



X RAY FLUORESCENCE
INSTRUMENT

PRODUCT BROCHURE

CONTACT US

Arihant Maxsell Technologies Pvt Ltd

Ameen Manors, A Block 1st Floor,
No. 138, Nungambakkam High Road,
Chennai - 600034
Phone: 044-40470000 / 9003988555

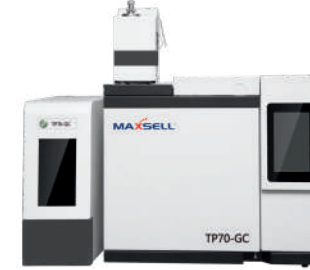
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TIMELINE



ARIHANT MAXSELL
TECHNOLOGIES
PVT LTD
FOUNDED

PRODUCT LAUNCH
THE CLASSIC GOLD
ANALYZER
Aurum5

PRODUCT LAUNCH
GOLD ANALYZER
XF-A7/S7

SOLUTION LAUNCH
ROHS2.0 SOLUTION
TP70-GC PY
QUALIFIED BY TÜV
MANAGEMENT SERVICE
according to ISO9001:2015

NEW GENERATION
ROHS ANALYZER
XF-T7

PRODUCT LAUNCH
GOLD ANALYZER
Aurum5 - iSeries Range

2004

2012

2015

2017

2018

2020

2021

2022

2023

2024-25

PRODUCT LAUNCH
GOLD ANALYZER
Aurum &
Aurum SDD Range

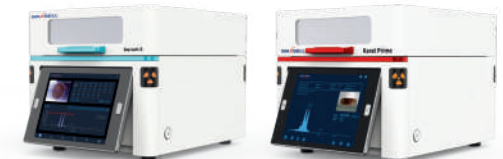
PRODUCT LAUNCH
ROHS ANALYZER
XRF-T6/EXF-W7

PRODUCT LAUNCH
THE PORTABLE
GOLD ANALYZER
Desire / Desire Plus

GOLD
ANALYZER
LAUNCH
Aurum5 Pro Range

PRODUCT LAUNCH
COATING
THICKNESS ANALYZER
XF-P1/XF-P3

PRODUCT LAUNCH
GOLD ANALYZER
Aurum6





COMPANY PROFILE

Maxsell is your partner for repeatable and absolutely reliable measurement technology in the field of X-ray fluorescence analysis. With our Maxsell X-RAY systems, we offer you Modern solutions for your Testing and measuring Needs.



Founded

2004



Indian Customers

6,000⁺



Global Sales

20,000⁺

■ What can we do?

RoHS3.0 Solution
Precious Metal Analyzer
Gemstone Composition
Analyzer

Silicone Oil Coating Analyzer
Mineral & Powder Analyzer
Coating Thickness Analyzer

- Production centers in Shenzhen, China, Malaysia & Thailand
- R&D Center, QC Lab and Application Center in Chennai, India



QUALITY CONTROL



High-power microscope detects beryllium window quality of detector



Salt spray tester tests the corrosion resistance of sheet metal



2.5-dimension measuring equipment measure the quality of collimator



Power consumption and ripple detection of switching power supply



Aging testing for verifying the quality of PCB



Oscilloscope detects PCB signal



IPQC inspection to make sure the quality of equipment



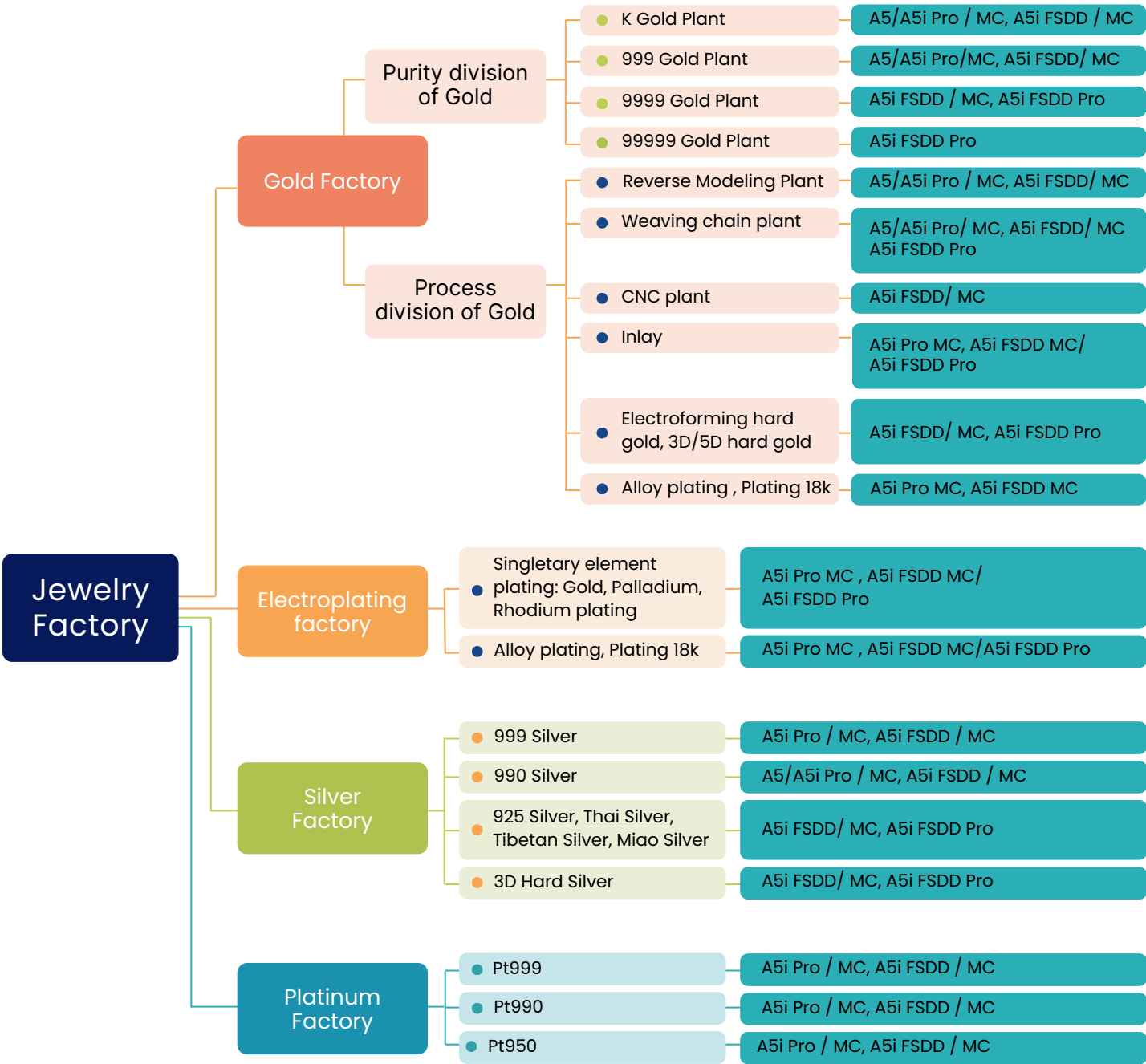
Color extractor detects the paint color difference of sheet metal



