raw materials and products.
- Intelligent: Supports self-optimizing offline modeling and fully automatic online modeling.

Specifications:

Technical Parameter	Value
Product	Online Raman Analyzer
Measurement Type	Raman Spectrometer
Laser wavelength	1064nm
Wavelength accuracy	0.2 nm
Wavelength stability	0.01 nm
Sample Type	Liquid
Number of detection channels	1 single channel
Standard Probe	1pc 1.3 m non-immersed fiber optic probe (PR100) and 1pc 5 m immersed probe (PR200-HSGL)
Software functions	1. Online Monitoring: Continuous real-time collection of single-channel signals, providing real-time substance content and trend changes, enabling intelligent analysis of unknown components during the reaction process; 2. Data Analysis: Capable of processing data through smoothing, peak finding, noise reduction, baseline subtraction, difference spectra, etc; 3. Model Establishment: establishes a quantitative model using known content samples and automatically builds a quantitative model based on real-time data collected during the reaction process.
Dimensions	300x356x185mm
Net Weight	≤10 kg
Certifications	CE ISO9001

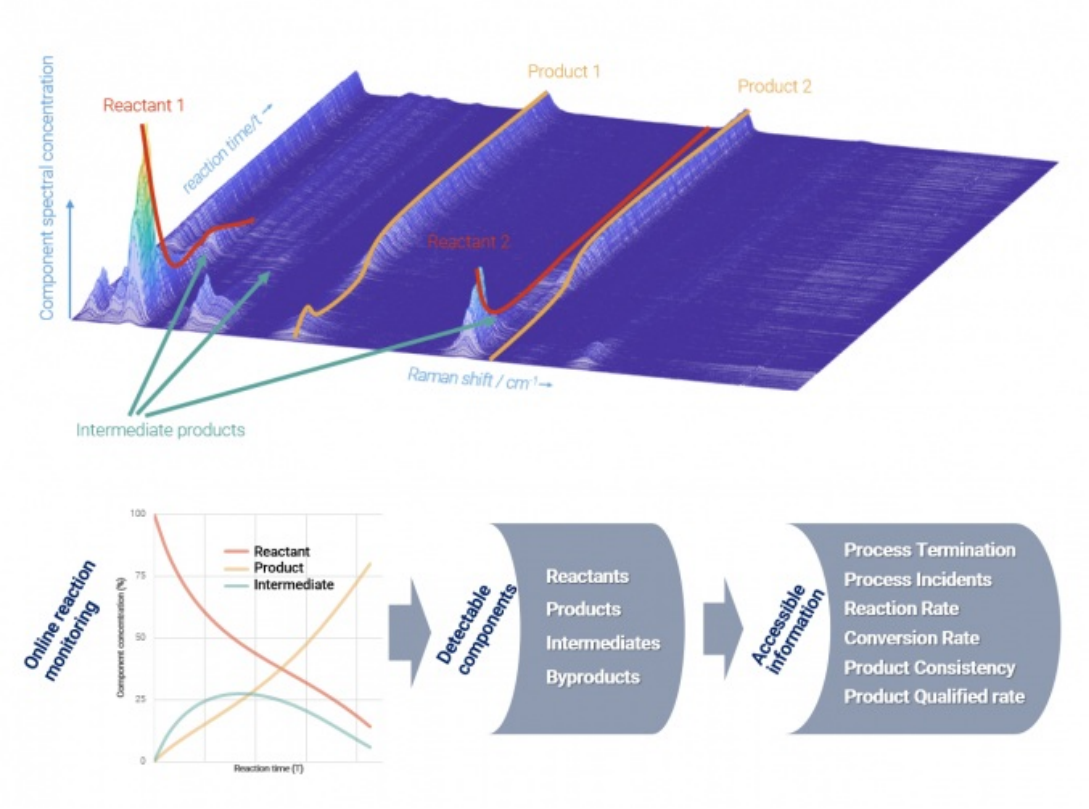
Applications:

Li-ion battery industry
Research on the synthesis process of bis(fluorosulfonyl)amide

Biopharmaceutical industry
Drug crystal form research and consistency evaluation
Quality Control in Biofermentation Engineering

Fine chemical industry
Research on the process of producing furfuryl alcohol by hydrogenation reaction of furfural
Process control of bioenzyme catalytic reactions of nitrile compounds
A certain ultra-low temperature nitrification reaction
Research on o-xylene nitration reaction process

Eg: Quality/Consistency Control in Mass Production
In the mass production of chemical/biological processes, ensuring product quality consistency requires batch-by-batch or real-time analysis of reaction products. Online monitoring technology, with its rapid and continuous advantages, can automate quality control for 100% of batch products. In contrast, offline detection techniques, due to their complex procedures and delayed results, can only perform sample testing, leaving untested products with potential quality risks.
Typical users: Process production personnel in pharmaceutical and biopharmaceutical companies; production personnel in new materials and chemical companies



Can withstand extreme reaction conditions such as strong acid, strong alkali, strong corrosiveness, high temperature, and high pressure

