

# Bench Top EDXRF Spectrometers X-Calibur & X-Cite



Light Elements Starting  
from Carbon

Detector Resolution  
Down to 123eV

Detection Levels from  
sub-ppm to 100%

Fast and  
Non-Destructive  
Analytical Method

- Non-destructive elemental analysis C(6)-Fm(100) from Sub- PPM to 100% concentrations
- Six customizable filters for fast and accurate determination of trace and minor elements
- Down to 123eV resolution
- Robust design, compact geometry
- Sample tray with 8/16 positions
- Easy to operate due to the proprietary nEXt™ software package
- Silicon Drift Detector (SDD) enables extremely high count rate applications with excellent energy resolution, suitable for both high and low Z elements
- Optional: SDD LE thin window for improved light elements analysis

# X-Calibur & X-Cite

Xenometrix's bench-top Energy Dispersive X-Ray Fluorescence (EDXRF) spectrometers offer a cost-effective solution in today's market for elemental analysis.

The compact spectrometers fit comfortably on a traditional laboratory bench and include a fully integrated computer system.

Xenometrix's bench-top spectrometers use a high resolution detector, optional software integrated camera and a powerful X-Ray tube in order to accommodate samples of various sizes and types.

The unique front - anode geometry of the X-Ray tubes, combined with an advanced optical design, permits extremely close coupling with the sample resulting in increased sensitivity.

The robust design make the X-Calibur ideal for a mobile laboratory, and it meets MIL 810E specifications for shock testing. The analyzer provides non-destructive qualitative and quantitative determination of C(6) through Fm(100), which results in an exceptional product, capable of delivering powerful analytical results now and into the future.

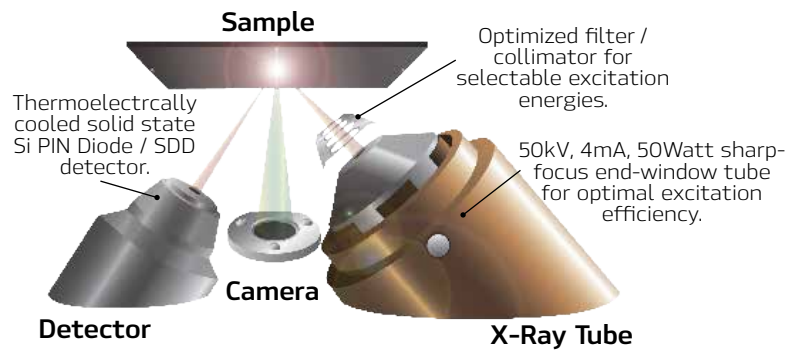
## Silicon Drift Detector (SDD):

The Silicon Drift Detector enables higher count rates, improved resolution, down to 123eV and faster response to minimize operational down time.

SDD LE: optional Ultra-thin detector window provides superior performance for low Z elements (Light Element) analysis.

## PD (Pin Diode) Detector:

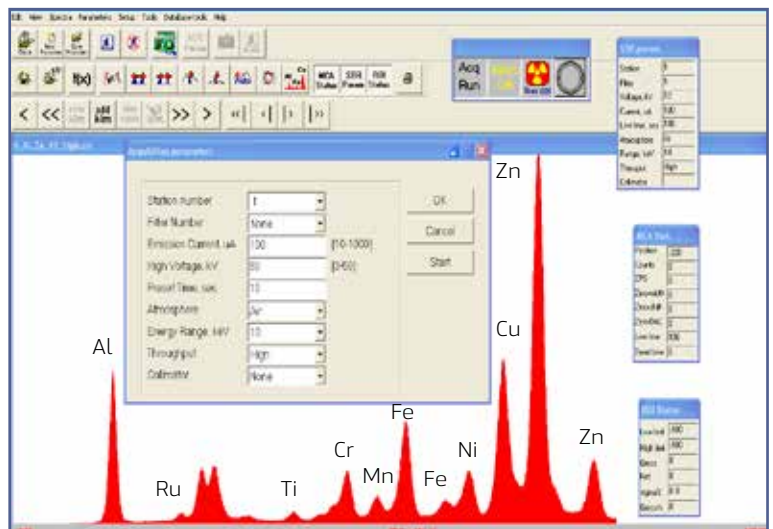
A basic and reliable detector, down to 150eV resolution.



