better analysis counts

Sulfur PLUS Lead Analysis in Petroleum Products

As aviation industry requirements become more stringent, lead detection is critical in such products as aviation gasoline and jet fuel. Sindie® +Pb delivers unprecedented precision and accuracy for sulfur and lead detection.

Applications

- Total sulfur and lead analysis from ultra low sulfur diesel to aviation gasoline
- For use in refinery labs, pipeline terminals, additive plants, testing vans and inspection laboratories

Features and Benefits

- LOD:
  - Sulfur: 0.7 ppm at 300 s
  - Lead: 0.002 g/L at 300 s
- Dynamic Range:
  - Sulfur: 0.7 ppm to 5000 ppm
  - Lead: 0.002 g/L to 10.000 g/L
- Fits on any lab bench
- Easy to use
  - Intuitive touch screen
  - Just plug-in and measure
  - Measurement time: 30-900 s
- Extremely low maintenance: no conversion gasses, heating elements, columns, or quartz tubing
- 75 W air-cooled excitation tube

Options

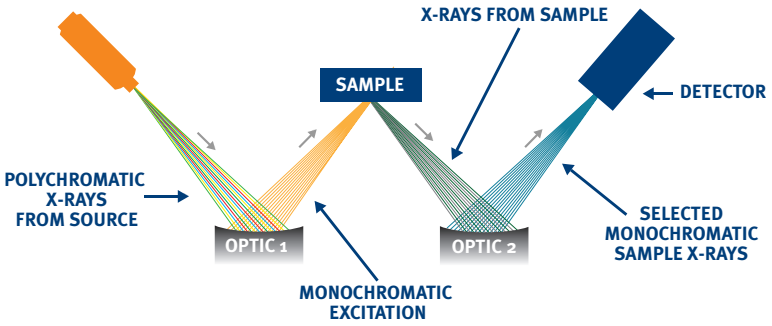
- LIMS data output compatible software

16 32.06 Sindie + 82 207.2 Pb Lead
Sulfur and Lead Analyzer

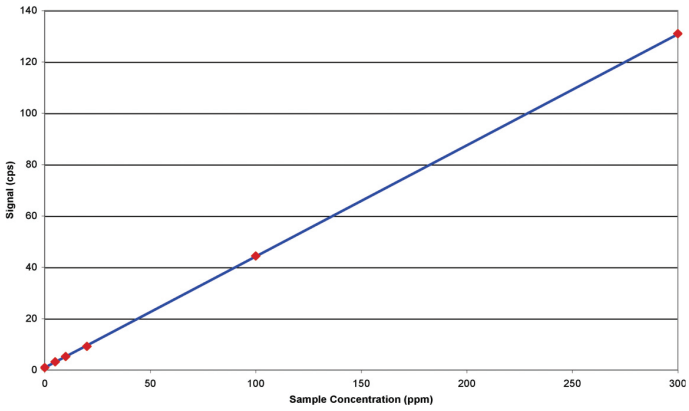
ASTM D7039 and ISO 20884

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 and lead 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.



Sulfur Low Range Calibration

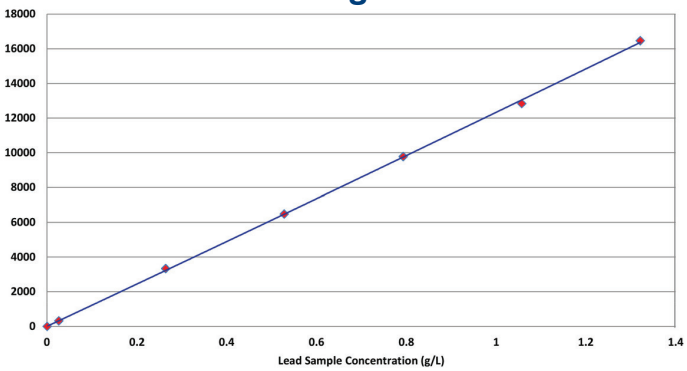


Sulfur Precision

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

Sulfur Concentration (ppm)	r	R
2	0.4	1.0
8	0.7	1.2
15	0.9	1.7
100	3	6
500	6	12

Lead 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.

Lead Precision

Typical repeatability (r) and reproducibility (R) values in iso-octane at 95% confidence. 300 s measurement time.

Lead Concentration (g/L)	r	R
0.03	0.0027	0.0053
0.1	0.0049	0.0097
0.3	0.0084	0.0168
0.5	0.0109	0.0217
1	0.0154	0.0308

Product Specifications

Model	Sindie +Pb
Test Method	ASTM D7039 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	Sulfur: 0.7 ppm to 5000 ppm Lead: 0.002 g/L to 10.000 g/L
Measurement	User selectable: 30-900 s
Calibration	8 calibration curves. Automatic and manual calibration functionality

XOS®
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