PRECIOUS METAL ANALYZER SOLUTION

The application scenarios in the field of precious metal analysis are quite complex, and Maxsell launched a series of different Product lines for different applications.

Applications		Recommended Instruments	Comments
Recovery		Aurum 5 / 5i Pro , Aurum 6	High cost performance
Jewelry manufacturing factory	Common Jewelry	Aurum 5i Pro / FSDD Pro	Higher accuracy/Stability
	Smaller sample/ Inlaid jewelry	Aurum 5i Pro MC/ 5i FSDD MC / Aurum 5i FSDD Pro	Smaller real focus
	Gemstone	Aurum 5i Pro /5i Pro MC, Aurum 5i FSDD MC, Aurum 5i FSDD Pro	Analysis of Gemstone Composition: Natural and Artificial
	Coating	Aurum 5i Pro MC, Aurum 5i FSDD MC , Aurum 5i FSDD Pro	Composition and thickness analysis Simultaneously
	Liquid	Aurum 5i Pro /5i Pro MC, Aurum 5i FSDD & MC , Aurum 5i FSDD Pro	Analysis of ion concentration in electroplating solution
	99999 gold	Aurum 5i FSDD Pro	Quick analysis of high-purity gold
Jewelry showroom		Karat Pro Plus , Karat Prime, Aurum 6, Aurum 5i Pro / Aurum5i Pro MC,	Fast and easy testing with printing apt for Busy Gold Counters
Bankers		Karat Pro Plus , Karat prime , Aurum 6 , Aurum 5	Fast and Easy Measurements and Full API Integration Support





PRODUCT MODEL COMPARISON TABLE



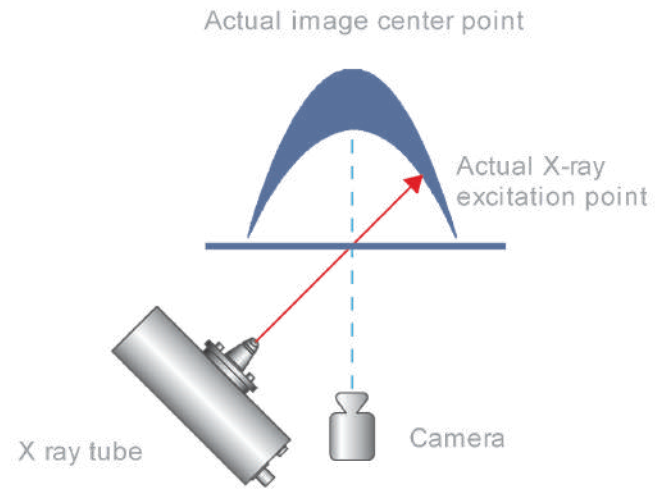
		Karat Pro plus	Karat Prime	Aurum 6	Aurum 5
Detector		Proportional Counter		AMPTEK X55 Si-Pin Detector	
HV power		50KV/1mA		50KV/1mA	
X-ray tube	Window	Glass		Glass	
	Target	tungsten	tungsten	tungsten	tungsten
	Focus	0.5mm	0.5mm	0.5mm	0.5mm
	Emit Angle	45°	45°	45°	45°
Collimator		Single	Single	Single	Single
Filter		Single	Single	Single	Single
Intergrated Computer		Celeron 2 Cores	Celeron 2 Cores	i3 10 Cores	i3 12 Cores
Touch Screen		Yes	Yes	Yes	No
Application	Metal	Yes	Yes	Yes	Yes
	Gemstone	No	No	No	No
	Coating	No	No	No	No
	Liquid	No	No	No	No
	Plating Alert	No	No	Yes	Yes
	API	No	Yes	Yes	Yes



