Real-time determination of LiPF6 synthesis endpoint by Online Raman Gas Analyzer

Our Product Introduction

Basic Information

- Place of Origin: CHINA
- Brand Name: JINSP
- Certification: CE ISO9001
- Model Number: RS2600
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: International Shipping Package
- Delivery Time: 90-120 working days
- Payment Terms: T/T, Western Union
- Supply Ability: 100 Unit 90-120 days

Product Specification

- Model Name: RS2600 Multi-gas Analyzer
- Laser Excitation Wavelength: 532 ± 0.5nm
- Spectral Coverage: 200 ~ 4200 Cm-1
- Analysis Time: 2 Seconds
- Detection Limit: Ppm Level
- Measurement Time: Real-time

More Images

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Product Description

RS2600 Multi-gas Analyzer for Real-time determination of LiPF6 synthesis endpoint

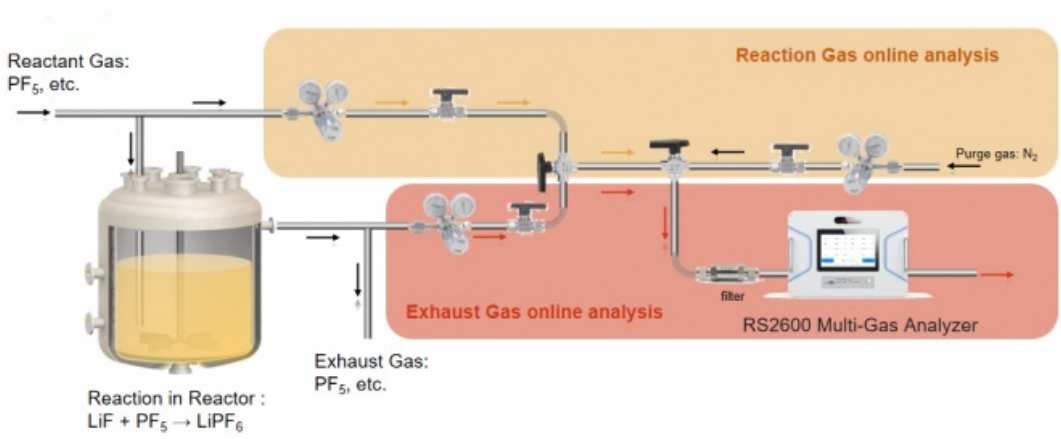
Product Specifications

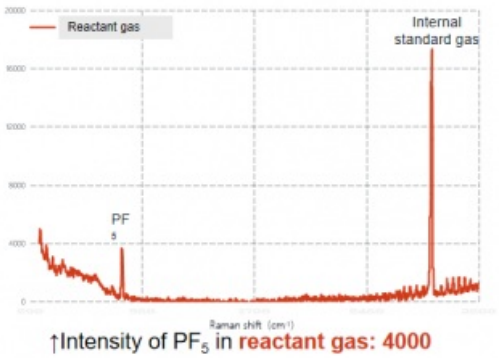
Attribute	Value
Model Name	RS2600 Multi-gas Analyzer
Laser excitation wavelength	532 ± 0.5nm
Spectral coverage	200 ~ 4200 cm-1
Analysis time	2 seconds
Detection Limit	ppm level
Measurement Time	Real-time

RS2600 Raman Based Multi-gas Analyzer for Lithium hexafluorophosphate (LiPF6) component of lithium-ion battery electrolytes

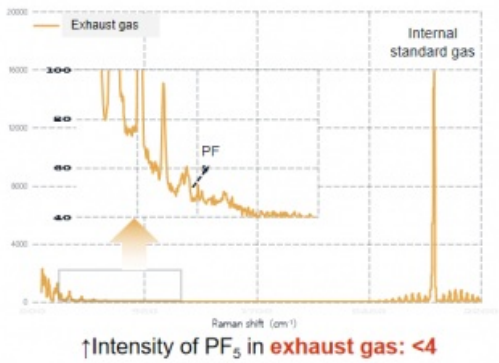
Real-time analysis of the relative content of PF5 in the reactant and exhaust gas to timely and quickly determine the reaction endpoint, end up the process earlier, and significantly improve production efficiency.