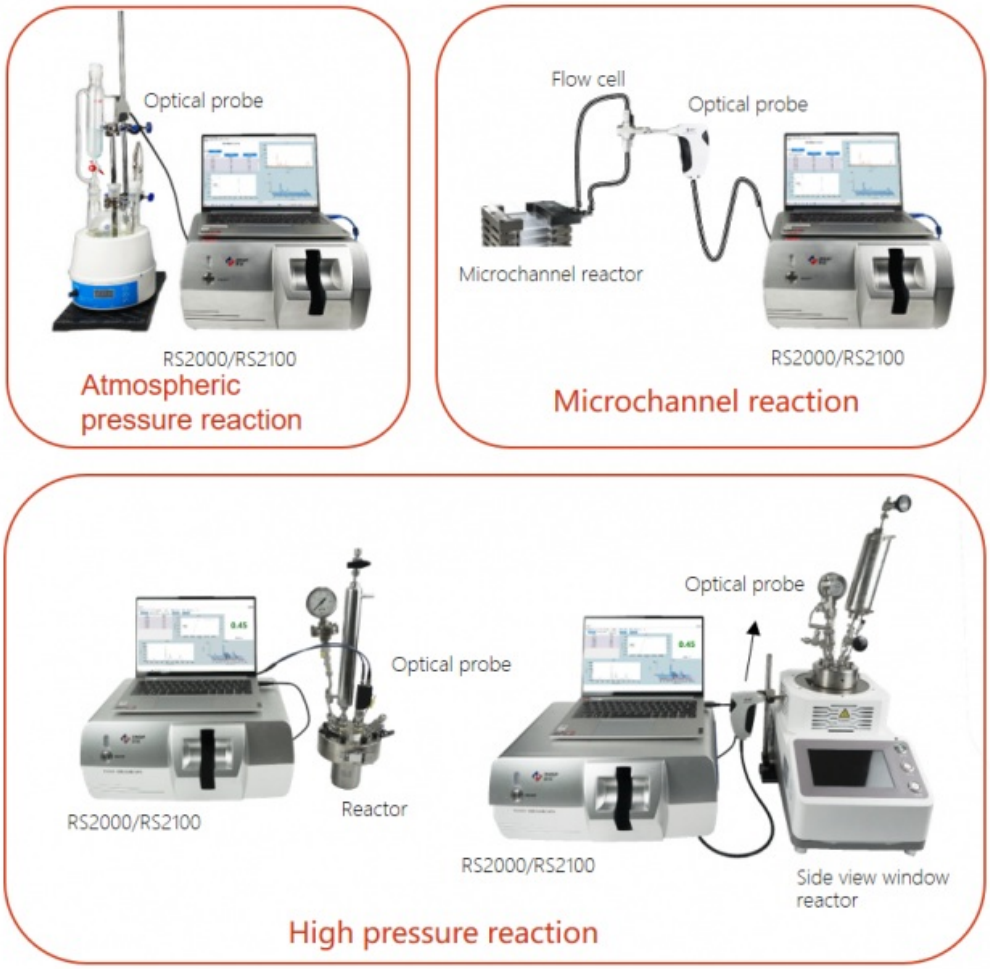
Real-time response in seconds, no need to wait, providing analysis results promptly.

No sampling or sample processing required, in-situ monitoring without interference to the reaction system.

Continuous monitoring to quickly determine the reaction endpoint and alert for any anomalies.

Usage models:

RS2100 has three usage modes in the laboratory, and each mode requires different accessories.
1. The first mode uses an immersed long probe that goes deep down to the liquid level of the reaction system to monitor each reaction component. Depending on the reaction vessel, reaction conditions, and system, different specifications of probes are configured.
2. The second mode involves using a flow cell to connect a bypass probe for online monitoring, which is suitable for reactors like microchannel reactors. Various probes are configured based on the specific reaction vessel and conditions.
3. The third mode utilizes an optical probe directly aligned with the side window of the reaction vessel for reaction monitoring.



Company Introduction:

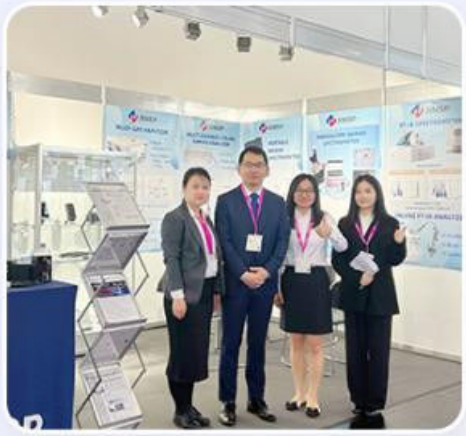
JINSP Company Limited, abbreviated as "JINSP", is a professional supplier with over 17 years of experience irspectral detection technology products, including Raman, FT-IR, LIBS technologies, etc. After 17 years of technology accumulation, the company's core key technologies have reached the international leading position at the level, and the cumulative number of patent applications exceeded 200.

JINSP offers over twenty spectroscopic products across various fields, including pharmaceutical and chemical industries, public security, and customs. Products are available nationwide and are exported to over 30 countries, with cumulative sales exceeding 3,000 units.

Benefit from 30+ R&D engineers, including 4 Ph.D., JINSP is deeply rooted in the field of personalized product customization, and is committed to meeting the diverse and unique needs of customers with excellent professional technology and innovative design capabilities.

Company Profile

Exhibition



Certifications

FAQ:

Q: This is the first time I use it, is it easy to operate?
A:We will send you a manual and guide video in English, it can teach you how to operate the spectrometer. Also, our technicians will offer professional technical operation meetings.
Q: Can you offer an operation training?
A: Your technicians can come to our factory for training. Jinsp engineers or local distributor egnineers can go to your place for local support (installation, training, debugging, maintenance).
Q: How to receive the best price in the shortest time?
A: When you send us an inquiry, please kindly offer details with your application, installatio requirements, working environment requirements and so on. We will send you a quotation with details soon to your email.
Q: Do you have MOQ requirement of each order?
A: No, we support order for even 1pc order.
Q: What is the product warranty?
A: All product has 1 year warranty, support extending warranty period with extra cost. Please contact with our sales person.

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