

RS2000-4/RS2100-4

Online Raman Analyzer



JINSP® RS2000-4/RS2100-4 online Raman analyzer is used for *in situ*, real-time and continuous monitoring of multiple components in chemical reactions.

In fine chemicals industry, it has been applied in process development, optimization, and studies in reaction mechanism, kinetics, and crystal forms. In particular, it is well-suited for dangerous processes such as nitration, chlorination, fluorination, hydrogenation, and diazotization.

In biopharmaceutical industry, it has also been applied in biological processes analysis including **aseptic** biological fermentation, peptide drug synthesis, enzyme catalytic reaction, etc.

JINSP COMPANY LIMITED

JINSP Company Limited (JINSP) is a company specialized in spectral analytical technology. With the experts in such fields as optics, machinery, electricity and software, we are engaged in the development and production of scientific and industrial spectrometers. With our existing technology, JINSP has won key awards in several international invention exhibitions and more than 200 patents, and passed the European Union CE certification and the EU Civil Aviation ECAC certification. Our thousands of products have been exported to dozens of countries worldwide.

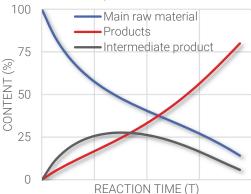


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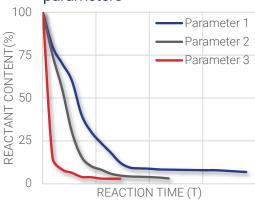
Technical Highlights

- **Multi-channel:** Four channels can be switched in turn, thus achieving alternative monitoring of multiple reactions
- Fast: Data acquired in seconds
- **Universal:** Several types of sampling probes and flow cells available for different reactors including continuous flow reactors
- **Intuitive:** Real-time process data of concentrations of reactants and products
- **Highly applicable:** Reliable measurements under high temperature, high pressure, and in strong acid/alkali, or strong corrosive liquid
- **Multi-functional:** Simultaneous measurement of multiple components
- **Intelligent:** Intelligent algorithm automatically qualify and quantify components with 30,000+ standard spectrum in the database

Continuous monitoring of reaction process



Quick screening of process parameters



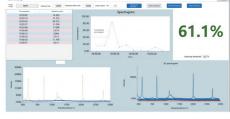
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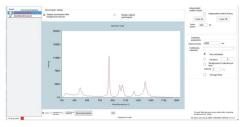
Product Specifications

	Immersion probe	Flow cell	Side window
Application mode	Optical probe Reaction kettle	Flow cell Optical probe Microchannel reactor	Optical probe Side window reaction kettle
Laser wavelength	785 nm (RS2000-4) or 1064 nm (RS2100-4)		
Probe length	35 cm, customization supported		
Channel	Single channel		
Probe	PR100, PR200 and PR300 probes available for different reactors and reaction conditions		
Flow cell	FC100, FC200 and FC300 flow cells available for various pipe connections and reaction conditions		
Window	Resistant to strong acid/alkali and hydrofluoric acid		
Software functions	Online monitoring, continuous data acquisition, data analysis, data comparison, method research, modeling, etc.		
Temperature	Operating temperature: 0 \sim 40 °C; storage temperature: $-20 \sim 55$ °C		

Software Interface

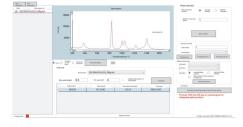
Online monitoring





Data acquisition

Data analysis





Method Research

JINSP COMPANY LIMITED

Address: 21/F, Building D, THTF S&T Square, Haidian District, Beijing, P.R. China

Tel.: +86(10)-50837191

E-mail: jinsp@jinsp-tech.com

Website: www.jinsptech.com



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