



SLFA-60



SLFA-6000 Series

# Sulfur-in-Oil

## SLFA-60/6000 Series

X-ray Fluorescence Sulfur-in-Oil Analyzer



# SLFA-60/6000 series for a new generation of petroleum products

Compact & Robust Design

Simple Operation

Safety Features

Wide Sample Range

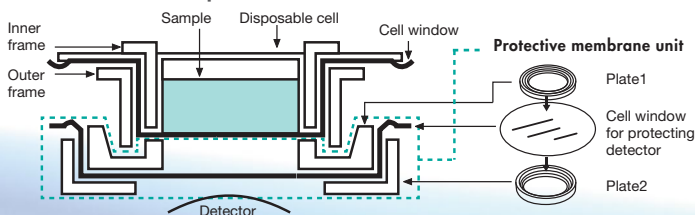
HORIBA introduces the new standard of sulfur-in-oil analyzers, the SLFA-60 and 6000 series. These instruments feature new software and hardware to meet the growing challenges in the petroleum industry.

## Compact & Robust Design

### Secondary Window to Prevent Leakage

Both the SLFA-60 and 6000 series have a protective membrane covering the cell window to prevent the detector and X-ray tube from accidental sample leakage. This protective membrane unit is simple to assemble and replace.

### Cross section of sample cell and detector

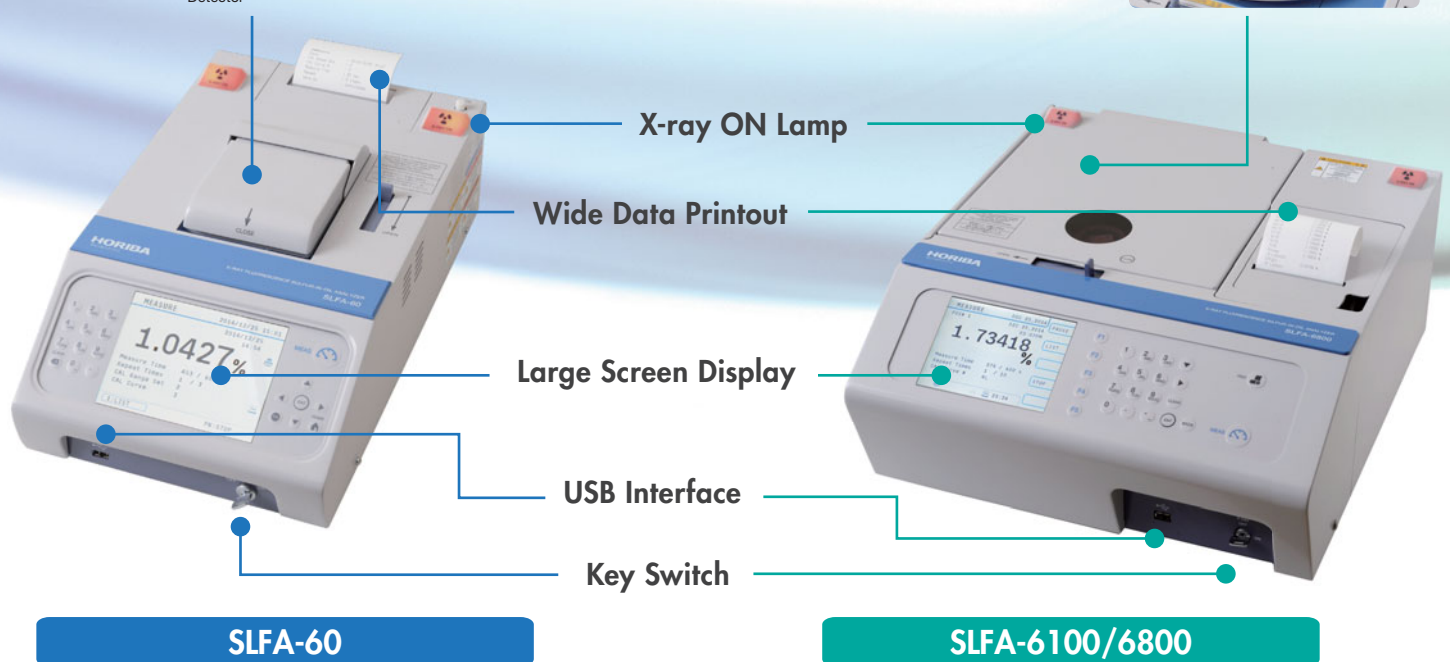


### Large Screen Display

The easy viewing monitor screen will display real-time data in ppm or %.

### Turntable (SLFA-6800 only)

The turntable equipped with the SLFA-6800 has been newly devised. Newly designed stepper motor is more robust and faster between sampling.



