

Sulfur Analysis with Compliance Flexibility

Sindie[®] 2622 Gen 3 complies with ASTM D2622, D7039 and ISO 20884 methods, enabling complete flexibility in sulfur analysis. With no compromises in detection, performance and reliability, Sindie 2622 is the ideal sulfur analytical solution from ultra low sulfur diesel and gasoline to heavy fuel oil and crudes.

Applications

- Total sulfur analysis from ultra low sulfur fuels to crudes
- For use in refinery labs, pipeline terminals, additive plants and inspection laboratories

Features and Benefits

- LOD: 0.15 ppm at 300 s
- Dynamic Range: 0.15 ppm - 10 wt%
- Easy to use
 - Intuitive touch screen
 - Just plug-in and measure
 - Measurement time: 30-900 s
- Low and high range calibrations available:
 - Low Range: 0.15 ppm - 3000 ppm
 - High Range: 0.3 wt% - 10 wt%
- Extremely low maintenance: no conversion gasses, heating elements, columns, or quartz tubing
- 75 W air-cooled excitation tube
- Fits on any lab bench
- Use Accucells for hassle-free sample prep

Options

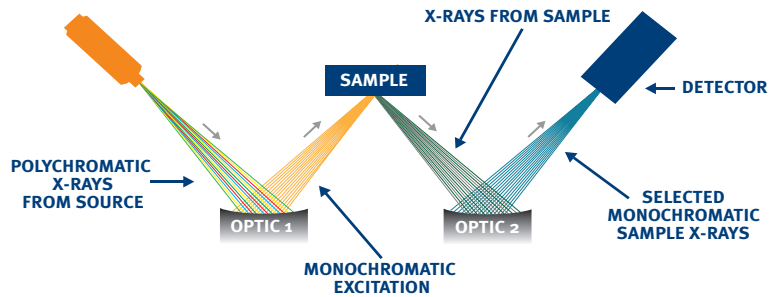
- 8-cell Autosampler
- Helium optical path available
- LIMS data output compatible software

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Sindie 2622
Sulfur Analyzer



TRUSTED PRECISION

Monochromatic Wavelength Dispersive X-ray Fluorescence (MWDXRF[®]) utilizes state-of-the-art focusing and monochromating optics to increase excitation intensity and dramatically improve signal-to-background over high power traditional WDXRF instruments. This enables significantly improved detection limits and precision, and a reduced sensitivity to matrix effects. A monochromatic and focused primary beam excites the sample and secondary characteristic fluorescence X-rays are emitted from the sample. A second monochromating optic selects the sulfur characteristic X-rays and directs these X-rays to the detector. MWDXRF is a direct measurement technique and does not require consumable gasses or sample conversion.

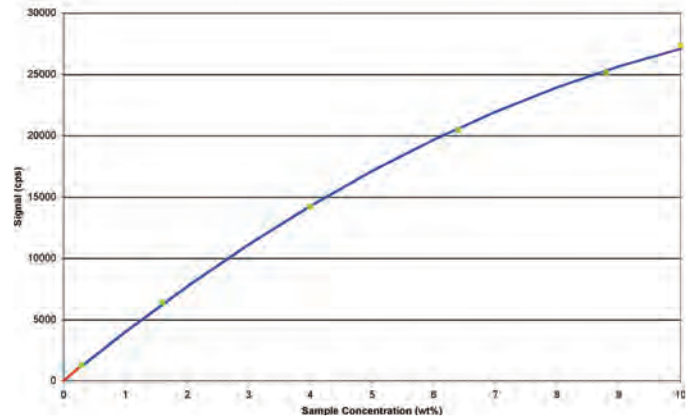


ACCUCELL SAMPLE CUPS

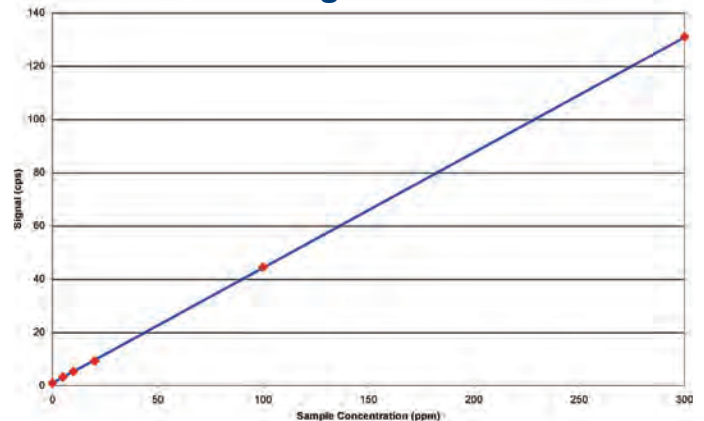
- No assembly of separate film & cup components
- Pre-vented sample cups
- Eliminates sample & cup contamination
- One discharge of 1 ml pipette will fill the cup