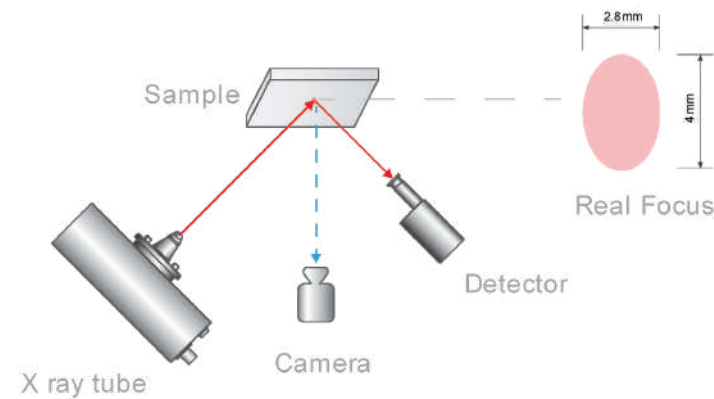
		Aurum 5 i Pro / Mc	Aurum 5 i FSDD	Aurum 5 i FSDD mc	Aurum 5 i FSDD Pro
Detector		X55 Si-Pin Detector	AMPTEK X55 FSDD		
HV power		50KV/1mA	50KV/1mA		
X-ray tube	Window	Glass	Glass		
	Target	tungsten	tungsten	tungsten	tungsten
	Focus	0.5mm	0.5mm	0.5mm	0.5mm
	Emit Angle	90°	90°	90°	90°
Collimator		Single	Single	Double	Multiple
Filter		Single	Single	Single	Three
Intergrated Computer		i5 12 Cores	i5 12 Cores	i5 12 Cores	i5 12 Cores
Touch Screen		No	No	No	No
Application	Metal	Yes	Yes	Yes	Yes
	Gemstone	Yes	Yes	Yes	Yes
	Coating	4 Layers	4 Layers	4 Layers	4 Layers
	Liquid	Yes	Yes	Yes	Yes
	Plating Alert	Yes	Yes	Yes	Yes
	RoHS	No	No	Yes	Yes



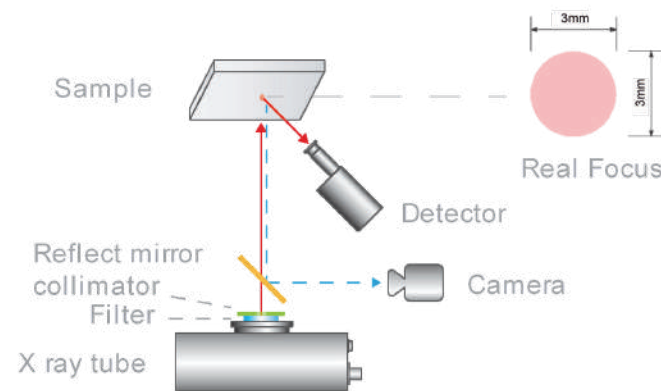
THE INFLUENCE OF OPTICAL PATH ON XRF DETECTION



If the sample is concave or the center area of the Image is several millimeters higher than the bearing ring, then the actual detection area is offset

