

# QUALITY

## X-Supreme8000

A powerful innovative XRF analytical solution  
combining performance with flexibility



**OXFORD**  
INSTRUMENTS

*The Business of Science®*



# Centre of Excellence

For many years Oxford Instruments has been at the centre of innovative science and its practical application worldwide

The first technology business to come out of Oxford University fifty years ago, Oxford Instruments is world renowned for introducing unique, powerful, yet simple to use analytical solutions to a wide range of analysis problems. This continues with the introduction of the latest X-ray fluorescence spectrometer the **X-Supreme8000**.

## Performance and simplicity combined

With the ever increasing requirement for high performance analysis, combined with minimal sample preparation and powerful but simple to use instrumentation, the well respected analytical technique of Energy Dispersive X-ray fluorescence (EDXRF) is finding increasing appeal providing simple analytical solutions to a wide range of quality and process control requirements.

Compared to other analytical techniques EDXRF offers numerous benefits including: non-destructive analysis, minimal or no sample preparation, simultaneous multi-element qualitative and quantitative analysis (results in seconds), and operation by 'anyone'. Analysis can be performed on a wide range of sample types including solids, liquids, powders, pastes, films, etc, from ppm to high %, covering the elemental range Na<sup>11</sup> to U<sup>92</sup> in the periodic table.

## Unique solutions

Oxford Instruments has a long and unique association with EDXRF analysis, for example with the world renowned **Lab-X** series of instruments, and to obtain optimal performance involves a detailed understanding and close attention to detail of the generation and detection of X-rays.

We assure world-class performance of our X-ray tubes and detectors on a global scale. Our Silicon Valley site designs, manufactures and distributes high-reliability X-ray tubes for both industrial and medical applications. We are also heavily involved in the European space program with the design and production of solid-state X-ray detectors. These technologically superior detectors, developed in our Finland production facility, are used extensively in our industrial XRF analysers.

Supreme technology for high performance and flexibility in XRF analysis



# Introducing the X-Supreme8000

The **X-Supreme8000** is a compact, powerful, easy to use EDXRF spectrometer

The **X-Supreme8000** incorporates an application optimised Oxford Instruments' high reliability X-ray tube and high-performance Silicon Drift (SDD), or proportional detector.

This unique best-in-class combination gives highest performance with lowest detection limits, and provides a winning integrated solution for quality assurance and process control requirements.



# X-Supreme8000 As easy as...

# X-Supreme

## Comprehensive analysis

The X-Supreme software provides simplicity of operation for routine analysis, with flexibility for qualitative, semi-quantitative and full quantitative analysis

### 1 Prepare sample



#### Minimal or no sample preparation

- No weighing or volumetric measurements
- No potentially dangerous chemicals
- Non-destructive analysis

### 2 Place sample on tray



#### Easy loading

- 10 positions for time saving unattended operation
- Unique design guarantees high precision, consistent, repeatable results from every tray position
- Tested to 1 million cycles, fully loaded – equivalent to 15 years of operation at 200 samples per day

### 3 Press Start key



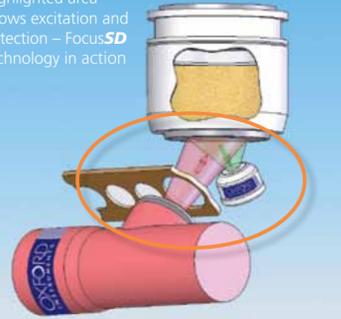
#### Rapid results

- Simultaneous single or multi-element analysis with 'Live Updates' – results obtained 5 seconds after measurement starts, allowing a rapid assessment to be made
- Results obtained using empirical calibrations for highest accuracy and traceability. Optional Standardless (Fundamental Parameter) Analysis where no or very few standards are available
- Field proven, rugged and reliable operation on a 24/7 basis carried out by laboratory or shift personnel

Results – save, print or send!



