

## High Applicability Industrial Process Online Raman Spectroscopy Analyzer 1064nm Laser Four Channel for Liquid Analysis

Our Product Introduction

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### Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE ISO9001
- Model Number: RS2100PAT-4
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: International Shipping Package
- Delivery Time: 90-120 working days
- Payment Terms: TT
- Supply Ability: 100 PCS/90-120 days



### Product Specification

- Laser Wavelength: 1064nm
- Wavelength Accuracy: 0.2nm
- Wavelength Stability: 0.01nm
- Power Supply: 900W (Max) 500W (Typical Running)
- Number Of Detection Channels: Four-channel Switching Detection
- Explosion Protection Rating (Main Unit): Ex Db Eb Ib Pzc C T4 Gc / Ex Ib Pzc Tb C
- Detection Accuracy: 0.5%
- Operating Temperature: -20 ~ 50
- Highlight: **Online Raman Spectroscopy Analyzer ,  
1064nm Online Liquid Analyzer**

## Product Description

### 1064nm Industrial Process Online Raman Spectroscopy Analyzer

JINSP® RS2100PAT-4 online Raman analyzers provide in situ, real-time, and continuous composition analysis of chemical processes in the production environment.

RS2100PAT-4 analyzers are highly suitable for dangerous chemical processes including nitration, chlorination, fluorination, hydrogenation, diazotization, etc. Available with both continuous flow processes and batch processes. RS2100PAT-4 analyzers help increase process understanding and boost product quality

#### Technical Highlights:

In situ: no sampling required, avoiding contact with hazardous samples

Real-time results: results provided within seconds

Continuous monitoring: continuous monitoring throughout the entire process

Intelligent: automatically provide analytical results

Internet connectivity: timely feedback of results to the central control system

#### Technical Parameters:

Technical Parameter	Value
Product	Online Raman Analyzer
Measurement Type	Raman Spectrometer
Laser wavelength	1064nm
Sample Type	Liquid
Number of detection channels	Four-channel switching detection
Chamber dimension	600 mm(width)× 400 mm(depth)× 900 mm(height)
Device dimension	900 mm(width)× 400 mm(depth)× 1300 mm(height)
Explosion Protection Rating (Main Unit)	Ex db eb ib pzc C T4 Gc / Ex ib pzc tb C T130°C Dc
Operating temperature	-20 ~ +50
Thermostat	The three-level temperature control system design can operate stably for a long time in an environment of -20 ~ 50 , and is suitable for online monitoring environments in different factories
Connectivity	RS485 and RJ45 network ports provide Mod Bus protocol, can be adapted to many types of industrial control systems, and can feedback results to the control system.
Probe	One standard 5 m non-immersed fiber optic probe (PR100)
% Relative humidity	0~90%RH
Power supply	900 W (Max) 500 W (Typical running)
Pre-heating time	60 min

#### Applications:

##### Li-ion battery industry

Research on the synthesis process of bis(fluoro sulfonyl)amide

##### Biopharmaceutical industry

Quality Control in Biofermentation Engineering

##### Fine chemical industry

For example:

### Chemical Reactions/Biological Processes Require Timely Intervention in Case of Anomalies or Reaction Endpoints

In processes such as biological fermentation and enzyme-catalyzed reactions, the activity of cells and enzymes is easily influenced by relevant components in the system. Therefore, real-time monitoring of abnormal content of these components and timely intervention are crucial for maintaining efficient reactions. Online monitoring can provide real-time information about the components.

**Typical Users:** Research and production personnel in biotechnology companies, pharmaceutical/chemical enterprises involved in enzyme-catalyzed reactions, as well as peptide and protein drug synthesis enterprises.



