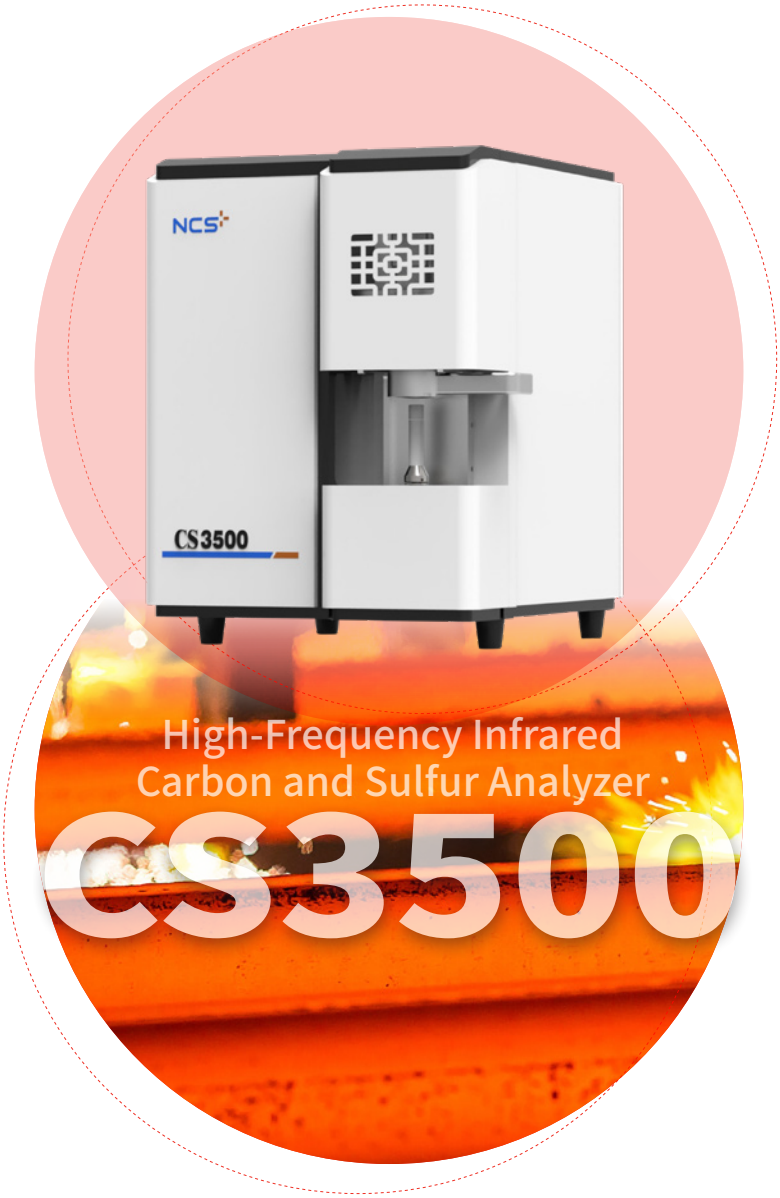


The only professional manufacturer in China to produce both CS and ONH analysers

The CS3500 carbon and sulphur analyser uses high frequency heating and infrared detection principle, combined with the latest combustion and full range detection technology. It is widely used in steel, powder metallurgy, non-ferrous, magnetic materials, new energy, third-party testing, research institutes and other industries. It can simultaneously and rapidly analyse carbon and sulphur in steel and its alloys, non-ferrous metals, powder metallurgy, rare earths, NdFeB, ores and other The technology can be used to analyse carbon and sulphur in solid materials.

The most powerful gas analyzer manufacturer in China

CS3500 High-Frequency Infrared Carbon and Sulfur Analyzer

Stability and high efficiency of High-frequency power , ensuring full sample combustion; excellent high-frequency shielding effect

Modular setup

- Infrared detection unit: Four independent infrared channels maximum; A high sulfur channel can be achieved based on customer requirements; Pyroelectric solid-state infrared detectors used.
- Motor: Swiss-imported synchronous motor adopted, capable of continuous operation without breakdown.
- Light source: Imported infrared source , not easily oxidized ; stable optical performance
- Temperature Control:The temperature of the IR cell keeps stable to ensure the measurement accuracy
- Copper oxide catalysis furnace (optional): coverts the trace CO into CO_2, ensures complete detection for carbon ;Converts SO_2 to SO_3 which is absorbed by cotton to ensure environmentally friendly.