By using JINSP RS2600 Raman Gas analyzer, users can easy to determination of LiPF6 synthesis endpoint because PF5 in the exhaust gas is less than 0.1% of the PF5 in the reactant gas, suggesting more than 99.9% of PF5 in reactant gas is absorbed by the solution, and there is still an excess of LiF in the reaction solution indicating the endpoint has not been reached. See the following indicated images.





↑Intensity of PF_5 in **reactant gas: 4000**



↑Intensity of PF_5 in **exhaust gas: <4**

This Online Analysis Solution Enables:
1. Real-time, in-situ, continuous monitoring of multiple components in reactant gases and exhaust gases.
2. Determination of reaction endpoint!
Single detection completes within 5 seconds.

Technical Specifications

Components	**N2, H2, O2, CO, CO2, H2S, CmHn, etc.**
Analysis time	2 seconds
Measurement uncertainty	≤0.2%
Laser excitation wavelength	532 ± 0.5 nm
Spectral coverage	200 ~ 4200 cm-1
Spectral resolution	≤8 cm-1 at full spectral range
Air circuit interface	6 mm standard tube fitting (3 mm, 1/8", and 1/4" are optional)
Input voltage	100~240 VAC,50~60 Hz
Sample gas temperature	-50 ~ 40 ºC
Sample gas pressure	1.0 MPa
Unit dimensions	485 mm (Width) × 350 mm (Height) × 600 mm (Depth)
Weight	40 kg

Technical Highlights

Non-destructive gas analysis: Analytes including homonuclear diatomic gases(F2, Cl2, etc.) and isotopic gases (H2, D2, T2, etc.)

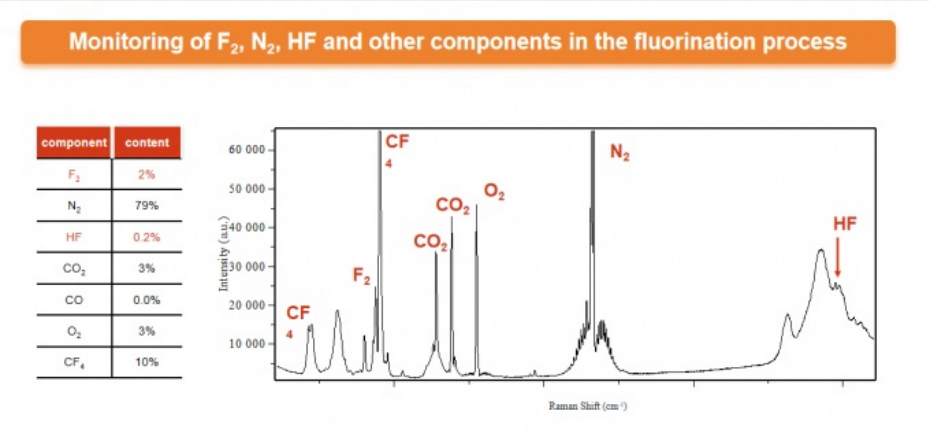
Short detection time: Data acquired in seconds

Minimal maintenance: Resistance to high pressure, direct detection without consumables (chromatographic column or carrier gas)