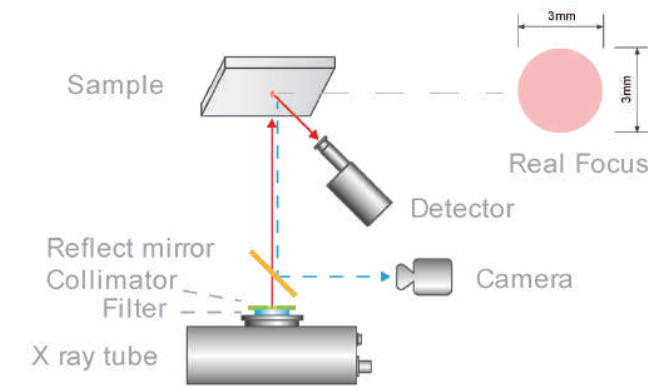


Aurum 5 / Aurum 6 Optical system

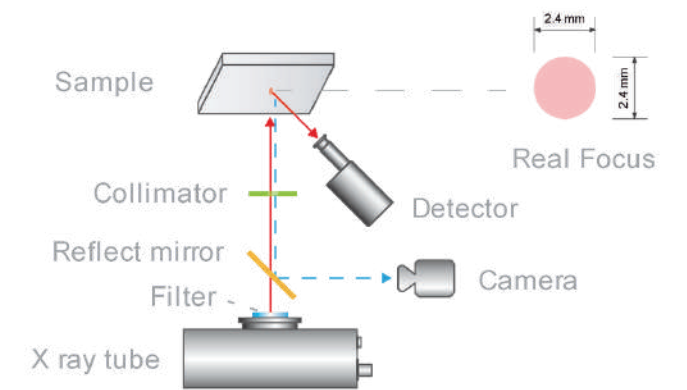


Aurum 5 Pro/Aurum 5 FSDD/FSDD Pro Optical system

Optical System Upgraded For Aurum 5 Pro / Aurum 5 FSDD/FSDD Pro

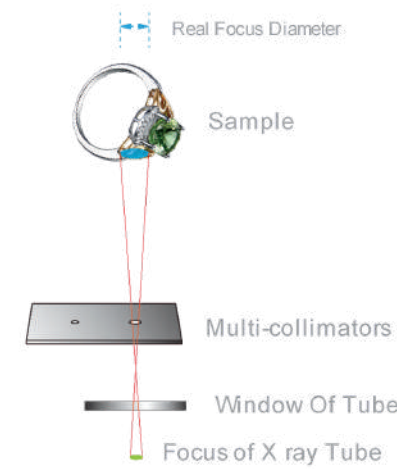


1st Generation vertical optical path
Aurum 5 Pro / Aurum 5 FSDD/FSDD Pro use

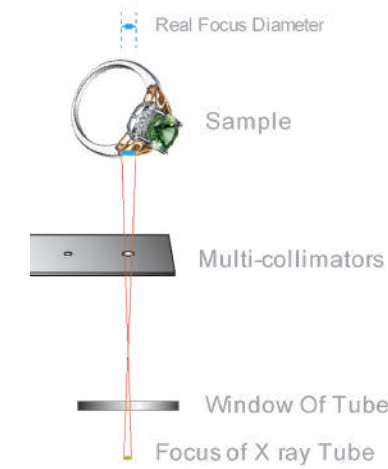


2st Generation vertical optical path 2024
Aurum 5 Pro / Aurum 5 Pro MC /
Aurum 5 FSDD/ 5 FSDD MC/FSDD Pro use

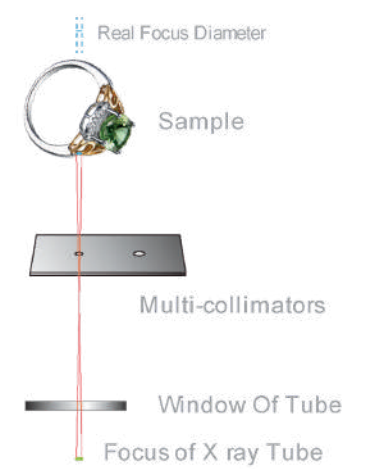
Typical Collimator Application



Aurum 5 FSDD Pro with
1.5mm collimator



Aurum 5 FSDD Pro 2024
with 1.5mm collimator



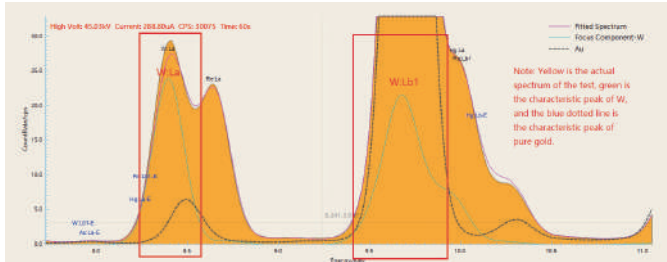
Aurum 5 FSDD Pro 2024
with 0.5mm collimator



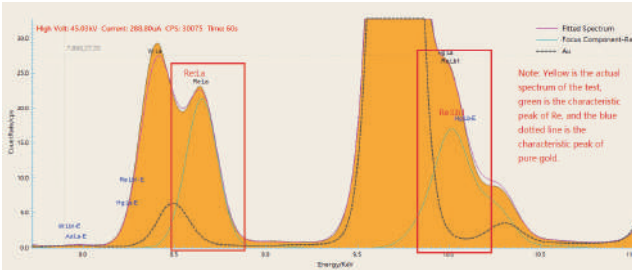
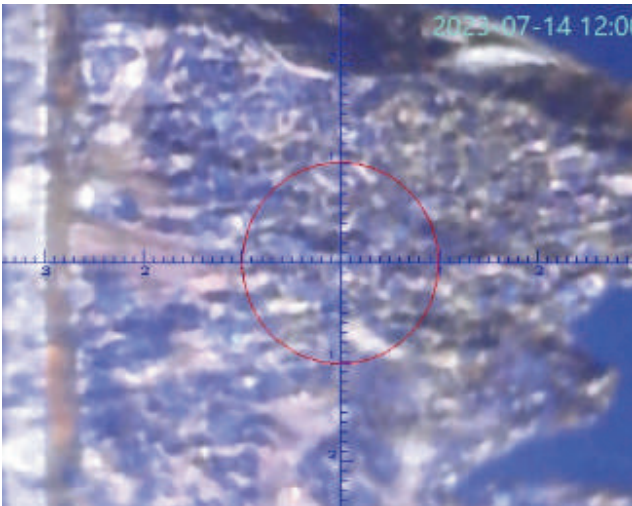
GOLD DOPED WITH RHENIUM AND TUNGSTEN

Recently, many old and impurity materials containing Rhenium and Tungsten emerged in the market, significantly impacting the gold recycling industry. Those customers who did not use the spectrometer analyzer

1. Typical impurity materials doped with Rhenium and Tungsten, black dots on the surface can be seen by eyes.



Like these impurity materials, the users of recycling business can see the Problem at a glance, because the black dots are dense. The characteristic peaks of Re and We can also be clearly seen on the spectrum shape detected by the spectrometer, and their detection content is relatively high.



Users can quickly spot Problems with this impurity material, even if they haven't melted it down or cut it for testing.