Precision			
Typical repeatability (r) and reproducibility (R) values in diesel fuel, at 95% confidence. 300 s measurement time.			
Sulfur Concentration (ppm)	r	R	
2	0.3	0.7	
5	0.5	0.8	
8	0.6	1.0	
15	0.8	1.4	
100	2	4	
500	5	10	

High Range Calibration



Low Range Calibration



Sindie uses a weighted least squares regression in low range which is extremely linear and easy to set up. Typical correlation (R value) is expected to be on the order of 0.999 or better.

Product Specifications

Model	Sindie 2622 Gen 3
Test Method	ASTM D7039, D2622 and ISO 20884
Dimensions	37 cm (w) x 50 cm (d) x 34 cm (h)
Power	100-120 VAC, 47-63 HZ at 6.0 Amps/ 200-240 VAC, 47-63 HZ at 6.0 Amps
Sample Cup Volume	1 ml
Ambient Temperature Requirements	5-40° C (40-104° F)
Dynamic Range	Standard: 0.15 ppm - 10 wt%
Measurement	User selectable: 30-900 s
Calibration	8 calibration curves. Automatic and manual calibration functionality
Optical Path	Vacuum (helium available)



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Sulfur Analysis with Compliance Flexibility

Sindie® 2622 Gen 2 complies with ASTM D2622, D7039 and ISO 20884 methods, enabling complete flexibility in sulfur analysis. With no compromises in detection, performance and reliability, Sindie 2622 is the ideal sulfur analytical solution from ultra low sulfur diesel and gasoline to heavy fuel oil and crudes.

Applications

- Total sulfur analysis from ultra low sulfur fuels to crudes
- For use in refinery labs, pipeline terminals, additive plants and inspection laboratories

Features and Benefits

- LOD: 0.4 ppm at 300 s
- Dynamic Range: 0.4 ppm to 10 wt%
- Easy to use
 - Intuitive touch screen
 - Just plug-in and measure
 - Measurement time: 30-900 s
- Low and high range calibrations available:
 - Low Range: 0.4 ppm - 3000 ppm
 - High Range: 0.3 wt% - 10 wt%
- Extremely low maintenance: no conversion gasses, heating elements, columns, or quartz tubing
- 75 W air-cooled excitation tube
- Fits on any lab bench

Options

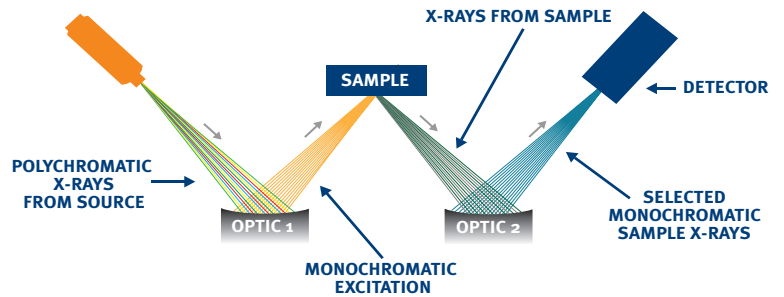
- 8-cell Autosampler
- Helium optical path available
- LIMS data output compatible software

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Sindie 2622
 Sulfur Analyzer