User-friendly analysis environment

- English operating software under Windows 10/11 system for user easy access and free updates
- Flexible quality input mode - automatic reading, manual reading, manual input, automatic crucible tare
- Automatic range switching - automatic switching between high and low ranges for carbon and sulfur
- Flux blank deduct - automatic deducting of flux blank value
- Abundant information display - release curve comparison and storage, data result statistics, quick data query, maintenance reminders, and monitoring of important instrument parameters

  1.Solenoid valve check - display and independently operate each solenoid valve

  2.Signal acquisition check - monitor all system acquisition signals

  3.High-frequency status check - high-frequency countdown preheating

  4.Baseline check - real-time monitoring of each channel baseline

  5.Automatic zero check - automatic zeroing of baseline can be achieved through software control

Instrument self-check function

- Stable and sensitive flow control: high-precision pressure difference electronic flow control technology
- Gas saving model: The instrument will shut the oxygen flow automatically when each analysis is over.

CS3500

High-Frequency Infrared Carbon and Sulfur Analyzer

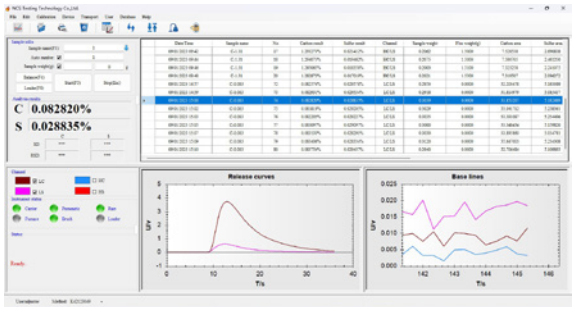
Highly sensitive pyroelectric solid-state infrared detectors

Reasonable parameter settings

- Flexible adjustment of analytical parameters based on specific samples
- Calibration methods and parameters can be established and stored separately for different types of samples, and the number of analytical methods is unlimited

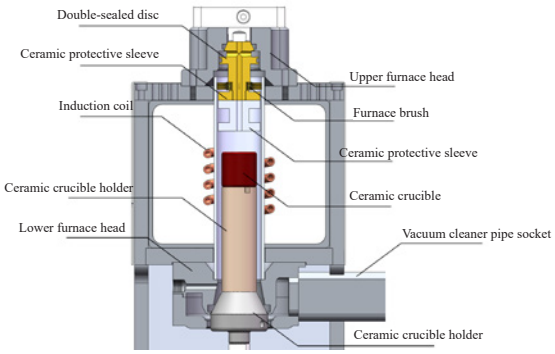
Powerful data management

- Database storage for flexible query and statistics
- Printing columns can be flexibly set according to user needs
- Current analysis data can be exported to Excel from the analysis interface
- Data transmission function for seamless integration with LIMS through the network



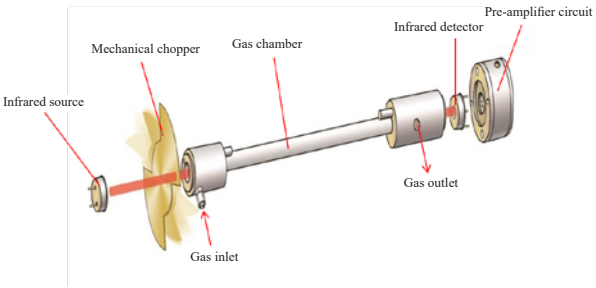
Automatic cleaning of high-frequency furnace

- CS3500 uses an imported dedicated metal dust filtering device that can be dismantled and cleaned without any tools, with simple and quick operation
- The combustion chamber is automatically cleaned twice and dust is automatically removed after each analysis, with the dust filter automatically blown back to prevent the accumulation of dust and the adsorption effect



Infrared detection unit

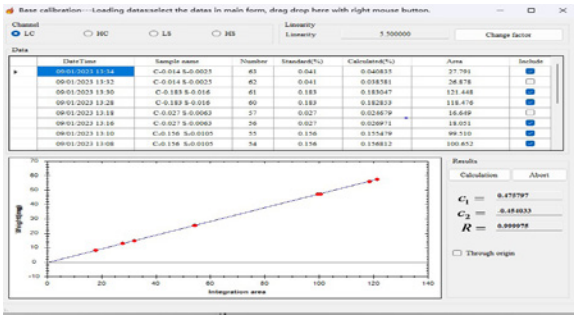
- The infrared pool detection unit of CS3500 uses non-dispersive, highly sensitive pyroelectric solid-state infrared detectors. The infrared cell zero point is automatically calibrated by the computer
- CS3500 comes with three independent infrared channels as standard, and can be expanded to four according to users' needs to achieve full-range detection