DISCOVER FP2.0: THE GAME-CHANGER IN GOLD PURITY TESTING

FP2.0 empowers Maxsell EDXRF to deliver unmatched gold analysis-no calibration, no compromise, just instant, precise results you can trust. Make every transaction bulletproof, whether you're a retailer, manufacturer, assayer, or gold buyer.



Feature	What It Means for You
Standardless Accuracy	No frequent calibration-always
Hardcoded Algorithms	Consistent purity checks, rain or shine
Smart Element Capture	Detects even subtle, trick alloys and plated gold
Automatic Optimization	Every reading micro-tuned for absolute reliability
High Stability	Years of unwavering, dependable results

FP2.0: Where science meets certainty. Turn every assay into a moment of confidence for your gold business.



COST EFFECTIVE SOLUTION OF GOLD PURITY TESTER



KARAT PRO PLUS

Accuracy

0.1% (999 Gold)

Operation

Easy

Cost

Lowest

Features

- Analysis elements: Gold, Silver, Copper, Platinum, Palladium
- Analysis range: 0.1%~99.9%
- Accuracy: $\pm 0.1\%$ (999 gold) / $\pm 0.3\%$ (K Gold)
- Detector: Proportional Counter
- X-ray tube Window material: glass window, Emit angle: 45°
- Supporting multi-point continuous test, high test efficiency
- 9.7-inch build-in integrated IPS display + capacitive touchscreen

Application

Metal





SMART SOLUTION FOR SMART SHOPS.

KARAT PRIME



Accuracy

0.1% (999 Gold)

Compact Design

Smaller size

Highlights

Integrated display and touchscreen

Features

- Analysis elements: Gold, Silver, Copper, Platinum, Palladium
- Analysis range: 1%~99.9%
- Precision: $\pm 0.1\%$ (999 gold) / $\pm 0.3\%$ (K Gold)
- Detector: Proportional Counter
- X-ray tube Window material: glass window, Emit angle: 45°
- Supporting multi-point continuous test, high test efficiency
- 9.7-inch 4K HDMI IPS display + Touchscreen + Tilting type - Premium Metal Casing
- Supports Integration - Weighing scale, Printer, API with billing software
- Sleek design with Pb Transparent Window for sample viewing helps in Building trust.
- Upgraded hardware - Digital HV, Xray safety locks, 360° side radiation indicator.
- Quick test key for saving time during rush hours.
- Special cooling fan helps in longevity of components and precision.

Application

Metal





**AFFORDABLE WITH SUPERB
ACCURACY.**

MXGT AURUM 5

Accuracy

0.03% (9999 Gold)

Upgraded 2025

**FP2.0
features**

Highlight

Classic



Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed at the same time
- Analysis range: 0.010%~99.99%
- Accuracy: $\pm 0.03\%$ (999 gold) / $\pm 0.1\%$ (K Gold)
- Detector: US AMETEK customized X55 Si-PIN detector
- X-ray tube Window material: glass window, Emit angle: 45°
- Supporting multi-point continuous test, high test efficiency
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results.

Application

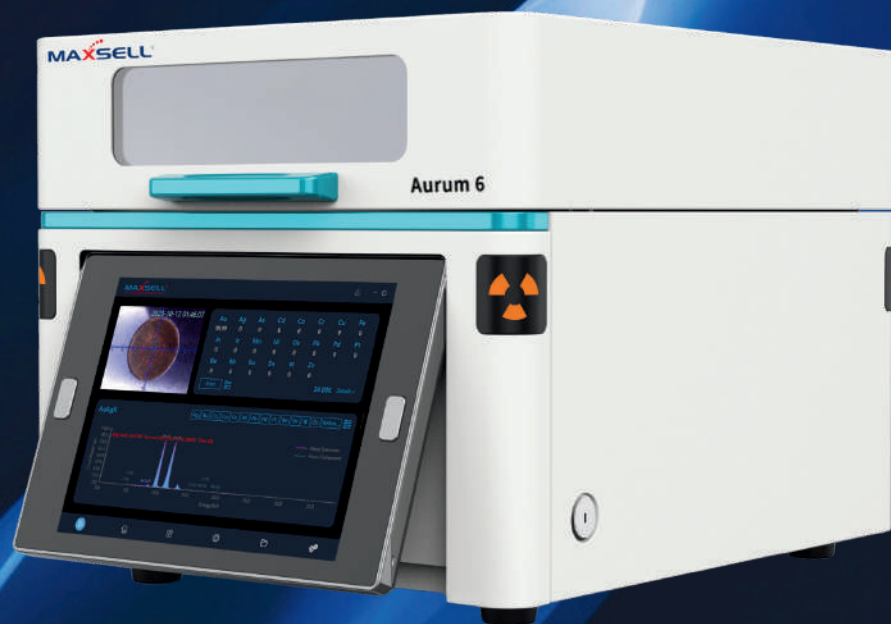
Metal





PERFECT FOR RETAILERS – SMART GOLD TESTER

AURUM 6



Accuracy

0.03% (9999 Gold)