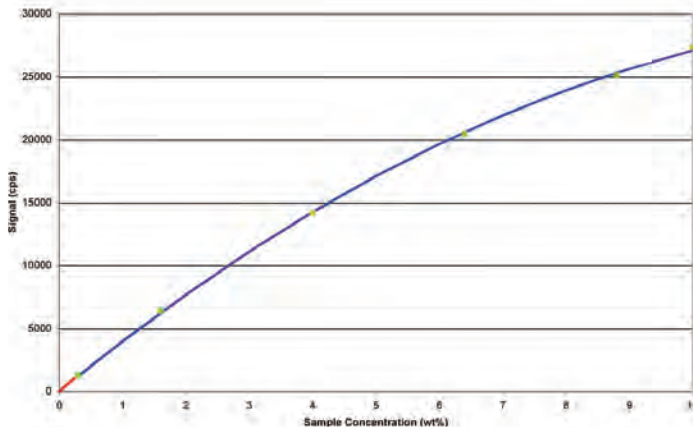


TRUSTED PRECISION

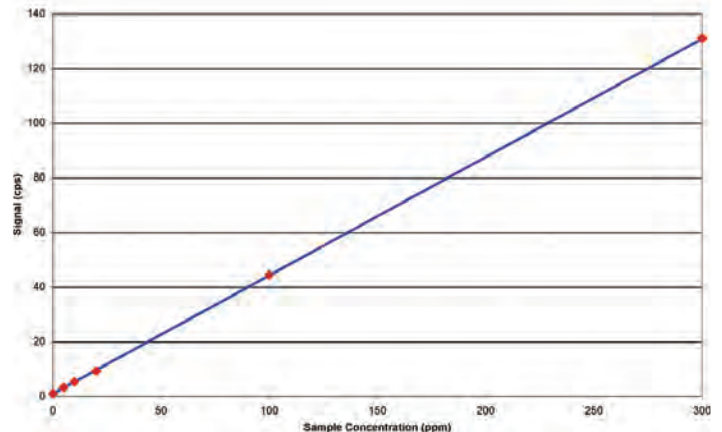
Monochromatic Wavelength Dispersive X-ray Fluorescence (MWDXRF[®]) utilizes state-of-the-art focusing and monochromating optics to increase excitation intensity and dramatically improve signal-to-background over high power traditional WDXRF instruments. This enables significantly improved detection limits and precision, and a reduced sensitivity to matrix effects. A monochromatic and focused primary beam excites the sample and secondary characteristic fluorescence X-rays are emitted from the sample. A second monochromating optic selects the sulfur characteristic X-rays and directs these X-rays to the detector. MWDXRF is a direct measurement technique and does not require consumable gasses or sample conversion.



High Range Calibration



Low Range Calibration



Sindie uses a weighted least squares regression in low range which is extremely linear and easy to set up. Typical correlation (R value) is expected to be on the order of 0.999 or better.

Product Specifications

Model	Sindie 2622 Gen 2
Test Method	ASTM D7039, D2622 and ISO 20884
Dimensions	37 cm (w) x 50 cm (d) x 34 cm (h)
Power	100-120 VAC, 47-63 HZ at 6.0 Amps/ 200-240 VAC, 47-63 HZ at 6.0 Amps
Sample Cup Volume	10 ml
Ambient Temperature Requirements	5-40° C (40-104° F)
Dynamic Range	0.4 ppm - 10 wt%
Measurement	User selectable: 30-900 s
Calibration	8 calibration curves. Automatic and manual calibration functionality
Optical Path	Vacuum (helium available)

Precision

Typical repeatability (r) and reproducibility (R) values in diesel fuel, at 95% confidence. 300 s measurement time.

Sulfur Concentration (ppm)	r	R
4	0.4	1.0
8	0.7	1.2
15	0.9	1.7
100	3	6
500	6	12



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Reliable Sulfur Analysis at an Affordable Price

Sindie® 2622 Gen 1.5 complies with ASTM D2622, ASTM D7039, ISO 20884 and EN 16997 methods, enabling complete flexibility in sulfur analysis. With no compromises in detection, performance and reliability, Sindie 2622 is the ideal sulfur analytical solution from low sulfur diesel and gasoline to heavy fuel oil and crudes, as well as biofuels and renewable fuels, at a more affordable price.

APPLICATIONS

- Total sulfur analysis from low sulfur fuels to crudes
- For use in refineries, terminals, pipelines, additive plants and laboratories

FEATURES AND BENEFITS

- **LOD:** 0.7 ppm at 300s
- **Dynamic Range:** 0.7 ppm to 10 wt%
- Easy to use
 - Intuitive touch screen
 - Just plug-in and measure
 - **Measurement time:** 30-900 s
- **Low and high range calibrations available:**
 - **Low Range:** 0.7 ppm – 3000 ppm
 - **High Range:** 0.3 wt% – 10 wt%
- Extremely low maintenance: no conversion gasses, heating elements, columns, or quartz tubing
- 75 W air-cooled excitation tube
- Small footprint