Highlighted area shows excitation and detection – FocusSD technology in action



### Speed, accuracy and long term reliability – FocusSD technology

- Application optimised, high performance solutions
- Oxford Instruments' X-ray tubes with W, Pd or Ti target and state of the art high resolution large area Silicon Drift (SDD) or proportional detector

### Unattended operation

- 10 sample positions with ability to measure QC sample during run giving total confidence in analytical results
- Sample spinner (optional) – reduces errors due to sample preparation, particle size and inhomogeneity
- Optional large trays for holding 51.5 mm (2") diameter steel ring for cement application, or 47 mm diameter filter samples
- Range of Oxford Instruments' sample holders for easy sample loading

### Minimum bench space

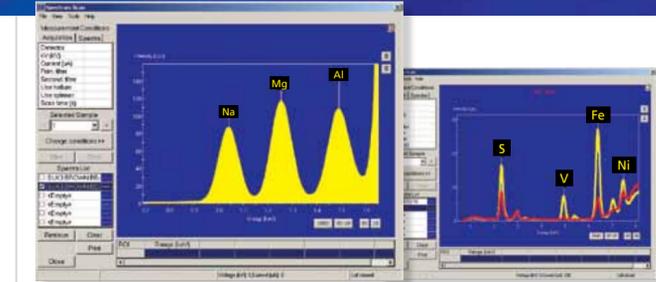
- Integrated PC – compact
- Large, easy to read colour graphics for clarity and ease of use
- Touch screen display (optional) for simple and rapid data input
- Industrial designed high performance, reliable embedded PC with Windows software

### Easy communication

- Easy access USB ports on side/underneath PC module for peripheral devices
- Ethernet connection for: transmission of results, interface to Laboratory Information Management System (LIMS) or remote operation and diagnostics

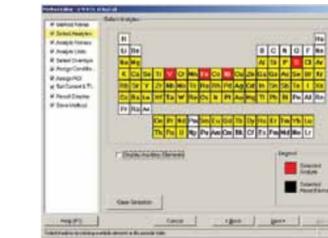
### Rugged and robust design

- Sealed membrane keypad resistant to dust, oils, solvents etc.
- Internal 'wind tunnel' design –ensures no dust ingress to main spectrometer
- Secondary easy-to-change safety window for liquids/powder analysis protects the instrument in the event of sample leakage



#### Investigation (qualitative analysis)

- FocusSD – unique elemental sensitivity and separation
- Multi-element X-ray spectrum obtained in seconds
- High resolution, high performance



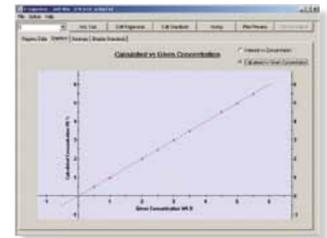
#### X-Supreme method Wizard

- Simple step-by-step setup
- Straightforward editing



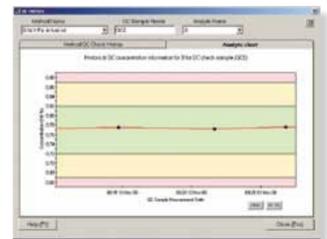
#### Routine Analysis (for production staff)

- Helpful hints for advice on good practice
- QC sample measurement ensuring high quality analysis
- SMARTCHECK software allowing operation 'by anyone'



#### Calibration (Quantitative Analysis)

- Regression – intensity, ratio, background corrections etc.
- Highest accuracy and traceability of analysis



#### Quality control

- Monitoring of instrument performance
- Powerful graphical/numerical QC display ensures high analytical performance

# SUPPORT

## ○iService® and worldwide customer support

Oxford Instruments Customer Service recognises there are many decisions to make when choosing the right product and company with which to partner. It is not just about superb instrument functionality or the rugged design of the analyser. The **○iService** teams are aware of the necessity to demonstrate our depth of knowledge, skills, experience and expertise with regard to supporting our customers.

Oxford Instruments offer a range of support packages that provide you with the level of service you require:

- Extended warranty contracts
- Tailored service support contracts
- World class training academy
- Technical help desk support
- Genuine approved Oxford Instruments spare parts
- Consumable products
- Service repair at **○iService** facility

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