Compact Design

Smaller size

Highlights

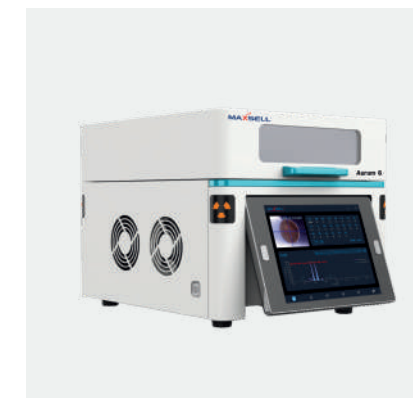
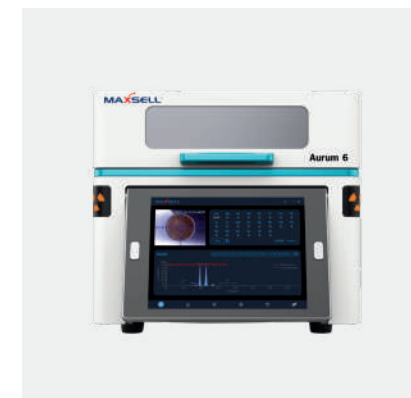
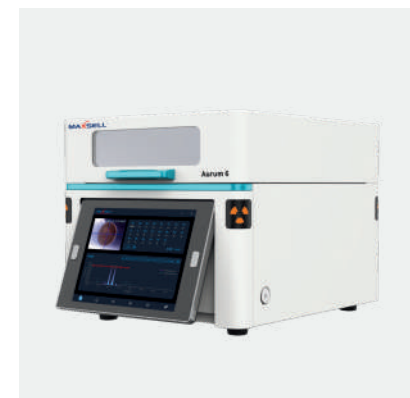
**Integrated display
and touchscreen**

Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed at the same time
- Analysis range: 0.010%~99.99%
- Accuracy: $\pm 0.03\%$ (9999 gold) / $\pm 0.1\%$ (K Gold)
- Detector: USA AMETEK X55 Si-PIN detector
- X-ray tube Window material: glass window, Emit angle: 45°
- Supporting multi-point continuous test, high test efficiency
- Sleek design with Pb Transparent Window for sample viewing helps in Building trust.
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results.
- 9.7-inch 4K HDMI IPS display + Touchscreen + Tilting type - Premium Metal Casing
- Supports Integration - Weighing scale, Printer, API with billing software
- Upgraded hardware - Digital HV, Xray safety locks, 4 side radiation indicator.
- Quick test key for saving time during rush hours.

Application

Metal





**BEST XRF IN PRICE TO
PERFORMANCE RATIO.**

Aurum 5 i Pro



Accuracy
0.01%
(9999 Gold)

Upgraded Optical System
A.Smaller X-ray focus spot
B.Adjustable camera focus

Highlights
**High cost
performance**

Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed simultaneously
- Analysis range:
Precious metal: 0.010%~99.999%
Coating:0.002um~80um Liquid: 10mg/L~200g/L
- Accuracy
Precious metal: $\pm 0.01\%$ (9999gold) / $\pm 0.1\%$ (K Gold)
Coating: RSD<2.5% Liquid:RSD<2.5%
- Detector: US AMETEK customized X55 Si-PIN detector
- X-ray tube Window material: glass window, Emit angle: 90°
- Supporting multi-point continuous test, high test efficiency
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results

Application

Metal

Liquid

Gemstone

Coating





TEST SIMPLE TO INTRINSIC JEWELLERY, NOW.

Aurum 5 i Pro MC



Accuracy

0.03%
(9999 Gold)

Upgraded Optical System

A.Smaller X-ray focus spot
B.Adjustable camera focus

Highlights

Multi-collimators,
test smaller spot

Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed simultaneously
- Analysis range:
Precious metal: 0.010%~99.999%
Coating:0.002um~80um Liquid: 10mg/L~200g/L
- Accuracy
Precious metal: $\pm 0.01\%$ (9999gold) / $\pm 0.1\%$ (K Gold)
Coating: RSD<2.5% Liquid:RSD<2.5%
- Detector: US AMETEK customized X55 Si-PIN detector
- X-ray tube Window material: glass window, Emit angle: 90°
- Supporting multi-point continuous test, high test efficiency
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results
- Comply with ISO23345 and ISO3497

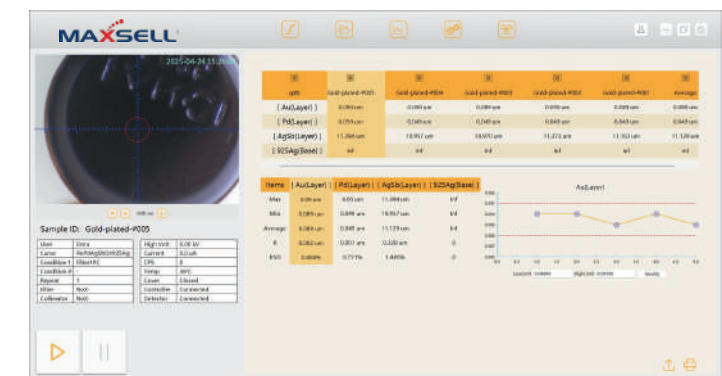
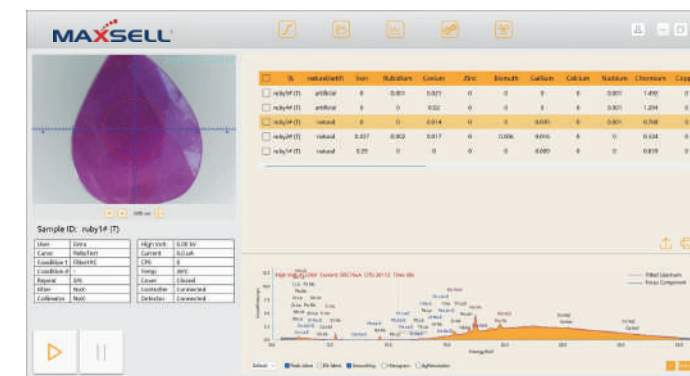
Application

