Xenemetrix
The Power to Change Energy Into Information

P-Metrix

EDXRF Portable Spectrometer

Taking the laboratory
to the field

Bridging new frontiers in Lab - to Field analysis

- High performance - 50kV and 10W
- The largest testing chamber
- Touchscreen & Sample camera
- Battery powered
- Light weight - 14Kg
- Unfolds to benchtop in seconds

Laboratory Quality with Fast Field Results

The P-Metrix is engineered to provide a portable field laboratory with safe and superior Energy-Dispersive X-Ray Fluorescence (EDXRF) quantitative and qualitative analysis. P-Metrix is a high-power analyser that incorporates performances and safety of a top-grade EDXRF benchtop analyser, combined with easy mobility and cost-effective benefits of a portable device and field engineered.

Non-destructive elemental analysis
Quantitative and qualitative analysis using standards and standardless (FP) methods

Silicon Drift Detector (SDD)
SDD with higher-count rate and resolution, down to 125eV for improved analysis, detection range from Na (11) - U (92)

X-Ray source
Excitation of 50kV, 10W, 400 μA with Rh anode LOD from ppm to 100% concentrations, providing onsite lab quality excellent performance for complex field applications

Tube filters
Variety of six adjustable tube filters for High performances

Automatic calibration
System automatic calibration upon materials for ambient atmosphere adjustment

Large testing chamber
The largest sealed testing chamber available for portable XRF systems

User-friendly operation
industrialized touchscreen and fully integrated PC

CMOS sample camera
Integrated camera for full identification of the area of interest

Analytix advanced SW package
powered by Analytix advanced SW analysis package for fast, easy-to-use performance for immediate action and results in the field

Battery operated
Field mobility and sealed rugged ergonomic carrying case

Standalone portable lab
Field working station - P-Metrix opens into a standalone, accessible portable lab

Self-service
Designed for self-service with low maintenance, easy replacement of instruments components such as: detector, tube, MCA, controller and PC board

P-Metrix Portability

P-Metrix **weighs only 14 kg** and due to its ergonomic design it is the perfect choice for field laboratory use. P-Metrix optional **sealed rugged ergonomic carrying case opens within seconds into a standalone, stable, accessible portable lab** with comfortable automatic opening and closing, providing bench-top quality ease of use at the field. **P-Metrix can operate upon battery (up to 4 hours)** as a standalone system in the field. The battery can be charged by a car charger, by extra batteries and by an optional external charger. All options are available to support extended period of working hours in the field.

High Level Performance and Power

- **Light weight - 14 Kg**
- **Largest chamber size in market**: 30.4 X 26.45 X 10 cm
- **X-Ray tube** of 50kV, 10W, 400 µA - delivers extraordinary limits of detection (LOD's)
- **Silicon Drift Detector (SDD)** enables extremely high count rate applications with tube that enables excellent energy resolution, down to 125eV elemental analysis range from Na (11) - U (92)
- **Six-position primary beam filters** reduces noise allow for optimal detection performance across the periodic table
- **Touchscreen with on-board PC** offers full operation of the P-Metrix in any environment including: **SSD hard drive, GPS, GPRS, WiFi, Mini HDMI and USB interfaces**
- **Micro spot size** that can reach down to ~0.3 mm
- **Sample video camera** for observation of samples
- **Sample in-tray sensor**, indicates that the sample is left in the chamber once the system is off
- **Helium and vacuum atmosphere** to increase capability of detecting light elements

Security and Safety

- System is active only when chamber is closed
- Accelerometer included to abort measurement if the system has been moved during process
- Built-in X-Ray shielding
- Password protection
- Sample in tray sensor

P-Metrix Applications

Petrochemical & Petroleum Elemental Analysis

P-Metrix provides accurate determination of trace to percent levels of elements in fuels, oils and lubricants. Our superior solutions cover the full production process, from research and development stage up to processing and quality control.

To be used for a wide variety of Petrochemical & Petroleum applications in order to identify elements and determine the actual elemental concentrations present in various matrices (solid, powder, and liquid samples). P-Metrix offers a low cost quantitative analysis method that achieves fast results with no need for sample preparation, and comply with numerous ASTM standards and regulations.