SLFA-60

SLFA-6100/6800

## Simple Operation

### Measurement Procedure

1. Pour the sample into the sample cell
2. Place the sample cell on the sample holder
3. Set to the measurement condition
4. Press the "MEAS" button to start the measurement
5. Instrument displays the results and data output

### Calibration

New software allows the SLFA-60 to store 3 sets of calibration and the SLFA-6000 series 5 sets. It also allows the users to choose between linear or quadratic curves. Calibration curves are restored manually without having to recalibrate as long as the users save the coefficients value/calibration data.

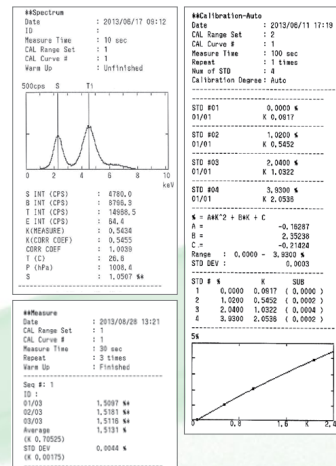
### Output Options

Print out, USB memory stick and USB cables connected to PC are available as output options.

\* Printer can be switched off if not used.

#### i) Wide Data Printouts

The users can control the contents/volume of the information on the printouts. There are 3 layout options. Printouts show sample ID, X-ray spectrum, date/time, measurement average value, standard deviation and calibration curve graph etc., on 80 mm wide format for easy viewing.



#### ii) USB Output

The user can transfer data into USB memory or PC connected with USB cable.



## Safety Features

In addition to our thorough X-ray leakage tests at the factory, the SLFA series are equipped with these safety functions:

### Key Switch

Only when the key switch is in the "ON" position, X-rays are turned on.



### Shield Shutter

Even if the lid is open, X-rays are continuously on. However, the shield shutter covers the X-ray and will prevent leakage that might be emitted.



The shield shutter

## Wide Sample Range

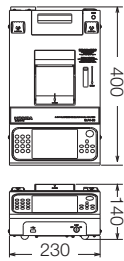
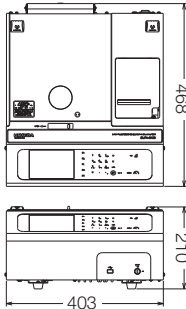
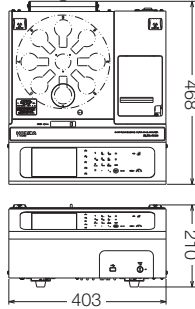
### Expanded Measurement Range (0 - 9.9999 wt%)

The SLFA-60 has expanded its range compared to the conventional model, and now both the SLFA-60 and 6000 series can measure from 0 - 9.9999%.





# Technical Specifications

|                                 | SLFA-60   | SLFA-6100   | SLFA-6800  |
|---------------------------------|---|---|--|
| Measurement principle           | X-ray Fluorescence Analysis Method  |   |  |
| Measurement samples             | Sulfur in petroleum products such as heavy oil, naphtha, crude oil and light oil  |   |  |
| Measurement range               | 0 - 9.9999%   |   |  |
| Repeatability                   | 15 ppm or less with a 1% sulfur sample  | 5 ppm or less with a 1% sulfur sample, 1.6 ppm or less with a 0% sulfur sample      |  |
| C/H error correction            | +/- 50 ppm or less per C/H *with a 1% sulfur sample   |   |  |
| Lower detection limit           | 15 ppm or less *  | 5 ppm or less *   |  |
| Number of calibration curves    | Up to 15 calibration curves   |   |  |
| Calibration curve order         | Linear or Quadratic (both automatic selection and manual settings are available)  |   |  |
| Amount and number of samples    | 4 - 10 mL, 1 sample   |   | 4 - 10 mL, 8 samples   |
| Measurement time                | 10 - 600 sec  |   |  |
| Data output                     | Printout, USB memory stick, USB cable connected to PC   |   |  |
| Spectrum measurement            | Energy Range: 0 - 10 keV, spectrum analysis to verify instrument performances   |   |  |
| Operating temperature           | + 5 °C to + 40 °C (+ 41 °F to 104 °F)   |   |  |
| Operating humidity              | 80% max relative humidity in temperature range + 5 °C to + 30 °C (+ 41 °F to 86 °F)<br>Linear decrease to 50% relative humidity in temperature range + 31 °C to + 40 °C (+ 88 °F to 104 °F) |   |  |
| Power supply                    | AC 100 - 240 V +/- 10%, 50/60 Hz  |   |  |
| Power consumption               | 80 VA   | 150 VA  |  |
| Conformity standard             | ASTM D4294 (USA), ISO 8754, JIS K2541/B7995   |   |  |
| Weight                          | Approx. 9 kg  | Approx. 21 kg   | Approx. 23 kg  |
| Dimensional Outlines (Unit: mm) |   |  |  |

\* 3 times the standard deviation with a 0% sample



**Please read the operation manual before using this product to assure safe and proper handling of the product.**

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