

16 32.06

Sindie OTG

Sulfur Analyzer

Plug-It-In & Measure
Results with One Touch
Unrivalled Precision

There's a first for everything and here's a new one for sulfur analysis; the first PORTABLE sulfur analyzer that provides reliable quality results from ultra low sulfur diesel and gasoline, to marine fuels and crudes.

The SINDIE 7039 OTG analyzer is the ultimate dual use portable and bench-top sulfur analyzer which uses XOS's Monochromatic WD XRF technique per ASTM D 7039. The standard configuration for this analyzer will measure sulfur concentrations from 1.0 ppm up to 10 wt%.

Monochromatic Wavelength Dispersive XRF is a direct measurement technique which does not require sample conversion, consumable gases or elevated temperature operating conditions. The analyzer is designed for use in refinery labs, pipeline terminals, marine and on-board use, additive plants and general test vans and inspection laboratories.

SINDIE OTG uses preassembled ACCU-CELL sample cups, designed to keep the sample and the cup free of external contamination and particles. ACCU-CELL cups eliminate the need for the user to put together the various separate film and cup components. The cups are pre-vented so there's no need for the user to punch a hole in the sample cup. One standard 1 ml pipette will fill the cup and that's it. Fast, clean and precise.

Analysis on demand, where and when you need it. Contact us to schedule a SINDIE OTG demonstration at your site or for more details visit us at www.xos.com.



APPLICATION AREAS:

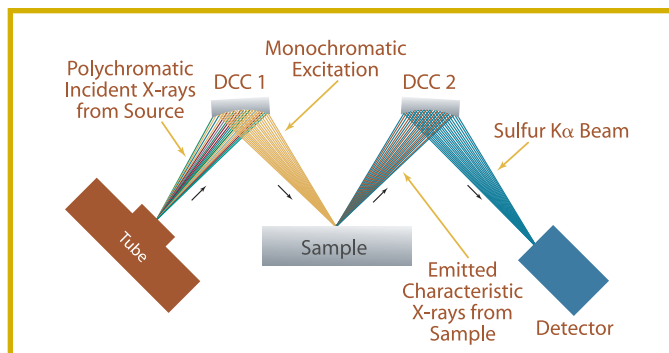
- Total sulfur analysis from ultra low sulfur fuels up to crude.
- Designed for refinery labs, pipeline terminals, on-board use, additive plants, testing vans and inspection laboratories.

FEATURES AND BENEFITS:

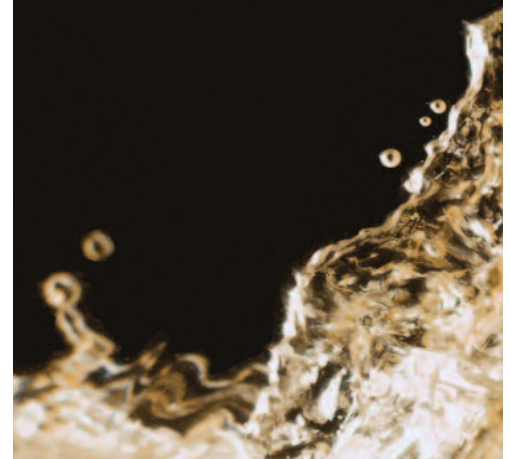
- Dimensions: 13' h x 12" w x 9" d
- Weight: 20 lbs
- Utility: Standard wall power: 100-120 VAC and 200-240 VAC
- No need for gases, no high temp operating conditions
- LOD: 1.0 ppm (measurement time: 300 s.)
- Dynamic Range: 1.0 ppm up to 10%
- Repeatability (95% confidence)

| | |
|----------|----------|
| 5 ppm | 0.78 ppm |
| 8 ppm: | 1.10 ppm |
| 15 ppm: | 1.51 ppm |
| 50 ppm: | 2.76 ppm |
| 500 ppm: | 8.74 ppm |
- User interface: Touch Screen.
- Utilizes the ACCU-CELL pre-assembled sample cups for enhanced precision, operator ease-of-use and increased productivity.
- User programmable measurement time: 30-300 s.
- One calibration curve for diesel and gasoline matrixes over the full dynamic range.
- Extremely low maintenance:
 - No conversion gasses
 - No heating elements
 - No quartz tubes or columns
- Robust polyamide windows enables industrial use. No exposed Be windows.