Key applications include:

- ASTM D7212, D7220, D7039, D7751, D5453 and ISO 8754, 13032, 20846, 20884, 13032, 20847, IP531
- ASTM D4294 (sulfur analysis)
- Monitoring of Mo, Ba, Mn
- ASTM D6481 (unused lubricating oils): Ca, P, Zn, S
- Monitoring of wear metals: Sb, Sn, Mo, Ti, Ni, Cd, Fe, V, Pb, Cr, Cu
- Analysis of P, S, Ca & Zn in Lube Oil

Mining & Geochemistry Elemental Analysis

P-Metrix provides on-site quantitative analysis of mining and minerals materials. The portable system reduce the time for receiving results from days to seconds, making it ideal also for the exploration industry, delivering excellent precision and accuracy levels for critical measurements, including low LODs.

Specialized applications:

- Iron, uranium
- Coal, diamonds, limestone
- Oil shale, rock salt and potash
- Precious metals – gold (Au), silver (Ag), platinum (Pt), palladium (Pd)
- L-lines, rare earth elements
- Cassiterite, cadmium and antimony, CnO2, Cd, Sb
- Light elements, such as, Mg, Al, Si, P, S and Cl

Metals & Alloys Elemental Analysis

P-Metrix plays a dominant role in quality control of the various metal industry processes. Non-destructive elemental analysis can be performed in each step of the process, from ores to finished alloys.

System is capable of easy and fast sorting between different steel grades, as well as forming a convenient tool for QA processing, providing immediate results.

Alloy analysis using P-Metrix, supported by sophisticated analytical libraries has become a standard practice. P-Metrix identifies most alloys and performs complete chemical analysis within a few seconds, providing quick and easy sorting and identification of different grades of alloys.

Grades of alloys:

- Iron and steel
- Low alloy and carbon steel
- Stainless steel
- Copper, brass\leaded, bronze, aluminium bronze\leaded, aluminium
- Nickel alloys, zinc alloys, cobalt alloys, titanium alloys
- Solders-tin, lead and silver

Food and Agriculture Elemental Analysis

Soil composition and use of fertilizers, as well as of nutrient uptake and levels of potentially toxic elements within the plants and crops, is critical within the agri-food sector.. EDXRF is an established analytical technique in this industry, the P-Metrix enables fast, accurate and precise measurement, providing qualitative and quantitative results.

Various minerals and metals are being added during the food production process for extra nutritional value, that must be closely monitored to comply with food administration regulations such as the FDA and the European Medicines Agency (EMA). This analysis also identifies undesirable additives and contaminations that may be found in raw and processed food.

Several well-known applications include:

- Iron in flour, rice and other grain
- Calcium in orange juice, cheese, and other foods
- Iron in powdered milk
- Aluminium and phosphorus in dough

P-Metrix Software: Analytix

- **Accurate,** comprehensive and easy-to-understand results.
- **Wide variety of applications**, adaptable to multiple tests performed within a short time and minimum configuration efforts.
- **Simple user-friendly GUI,** designed with a highly intuitive interface, that can be operated by different levels of users for a wide variety of elemental analysis tasks.
- **Client-server network operator mode:** real-time data transfer by Wi-Fi or GPRS, enables easy management of multiple systems at disperse global locations. Analysis can be easily performed onsite while results can be transferred to any distributed client.

Features

Fundamental Parameters analysis:
The fundamental Parameter method Enables standardless calibrations, correlates between the measured X-ray intensities and the elemental concentrations in samples, based on X-ray physics and measured values of fundamental atomic parameters in the ED-XRF region of the spectra.

Advanced quantitative & qualitative analysis:
Predefined customized procedures for quantitative and qualitative spectroscopic analysis.

Fast analysis:
Quick and accurate spectral acquisition and qualitative analysis with auto-peak identification.

Deep analysis:
Advanced spectral acquisition and qualitative analysis, with six different sequential acquisitions and pre-defined procedures included.