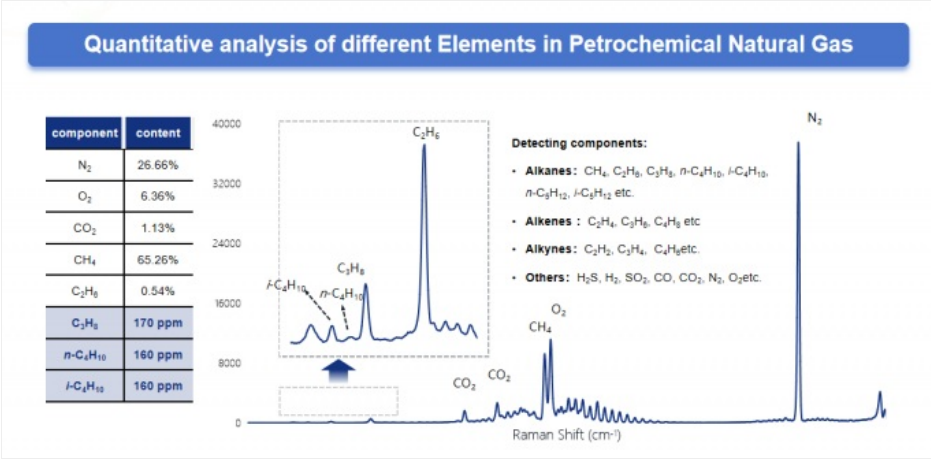
Wide detection range: LOD at ppm level, detection range up to 100%

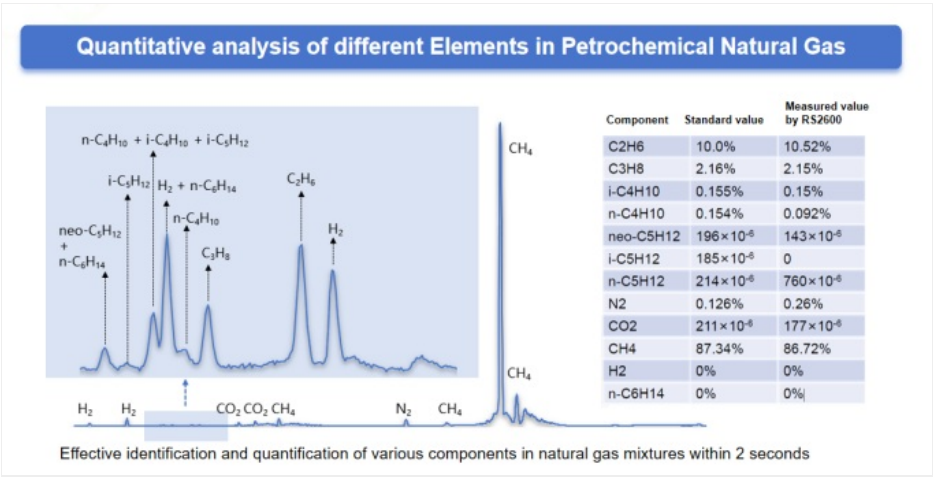
Applications

1. Monitoring of F2, N2, HF and other components in the fluorination process.

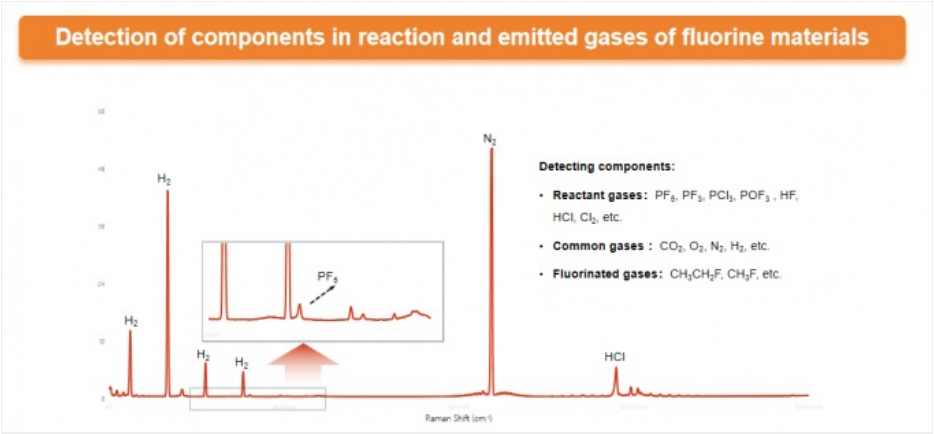


2. Quantitative analysis of different Elements in Petrochemical Natural Gas
Effective identification and quantification of various components in natural gas mixtures within 2 seconds, such as alkanes, alkenes, alkynes, etc.

