

# LAB-X 5000

**HITACHI**  
Inspire the Next

Oils and fuels analysis made easy



**PETROCHEMICALS**

# Tried and trusted

For over 45 years, our LAB-X analysers have been counted on for reliable analysis in production control and testing laboratories.

With the LAB-X5000 we have made analysis faster, easier and more versatile than ever before by combining software inspired by our leading line of point-and-shoot handheld analysers with hardware features built for high-throughput laboratory testing.

The strength of the LAB-X5000 is its simplicity and robustness. The streamlined interface makes it easy for any operator to get repeatable results with a single touch of a button. The automatic sample positioner moves the sample away from the X-ray tube and detector after measurement to protect against damage from spills.



| Feature   | LAB-X5000    | X-Supreme8000                     |
|---|--------------|-----------------------------------|
| Element range   | Mg - U       | Na - U                            |
| Sample tray capacity                                  | 1            | 10                                |
| User interface  | Touch screen | MS Windows, optional touch screen |
| Atmospheric compensation                              | ●            |                                   |
| High-resolution detector                              | ●            | ●                                 |
| Helium purge for improved analysis of Na - Cl         |              | ●                                 |
| One touch to start measurement                        | ●            |                                   |
| Automatic data storage                                | ●            | ●                                 |
| Cloud-based data backup with LiveConnect              | ●            |                                   |
| Factory-loaded calibrations for selected applications | ●            | ●                                 |

# Reliable XRF analysis

The LAB-X5000 is the ultimate elemental analysis tool for fast and easy quality control of fuels and oils, including lubrication oils and waste oils.

The software has been streamlined for simplicity, increasing testing throughput by reducing the time between collecting a sample and getting results. Our expert developers have optimised the analysis routines and hardware selection to get high quality analysis of petrochemicals from crude oil through refinery output to reclaimed oil for biofuel production.

The LAB-X5000 has low operating costs as atmospheric compensation replaces the need to purchase helium. Automatic sample density correction minimizes the number of calibrations required to measure different matrices. Combined, you spend less time and money configuring the instrument and more time taking measurements.

Conform to test norms for sulfur in oils and fuels including ASTM D4294 and ISO 20847 with ease and confidence.





## LAB-X5000

### Analyser:

- Benchtop EDXRF analyser.
- High resolution Silicon Drift Detector (SDD).
- Element range Mg (12) – U (92).
- Ti or Pd target X-ray tube (max. 3 W; 30 kV, 750  $\mu$ A).
- 5 primary filter positions, programmable.
- Operating temperature: 10 °C to 35 °C.

### Screen and data handling:

- 7" touch screen, panel PC.
- Display resolution: 480 (H) x 800 (V) .
- Capable of storing 100,000 results with spectra.
- USB port for data transfer.
- Network connection for access to cloud-based LiveConnect service.
- Integrated printer for automatic and manual reporting.
- Graphical user interface available in 9 languages: Chinese, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish.

### Analysis modes:

- Simultaneous or sequential analysis with live updates.
- Quantitative analysis of up to 20 elements with empirical calibrations.
- Qualitative investigation using dedicated spectrum evaluation tool.

### Sample presentation:

- Sample turntable automatically rotates sample to and from the X-ray analysis components.
- Measure liquids, powders, gels, solids, paper, film, etc.
- Unique Hitachi High-Tech Analytical Science sample holders for pressed pellets and discs with diameter 28 – 40 mm (1.1 – 1.5") diameter.
- Optional sample spinner available for non-homogeneous samples.



### Sample chamber:

- Analysis in air path.
- Atmospheric compensation corrects for changes in air density caused by environmental conditions or sample temperature.

### Standard accessories:

- Diagnostic setting up sample (SUS).
- USB memory stick containing the user manual available in 9 languages and factory backup.
- Printer paper.
- Secondary safety windows.

### Radiation safety:

- Password-protected user interface.
- Fail-safe warning lights.
- X-ray status indicator in the user interface.

### Dimensions, weight and power:

- 440 mm (W) x 520 mm (L) x 155 mm (H).
- 16 kg
- 100 – 240 V, 47 / 63 Hz

#### Note:

In the interests of continued product improvement, Hitachi reserves the right to change any part of the description and specification without notice.

# Our Service

Our global network of service hubs offers a full range of technical support to keep you up and running.

- | **Telephone help-desks**  
For a fast response to your problem.
- | **Remote diagnostics**  
In-depth support over the internet.
- | **Preventive maintenance**  
Ensures your analyser produces the right result year after year.
- | **Training**  
Understand your analyser and its features.
- | **Extended warranties**  
Avoid unplanned costs.
- | **Consumables and accessories**  
From sample preparation to calibration standards.
- | **Repairs**  
Fast and efficient turnaround.

## MORE INFORMATION

To find out more about our XRF solutions, visit [www.hitachi-hightech.com/hha](http://www.hitachi-hightech.com/hha)

# Other products

We have been providing industrial analysis products for materials analysis for over 40 years.

- | **Benchtop XRF:** the X-Supreme8000 offers additional versatility and features for more complex analysis.
- | **Handheld XRF:** for portable analysis of bulk materials and ensuring compliance to consumer goods and electronics regulatory statutes.
- | **Micro spot XRF:** for precise analysis of the smallest samples and features.

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