Metal

Liquid

Gemstone

Coating





**GUARANTEES HIGH STABILITY
WITH ITS HIGH CPS.**

Aurum 5 i FSDD



Accuracy

**0.01%
(9999 Gold)**

Upgraded Optical System

**A.Smaller X-ray focus spot
B.Adjustable camera focus**

Highlights

**Higher Performance
Detector: Fast SDD**

Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed simultaneously
- Analysis range:
Precious metal: 0.010%~99.999%
Coating:0.001um~80um Liquid: 5mg/L~200g/L
- Accuracy
Precious metal: $\pm 0.01\%$ (99999gold) / $\pm 0.1\%$ (K Gold)
Coating: RSD<1.5% Liquid:RSD<1.5%
- Detector: US AMETEK customized X55 Fast-SDD detector
- X-ray tube Window material: glass window, Emit angle: 90°
- Supporting multi-point continuous test, high test efficiency
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results

Application

Metal

Liquid

Gemstone

Coating





TEST EVERYTHING WITH HIGH
ACCURACY.

Aurum 5 i FSDD MC



Accuracy
**0.01%
(9999 Gold)**

Upgraded Optical System
A.Smaller X-ray focus spot
B.Adjustable camera focus

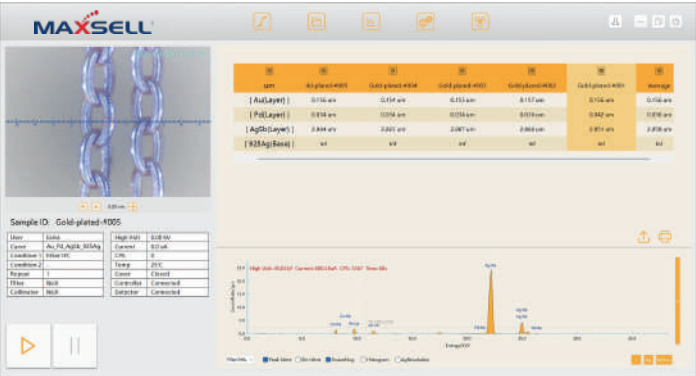
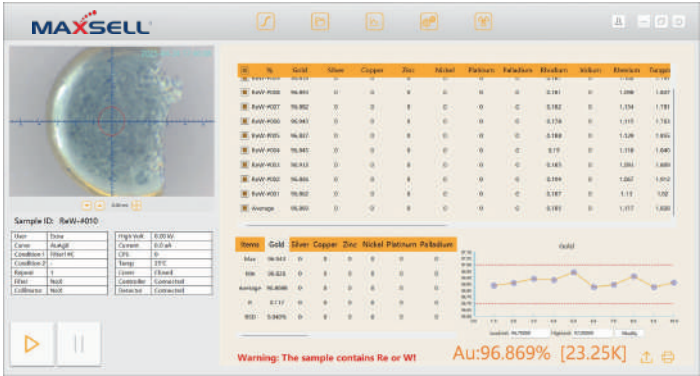
Highlights
Higher Performance
Detector: Fast SDD
Multi-collimators

Features

- Analysis elements: K(No.19)~U(No.92)
- Max up to 30 elements could be analyzed simultaneously
- Analysis range:
Precious metal: 0.010%~99.999%
Coating:0.001um~80um Liquid: 5mg/L~200g/L
- Precision:
Precious metal: ±0.01% (99999 gold) / ±0.1% (K Gold)
Coating: RSD<1.5% Liquid:RSD<1.5%
- Detector: US AMETEK customized X55 Fast-SDD detector
- X-ray tube Window material: glass window, Emit angle: 90°
- Supporting multi-point continuous test, high test efficiency
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results
- Comply with ISO23345 and ISO3497

Application

- Metal
- Liquid
- Gemstone
- Coating





THE TOP END – FLAGSHIP & VERSATILE XRF.

Aurum 5 i FSDD Pro



Accuracy

**0.01%
(9999 Gold)**

Upgraded Optical System

**A.Smaller X-ray focus spot
B.Adjustable camera focus**

Highlights

**Be-Window
Xray + FP2.0**

Features

- Analysis elements: Al(No.13)~U(No.92)
- Max up to 30 elements could be analyzed simultaneously
- Analysis range:
Precious metal: 0.010%~99.999% Coating:0.001um~80um
Liquid: 5mg/L~200g/L RoHs: 1ppm~99.999%
- Accuracy
Precious metal: $\pm 0.01\%$ (99999gold) Coating: RSD<1.5%
Liquid: RSD<1.5% RoHs: 1ppm(Ideal situation)
- Detector: US AMETEK customized X55 Fast-SDD detector
- X-ray tube Window material: Beryllium window, Emit angle: 90°
- Simultaneously detect thickness and content
- Support connect scale solution to get the value of weight
- **Gold Plating alert helps in fraud detection**
- Rhenium and tungsten detection warning.
- Support automatic calculate average value and RSD of multi-results
- Comply with ISO23345 and ISO3497

Application

Metal

Liquid

Gemstone

Coating

RoHS

Mineral





SOLUTION FOR ROHS DETECTION

The RoHS Directive is a mandatory standard set by the EU legislation and its full name is "on the Restriction of Hazardous Substances in the use of electronic and electrical equipment Directive" (Restriction of Hazardous Substances), up to now, its restricted substances a total of 10 items.