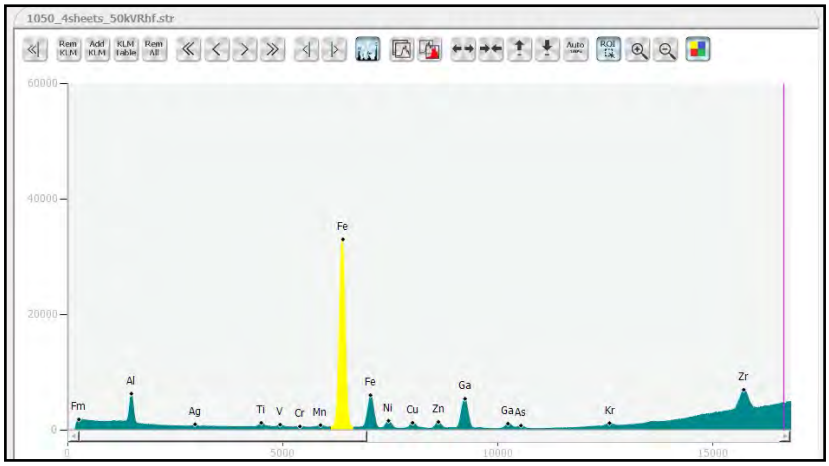
Libraries:
Defining alloy grade, resulting composition of elements, providing quantitative analysis, composition and other properties of the alloy material.

Auto-calibration:
Automatic energy shift correction calibration.

Automatic energy calibration:
Normalization, matching and validation of tube intensity.

Analysis results features:
Manual Peak ID, User Annotation, Overlap and ROI.

Client-server network operator mode:
The Analytix operator mode enables storing data in the "cloud" - Suitable for organizations that utilize multiple systems and require a central control for both application and system maintenance.



Client-Server Operator Mode

Analytix operator mode suits either compact portable analyzers that can easily be transported between sites, or a robust lab system that can be installed in a distributed laboratory.

Stand-alone / Client-server

Analytix operator mode can operate in a stand-alone mode wherein all data and results are stored locally, as well as in a client-server configuration wherein all results and data are updated in real-time or upon request to the company's HQ server. This enables easy management of multiple systems at disperses global locations and collecting data from different sites into the company's central server.

GPRS / Wi-Fi / LAN / GPS

Analytix software supports GPRS / Wi-Fi / LAN / GPS connectivity, that enable location-based data to be transferred immediately to the company's HQ server for reporting and monitoring.