# Software Environment (GUI)

Simple, Straight Forward, User Friendly nEXt™ Platform.

Implementing Easy nEXt software package allows the system to operate either in a "stand alone" mode or in a "client-server" configuration, providing Pass/Fail indication for each element being measured.



# System Specifications

System Specifications	X-Cite	X-Calibur	X-Cite	X-Calibur	X-Calibur
Detector Type	Pin Diode (Si-Pin) Detector		Silicon Drift Detector (SDD)		SDD LE
Measurement Capability					
Detectable Range	Na(11) - Fm (100)		F(9) - Fm(100)		C(6) - Fm(100)
Detectable Concentration	ppm -100%		sub ppm -100%		
X-Ray Generation					
X-Ray Tube	Rh/Ag/Mo/W/Pd anode				
X-Ray Source	35kV, 9W	50kV, 50W	40kV, 18W	50kV, 50W	
Excitation Type	Direct with filters				
Stability	Precision 0.1% at ambient temperature				
X-Ray Detection					
Detector	Thermoelectrically cooled PIN diode		SDD version		
Resolution (FWHM)	155 eV ± 10eV at 5.9 keV.		125eV ± 5eV		
Window Type	Be				Light element optimized thin window
General Features					
Autosampler	8/16 positions				
Work Environment	Air/ Vacuum/ Helium				
Tube Filters	6 software selectable (customized)				
Power Supply	110-230VAC 50/60Hz				
Pulse Processing	Digital multi-channel analyzer (DPP)				
System Dimensions (L x W x H, cm)	Unpacked: 55 x 55 x 32, Packed: 80 x 80 x 65				
System Weight	50kg (net), 90kg (gross)				
Chamber Dimensions	22 x 22cm, H=5cm				
Computer	Integrated PC				
Software					
Operating Software	nEXt™ analysis package, running under Microsoft Windows™ OS including basic fundamental parameters software				
Control	Automatic control of excitation, detection, sample handling and data processing				
Spectrum Processing	Automatic escape peak and background removal. Automatic peak deconvolution. Graphical statistics				
Quantitative Analysis Algorithms	Multi-element regression with inter-element corrections (six models available). Gross, net, fit and digital filter intensity methods				
Reporting	User-customizable data print out				
Options at Additional Cost	16 pos. carousel autosampler. Sample spinner. Professional fundamental parameters. CCD camera, Robust Casing, Shock absorbers for mobile laboratories				

# Key applications

- **Polymers:** plastics raw material analysis, PVC, additives, traces and others
- **Mining & Minerals:** cement, limestone, sand, clays, bauxite, phosphate rock, gypsum and others
- **Petrochemical:** Sulfur and ULS in fuels, lube oils monitoring, additives, wear metals and others
- **Metallurgical:** research and quality control of the various metal industry processes of stainless steels, cast irons, metal sorting and others
- **Environmental:** wastewater, RoHS compliance, air pollution, soils & grounds, emission control and others
- **Coating Thickness & Thin Films:** analysis of multilayer coatings, steel coating, impurities and others
- **Forensics:** evidence analysis, materials matching, explosives and others
- **Food, Cosmetics and Pharmaceutical:** additives control, raw materials, hazardous metals, packaging quality and others
- **Academic Research:** academic studies of material sciences, chemical engineering, electronics and others



## Xenemetrix

**Worldwide Distributions:**

North America, Latin America, Europe, Asia, Australia, Africa & Middle East

Xenemetrix is a leading designer, manufacturer and marketer of Energy-Dispersive X-Ray Fluorescence (EDXRF) systems. With more than 30 years experience, Xenemetrix continues to develop highly innovative technologies and solutions suitable for

today's ever-growing analytical challenges. Xenemetrix combines the latest technological developments with innovative engineering, to provide cost-effective solutions to a wide range of industries and applications.