OPTIONS

- 8-cell Autosampler (Accucell™ Cups)
- LIMS data output compatible software



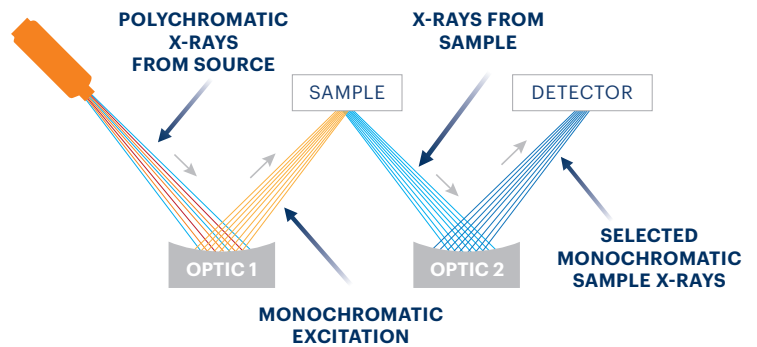
GEN 1.5



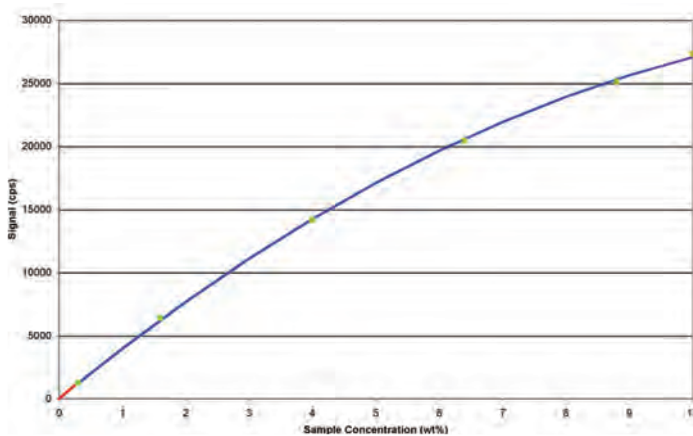
ASTM D2622 & D7039
ISO 20884 EN 16997

TRUSTED PRECISION

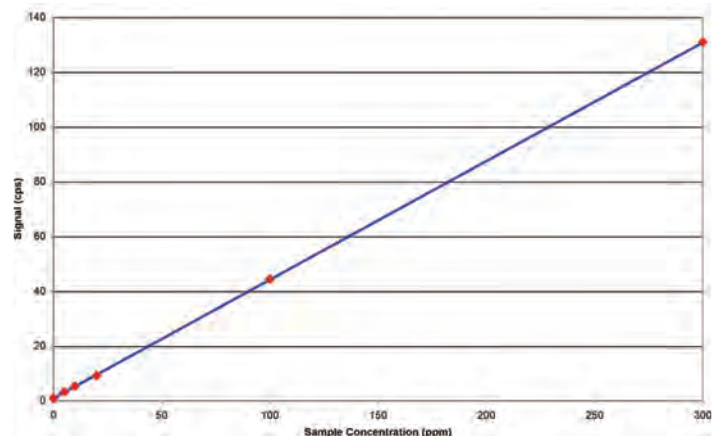
Monochromatic Wavelength Dispersive X-ray Fluorescence (MWDXRF®) utilizes state-of-the-art focusing and monochromating optics to increase excitation intensity and dramatically improve signal-to-background over high power traditional WDXRF instruments. This enables significantly improved detection limits and precision, and a reduced sensitivity to matrix effects. A monochromatic and focused primary beam excites the sample and secondary characteristic fluorescence X-rays are emitted from the sample. A second monochromating optic selects the sulfur characteristic X-rays and directs these X-rays to the detector. MWDXRF is a direct measurement technique and does not require consumable gasses or sample conversion.



HIGH RANGE CALIBRATION



LOW RANGE CALIBRATION



PRODUCT SPECIFICATIONS

Model	Sindie 2622 Gen 1.5
Test Method	ASTM D7039, D2622 and ISO 20884, EN 16997
Dimensions	37 cm (w) x 50 cm (d) x 34 cm (h)
Power	100-120 VAC, 47-63 HZ at 6.0 Amps/ 200-240 VAC, 47-63 HZ at 6.0 Amps
Sample Cup Volume	10 ml
Ambient Temperature Requirements	5-40° C (40-104° F)
Dynamic Range	0.7 ppm - 10 wt%
Measurement	User selectable: 30-900 s
Calibration	8 calibration curves. Automatic and manual calibration functionality
Optical Path	Vacuum

Sindie uses a weighted least squares regression in low range which is extremely linear and easy to set up. Typical correlation (R value) is expected to be on the order of 0.999 or better.

PRECISION		
Typical repeatability (r) and reproducibility (R) values in diesel fuel, at 95% confidence. 300 s measurement time.		
Sulfur Concentration (pmm)	r	R
10	0.9	1.6
100	3	6
1000	8	16
10,000 (1%)	80	200