



- Intuitive and easy to use TEAM™ software
- Compact spectrometer design for easy installation on standard EDS ports
- Lightweight
- Standard with five diffractors optimized for any application
- Fitted with a set of X-ray mirrors to produce an intense parallel X-ray beam
- Optimized to cover low energy applications - ideal for excitation voltages of up to 5 keV

The Low Energy X-ray Spectrometer (LEXS) is a wavelength dispersive X-ray spectrometer (WDS), which features X-ray optics designed for parallel beam operation. The high collection optics provide maximum efficiency for light elements, especially Be, B, C, N and O, with a total range of operation from 80 eV to 2.4 keV. The compact design means that the LEXS can be easily installed on a standard EDS port and provides a perfect complementary tool to EDS analysis. Utilizing intuitive TEAM™ WDS software, the LEXS ensures improved quantification and detection limits, which guarantee the best results for your materials analysis.

Scanning Modes

The LEXS can perform a scan over the entire energy range of the spectrometer (80 eV - 2.4 keV).

Scanning mode options include:

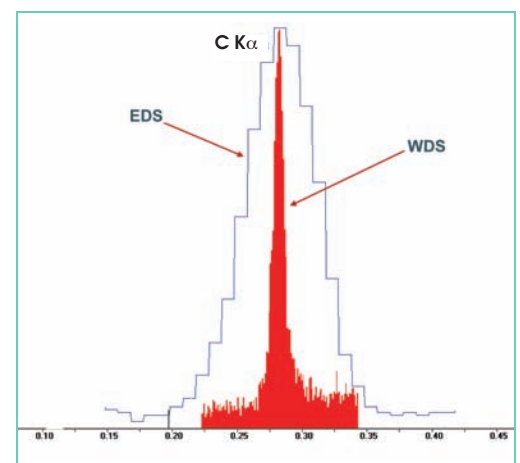
- Select one or many EDS elements for an automated scan acquisition of each
- Select an application specific scan range using spectral Swipe Mode or textual input
- Step size and speed per step is user selectable
- Peak and background mode for a selection of elements
 - Selected from a periodic table interface
 - Software suggests diffractor, peak and background positions

Qualitative and Quantitative Analysis

TEAM™ WDS with Smart Quant provides the analyst with both qualitative and quantitative measurements. EDS and WDS data can be collected simultaneously and overlaid for easy qualitative confirmation. The analyst can select which source per element (EDS or WDS) for quantitative calculations to improve precision and detection limits.

Smart Focus

The Smart Focus routine is a unique feature of TEAM™ WDS. The automated routine adjusts the sample position to focus the WDS signal and thereby enable the optimum performance of the spectrometer.



C in SIC showing superior resolution of WDS compared to EDS

Specifications

- Compact spectrometer design:
250 mm x 250 mm x 150 mm
- Lightweight: 22 lbs (10 kg)
- Optimized for low energy applications: element energies from 80 eV to 2.4 keV (Be K to S K)
- Elemental coverage
Be to S - K lines
Sc to Mo - L lines
La to Bi - M lines
- High resolution performance down to 11 eV at C
- Standard with TEAM™ WDS Software Suite
 - Smart Focus
 - Smart Quant
 - Smart Standards

Features and Benefits

Compact Design

- Fits all SEM chambers with available high angle port
- Installs on standard EDS port - no special chamber or port required
- Easy upgrade path to add WDS to an existing EDS system

Sensitivity

- Combination of X-ray optics and compact design results in superior count rates

Ease of alignment

- Improves operation, performance and accuracy of data

Seamless integration with EDS and easy to use software

- EDS users can easily operate WDS
- Improved X-ray microanalysis

Conclusion

TEAM™ WDS Analysis System with the LEXS enables the capture of the highest count rates providing rapid X-ray analysis at the highest spectral resolutions available for critical low energy X-ray lines. The easy to use TEAM™ software interface ensures reliable results for all users and provides smart insight into low energy microanalysis.

Available Diffractors for LEXS

2d=197	For very low energies, 90 eV to 280 eV. Covers Be, B and C.
2d=120	Primarily useful for C, providing extremely high count rates.
2d=80 Sc	Optimized for N; also works well for C.
2d=80 Cr	Optimized for Ti (L) line; also works for N and Cl. For the Ti (L) line it provides four to five times the count rate of the 2d=80 Sc.
2d=60	Well suited for O and F; works for energies from about 400 eV up to 1000 eV. Very useful for transition metals L lines.
2d=30	Useful for energies above 1000 eV to approximately 2700 eV. Particularly good for Mg and Al. It works for higher energies giving approximately twice the count rates of PET.
PET	Useful for energies from 1.4 keV to 3 keV. Higher spectral resolution than '2d=30'.

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