



BENCHTOP PRECIOUS METAL AND GOLD ANALYZER SCOPEX PG5

A Trusted Instrument For Accurate Precious Metal and Gold Analysis

ScopeX PG5 Benchtop Precious Metal and Gold Analyzer is a cutting-edge, down-irradiation design analyzer offering exceptional ease of use and reliable results.

With no need for sample preparation, it ensures fast and accurate detection of precious metals such as gold, silver, platinum, and palladium, as well as non-noble alloys and gold-plated materials. This analyzer is highly efficient, providing quick analysis of elemental concentrations with strong detection capability. Its versatility makes it ideal for industries including gold and silver purity certification centers, gold processing plants, recycling, and jewelry retail.

APPLICATIONS

ScopeX PG5 Analyzer – Precious Metal Recycling

Precious Metal Recycling Industry

ScopeX PG5 Analyzer – Jewelry Processing

Jewelry Processing Industry

ScopeX PG5 Analyzer – Pawn Industry

Pawn Industry

ScopeX PG5 Analyzer – National Quality Inspection

National Quality Inspection Agencies

ScopeX PG5 Analyzer – Universities and Labs

Universities and Laboratories

ScopeX PG5 Analyzer – Other Industries

Other Related Industries

FEATURES

NDT (Non-Destructive Testing): No sample preparation required, offering simple, convenient, and fast non-destructive testing of precious metals.

Sample Flexibility: The ScopeX PG5 can easily test samples of various shapes, including small components like connectors, buttons, inlays, and gemstone holders.

Multiple Safety Protection Devices: Equipped with high-voltage safety locks (automatic interlock), software cover-opening protection, anti-leak safeguards, a switch, and an all-metal enclosed body, the analyzer ensures the safety of operators by preventing radiation exposure from accidental operations.

Rapid Test: Qualitative sample identification in just 3 seconds, with test results available in 60 seconds. The analyzer provides precise test data down to the ppm (parts per million) level.

HD Imaging: Featuring a 5-million-pixel industrial-grade high-definition camera, the analyzer allows real-time monitoring of the test area without needing to open the cover. This enhances detection efficiency and automatically captures images of the sample for test report generation.

No Need for Liquid Nitrogen: Utilizing advanced Peltier electric cooling technology, the ScopeX PG5 eliminates the need for liquid nitrogen, simplifying equipment use and reducing both maintenance costs and complexity.

THEORY & METHOD

Product Principle

The sample is exposed to X-rays, which excite the atoms and cause them to emit X-ray fluorescence. This process typically ejects electrons from the inner K and L electron layers of the elemental atoms. These vacancies are then filled by high-energy electrons from outer layers. As the high-energy electrons move into lower-energy orbits, they release excess energy in the form of X-ray fluorescence.

The spectral lines emitted contain distinct characteristics of each element, much like a fingerprint, and are not affected by the chemical valence state of the atom. The intensity of the radiation is directly proportional to the concentration of the element in the sample.

Benchtop Precious Metal and Gold Analyzer ScopeX PG5

High-performance hardware configuration

Product configuration

- One-Button Intelligent Operation:** The ScopeX PG5 offers a simple one-button operation that completes the entire analysis process in just a few seconds. This easy-to-use feature allows non-technical personnel to quickly master the system, ensuring fast and efficient results.
- Accurate and Reliable Quantitative Analysis:** With advanced XRF analysis software and integration of calibration curve methods, basic parameter methods (FP), and other techniques, the ScopeX PG5 guarantees highly accurate test data.
- Correction Curve Method:** The instrument determines the influence coefficient based on the analysis of standard samples that are similar to the sample being tested. The calibration model is straightforward and easy to use.
- Basic Parameter Method (FP Method):** This method uses modeling and physical quantity calculations to determine parameters based on actual detected substances. It does not require high-quality standard samples and is suitable for situations where corresponding standard sample material is unavailable.
- Easy Customization:** The ScopeX PG5 allows for easy customization of test conditions and thresholds, enabling personalized screening of different materials and elements to meet specific detection needs.
- Multiple Data Output Options:** Analytical data can be exported in PDF or Excel format. When exporting to Excel, you can also review and edit the data in detail within the table.

TECHNICAL SPECIFICATIONS

Sample Chamber Size	320×480×130mm (W×D×H)
Size of Main Unit	330×580×360mm (W×D×H)

Weight	40KG
Element Range	Al(13)-U(92)
Test Range	0.01%—99.99%
Test accuracy	±0.03% (999Au)
Test Object	Solid, Liquid, Powder
X-ray Tube	50 W(50kV, 1mA)
X-Y platform	Optional
Detector	Si-Pin detector(High sensitivity SDD detector optional)
Collimator	Fixed collimator, multi-collimator optional
Camera	High-resolution CMOS color camera, 5 million pixels
Filter	Filter Fixed primary filter, multiple filters optional
Voltage	AC 220V±5V 50Hz (110V is also available)
Rated power	100W
Temperature	10°C—35°C
Relative humidity	40%—70%

Benchtop Precious Metal and Gold Analyzer ScopeX PG5



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