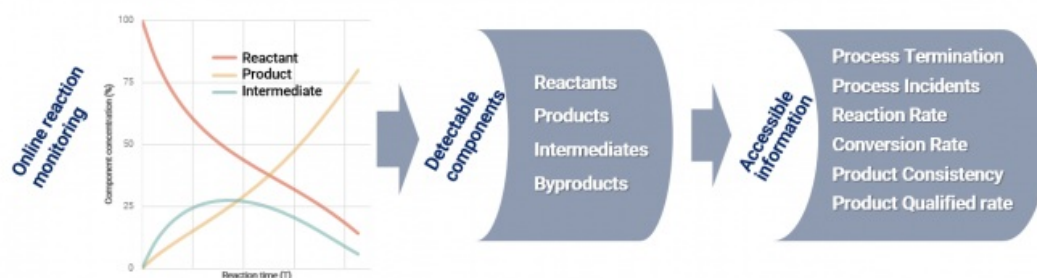
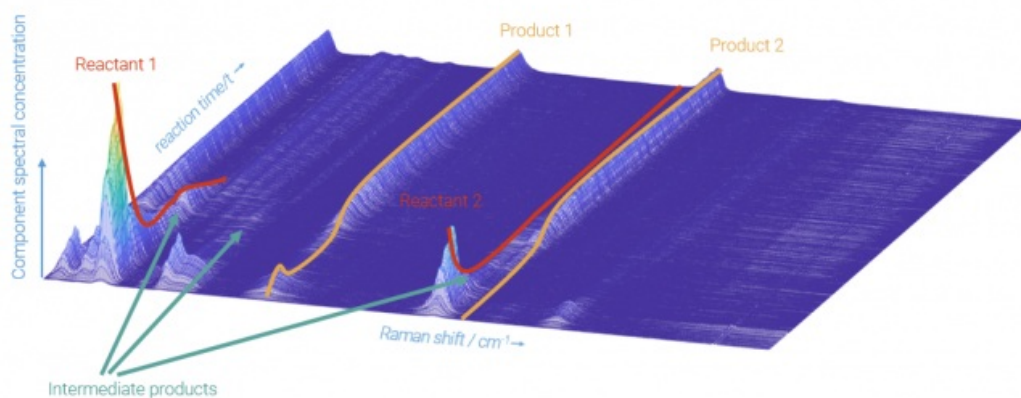
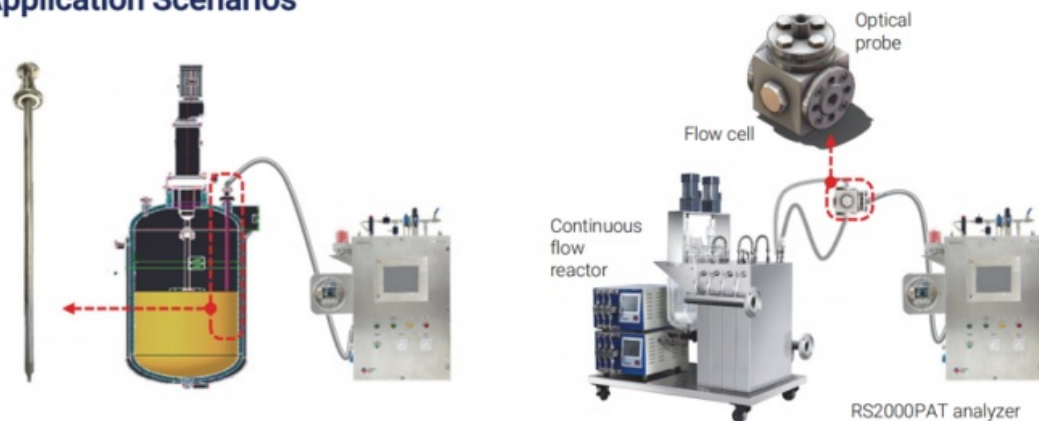
### Usage models:

The RS2100PAT-4 can be used in two ways in large-scale production.

The first way is to use an industrial immersion long probe to go deep below the liquid surface of the reaction system to monitor the reaction components, which is more suitable for kettle-type batch reactors;

The second way is to use the flow cell to bypass the connected probe for online monitoring, which is more suitable for continuous flow reactors and other types of reaction vessels.

### Application Scenarios





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

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

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

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

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#### **Company Introduction:**

JINSP Company Limited has won the National Science and Technology Commission's Scientific and Technological Achievement Appraisal Certificate and the China Patent Excellence Award, and related products have been obtained has won authoritative awards such as the Geneva International Invention Award, the Beijing New Technology and New Product Certificate, and the "Innovation Achievement Award" of the Zhu Liangyi Analytical Instrument Innovation Award.

In addition, JINSP participated in the drafting of several national and international standards, including participating in the drafting of an international standard as the only participating unit in China IEC 63085 International Standard: System of spectral identification of liquids in transparent or semitransparent containers; Drafting of two national standards: GB/T 41086-2021 "General Technical Requirements for Safety Inspection Equipment for Hazardous Chemicals Based on Raman Spectroscopy", GB/T 40219-2021 "General Specification for Raman Spectrometer".

# Company Profile







Q1: This is the first time I use it, is it easy to operate?

A1: 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.

Q2: Can you offer an operation training?

A2: Your technicians can come to our factory for training. Jinsp engineers can go to your place for local support ( installation, training, debugging, maintenance ).

Q3: How to receive the best price in the shortest time?

A3: When you send us an inquiry, please kindly offer details with wavelength, detector, effective pixels, focal length, and so on. We will send you a quotation with details soon to your email.

Q4: If the spectrometer has a problem in my place, what could I do?

A4: The spectrometer has a one-year warranty. If it breaks down, our technician will figure out what the problem maybe, according to the client's feedback. We can repair for free within one year warranty.

Q5: What about quality assurance?

A5: We have a quality inspection team. All goods will go through quality inspection before shipment. We can send you pictures for inspection.



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