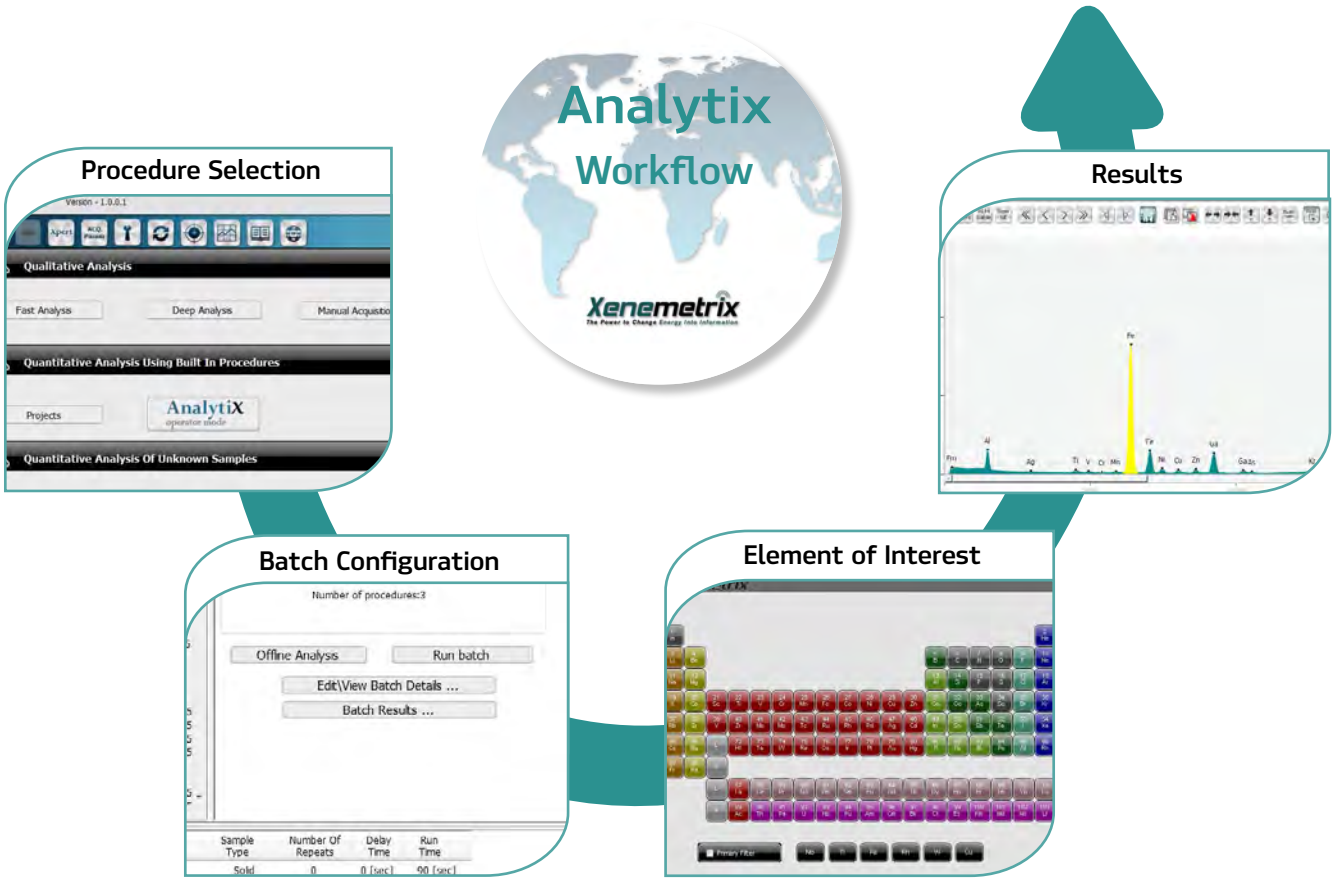
Fast processing

Analytix operator mode is an advanced software package with strong analytical capabilities. The user-friendly system enables an operator to perform multiple tests within a short time and at minimum effort.

Analytix Workflow

High-end ED-XRF solution with real-time analytic data collection - matching your analytical needs

Easy creation of analytic procedures



P-Metrix Technical Specifications

Detector	Silicon Drift Detector (SDD) with Be window resolution, down to 125eV
Excitation	X-Ray Source of 50kV, 10W, 400 µA with Rh anode
Elemental Analysis Range	Na (11) - U (92)
Detectable Concentration	ppm - %100
Weight	14 Kg (30 lb)
Dimensions	Transport: 40.2W x 30.2L x 24H cm Operation: 40.2W x 30.2L x 28.5H cm Chamber: 30.4W x 26.45L x 10H cm
Tube Filters	6 software selectable (customized)
Micro spot	Collimator 0.3 mm - 1 mm
Sample Camera	CMOS video camera HD
Work Environment	Air / Helium / Vacuum atmosphere
Power Supply	AC 220/100V power adaptor
Touchscreen	10.1`` capacitive touch screen HD
Hardware	Integrated PC, SSD hard drive, GPS, GPRS, WiFi, Mini HDMI, USB interfaces
Software	AnalytiX advanced package (Running under Microsoft Windows™ OS)
Standardless	Fundamental Parameters analysis, libraries
Options	**Excitation:** Rh \ Ag \ W \ Au anode
	Power Supply: ● 4 hour Li-ion battery (Standby 10 hours) ● 12 V DC car charging cable ● External charger
	Sealed rugged carrying case: ● Opens into a standalone, accessible portable lab ● Automatic opening \ closing sequence ● Semi-automatic folding sequence
	Sample cup holder with sample in-tray sensor - indicates that the sample is left in chamber once system is off

Xenemetrix Headquarters

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Xenemetrix is a leading designer, manufacturer and marketer of Energy-Dispersive X-Ray Fluorescence (ED-XRF) 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.

Worldwide Distributions:

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