FIGURE 1
Monochromatic
WD XRF per
ASTM D 7039



- Monochromatic excitation = extremely low background
- Broad dynamic range from 1.0 ppm wt. up to 10 wt %
- No consumable gasses or sample conversion required



Typical Sindie OTG Specifications

FIGURE 2

Linearity
0–500 ppm
 $R^2=0.9999$

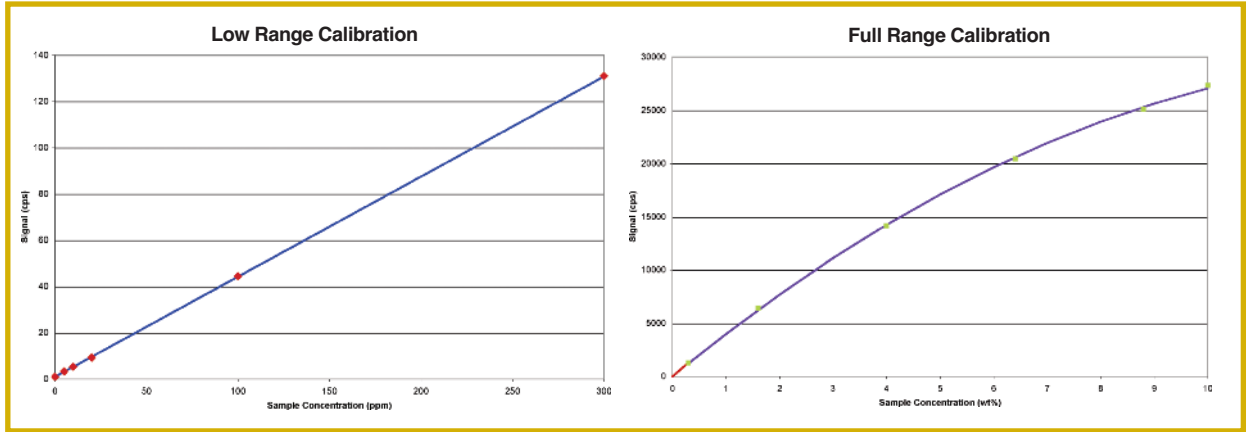
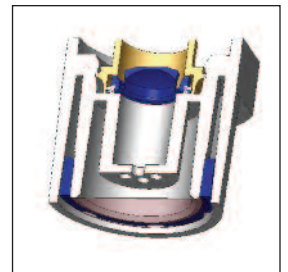


Table 1. Repeatability. Successive sulfur measurements of diesel specimen at various sulfur concentrations, on same analyzer. Measurement time: 300 seconds.

| Measurement | 5 ppm | 10 ppm | 100 ppm | 500 ppm | 1% |
|-------------|-------|--------|---------|---------|-------|
| 1 | 5.13 | 8.93 | 103.68 | 513.03 | 1.02 |
| 2 | 4.03 | 9.8 | 102.39 | 505.16 | 1.03 |
| 3 | 4.6 | 9.32 | 99.19 | 502.13 | 1.03 |
| 4 | 4.3 | 10.79 | 101.74 | 513.76 | 1.02 |
| 5 | 3.76 | 7.4 | 100.60 | 505.7 | 1.02 |
| 6 | 5.43 | 8.27 | 97.96 | 505.83 | 1.03 |
| 7 | 4 | 9.56 | 103.47 | 499.96 | 1.04 |
| 8 | 4.23 | 9.65 | 101.46 | 506.9 | 1.05 |
| 9 | 5.76 | 9.23 | 99.34 | 498.6 | 1.4 |
| 10 | 4.26 | 10.01 | 98.79 | 514.43 | 1.1 |
| Mean | 4.55 | 9.29 | 100.86 | 506.55 | 1.03 |
| SD | 0.63 | 0.94 | 2 | 5.63 | 0.012 |
| RSD | 13.9% | 10.1% | 1.9% | 1.1% | 1.1% |

ACCU-CELL Sample Cups



No assembly of separate film and cup components

Pre-vented sample cups

Eliminates sample & cup contamination

One discharge of 1 ml pipette will fill the cup



Enables in-the-field, no-hassle measurements

Easy Drop & Lock sample cup loading



| | |
|----------------------------------|--|
| Test Method | In accordance with ASTM Standard Test Method D-7039 |
| Dimensions | 13" w x 12" d x 9" h |
| Power | 100-120 VAC, 47-63 Hz at 2.0 Amps 200-240 VAC, 47-63 Hz at 2.0 Amps |
| Other Utilities | None |
| Sample Introduction | Maximum sample cup volume: 1 ml. |
| I/O Ports | Ethernet 10/100 base T RS 232 |
| Ambient Temperature Requirements | 5–40°C (40–104°F) |
| Dynamic Range | 1.0 ppm–10% (wt.) |
| Measurement Time | 30-900 seconds (user selectable) |



better analysis counts

15 Tech Valley Drive • East Greenbush, New York 12061, USA • 518-880-1500 • Fax: 518-880-1510

e-mail: info@xos.com • website: www.xos.com