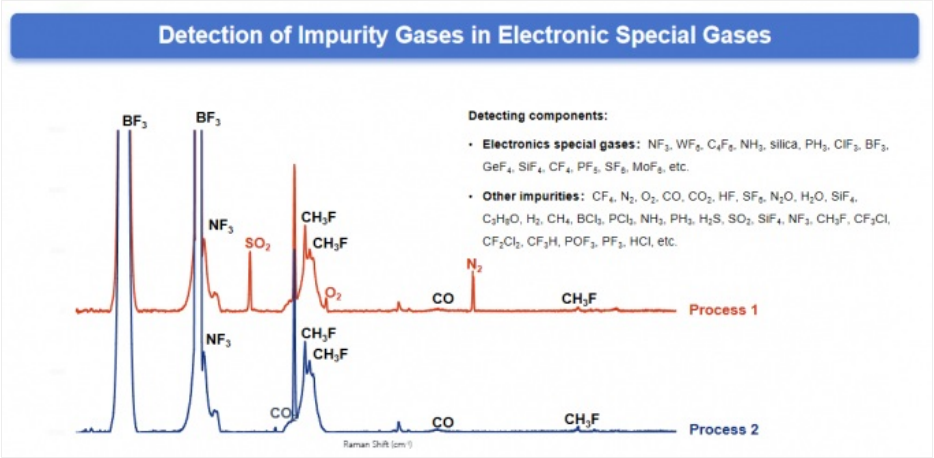




3. Detection of components in reaction and emitted gases of fluorine materials, such as reactant gases, common gases, fluoinated gases.

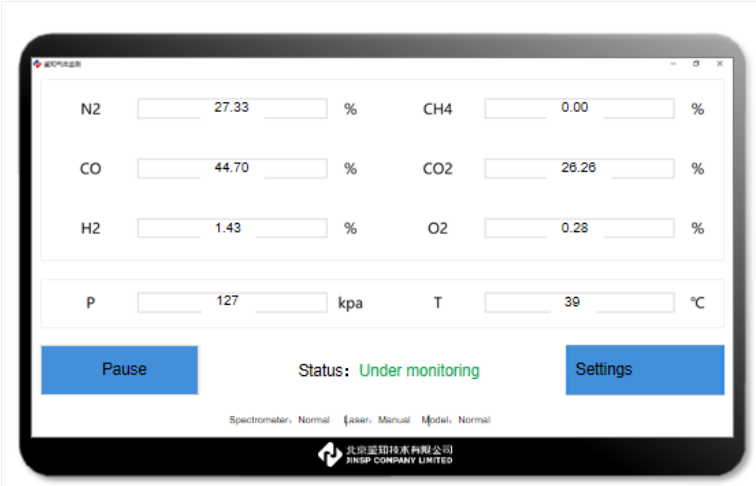


4. Detection of impurity gases and electronic special gases.



Gas Analyzer Features

By constructing quantitative models of multiple standard curves and combining them with chemometric methods, the correlation between spectral signals and the content of various component substances can be effectively established. This comprehensive method not only improves the accuracy of analysis, but also enables the simultaneous processing and analysis of multiple different chemical components, providing a powerful tool for quantitative analysis of complex samples. Even in the case of changes in sample gas pressure or fluctuations in testing conditions, this quantitative analysis method can still maintain the accuracy of the results. This is due to its high stability and robustness, ensuring consistent analysis results in any environment, providing reliable data support for scientific research and industrial applications.



Company Introduction

JINSP Company Limited, abbreviated as "JINSP", is a professional supplier with over 17 years of experience in spectral 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.

Frequently Asked Questions

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

A: We will send you 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 a operation training?

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

Q: How to receive a best price in the shortest time?

A: When you send us an inquiry, please kindly offer details with wavelength, detector, effective pixels, focal length and so on. We will send you 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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