Automatic switching between high and low ranges
Advanced electronic flow control

Electronic flow control

- CS3500 adopts high-precision electronic flow control technology, with fast feedback response and stable flow control, ensuring the precision of the instrument's analytical data

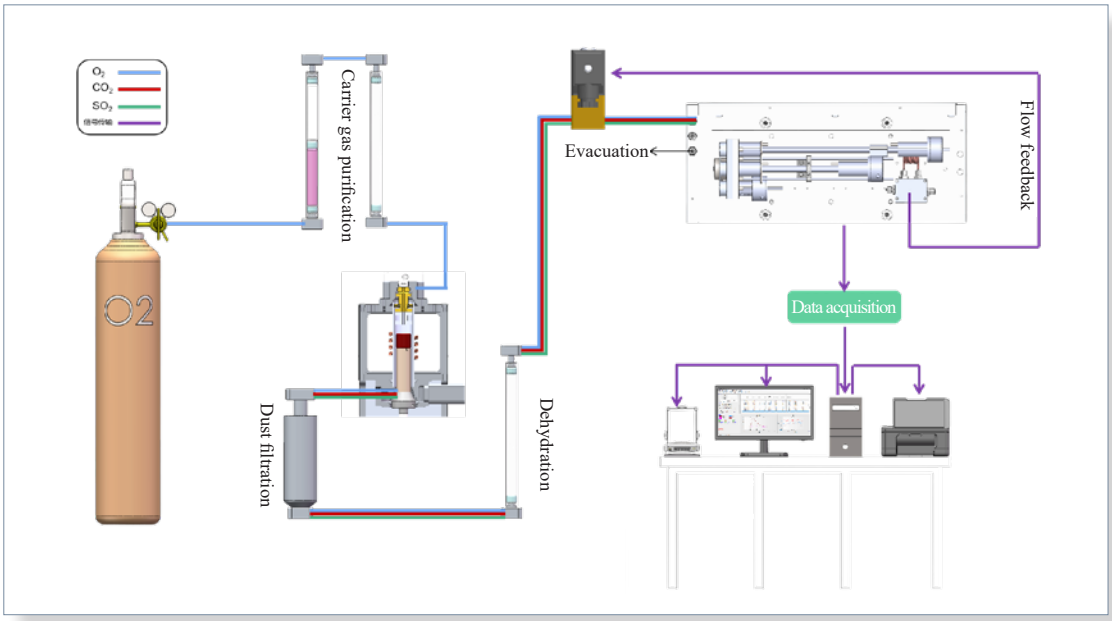


Typical linearized calibration curves

High-frequency stability and high efficiency, ensuring full sample combustion

CS3500 High-Frequency Infrared Carbon and Sulfur Analyzer

Working principle



High-frequency infrared carbon and sulfur analyzer

CS3500

Instrument specifications

Analysis range	High-frequency induction furnace (500mg sample): Low carbon: 0.06 ppm~0.1%, High carbon: 0.1%~50% Low sulfur: 0.6ppm~0.3%, High sulfur: 0.3%~30% Note: Changing the sample size can extend the analysis range up to 100% *High sulfur absorption pools channel can be customized according to customer needs
Analysis accuracy	High-frequency induction furnace: Carbon: 1ppm or RSD ⩽ 0.5% Sulfur: 1ppm or RSD ⩽ 1.0%
Sensitivity	0.01ppm
Analysis time	30 to 40 seconds
Sample quality	Recommended sample weight: 0.1g to 0.5g, can be adjusted based on carbon and sulfur content
Combustion furnace	High Frequency Induction Furnace: 18MHz, 2.7KVA； The combustion chamber is automatically cleaned after each analysis, easy for routine maintanance
Dust cleaning	Automatic
Detector	Solid-state pyroelectric detector
Carrier gas	Oxygen purity : ⩾ 99.5%; 0.2-0.4Mpa
Power gas	Nitrogen (industrial grade)
Power supply	220VAC±10%　　50±1Hz 16A
Weight	Approximately 100kg
Dimensions	550mm×760mm×770mm (width × depth × height)