1) The standard was officially implemented on July 1, 2006, which Contains six restricted substances: Plumbum (Pb), Hydrargyrum (Hg), Cadmium (Cd), hexavalent Chromium (Cr6+), Polybrominated biphe-nyl (PBB), Polybrominated diphenyl ether (PBDE).

2) Upgraded to ROHS 2.0 in July 2011, increasing the number of restricted substances to 10 items:Plumbum (Pb), Hydrargyrum (Hg), Cadmium (Cd), hexavalent Chromium (Cr6+), Polybrominated biphe-nyl (PBB), Polybrominated diphenyl ether (PBDE), Di-(2-ethylhexyl)Phthalate (DEHP), Benzyl butylphthalate (BBP), Dibutyl phthalate (DBP), and diisobutyl phthalate (DIBP).

3) If the Tetrabromobisphenol A (TBBP-A) and Medium chain Chlorinated paraffins (MCCPS) pass the final resolution, it will lead to ROHS 3.0 for 12 restricted substances.



	Composition	Max limit	Machines
RoHS 1.0	Pb	1000ppm	XRF
	Hg	1000ppm	XRF
	Cd	100ppm	XRF
	Cr 6+	1000ppm	XRF
	PDD	1000ppm	XRF
	PBDE	1000ppm	XRF
RoHS 2.0	DEHP	1000ppm	PY-GC/PY-GCMS
	BBP	1000ppm	PY-GC/PY-GCMS
	DBP	1000ppm	PY-GC/PY-GCMS
	DIBP	1000ppm	PY-GC/PY-GCMS
RoHS 2.0	TBBP-A	1000ppm	PY-GCMS
	MCCPs	1000ppm	PY-GCMS
Halogen	Br	900ppm	XRF
	Cl	900ppm	XRF
	Br+Cl	1500ppm	XRF



ROHS ANALYZER – T 7

Analysis range

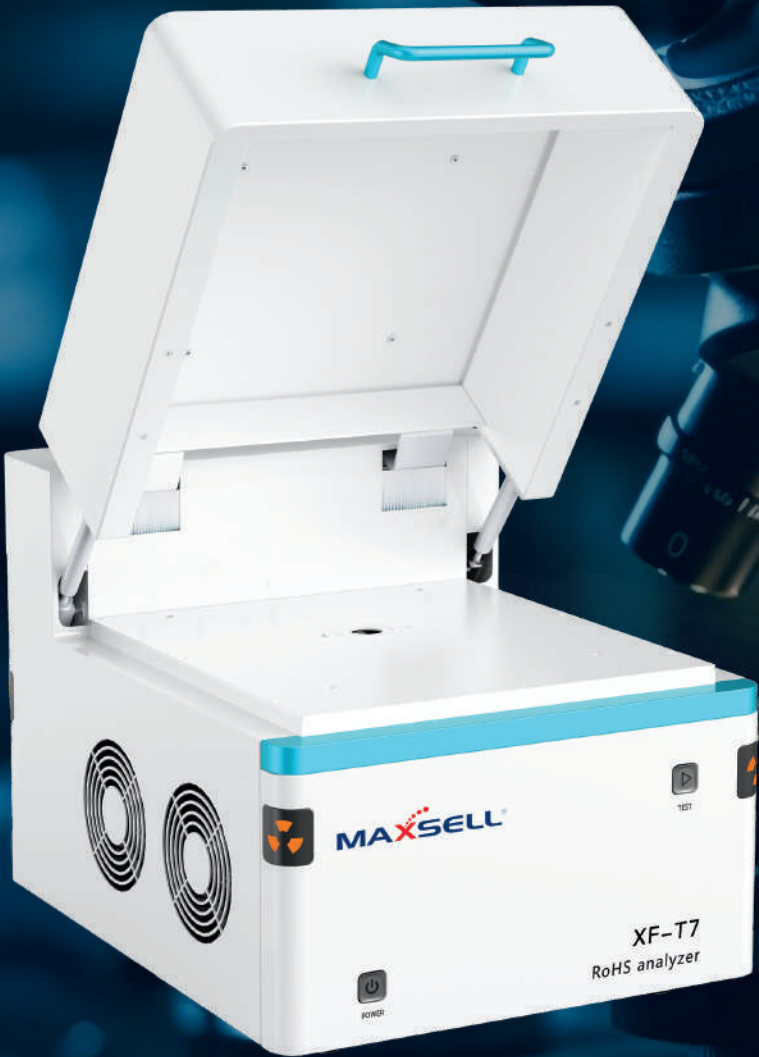
S–U

Test Duration

60 Seconds

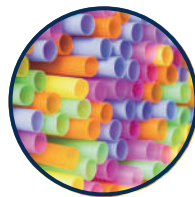
FP algorithm

More Accurate



Features

- Analysis range: S (No.16)~U (No.92)
- Max up to 30 elements could be tested at the same time
- Rapid detection of RoHS 1.0 instruction compliance
- Halogen detection, support EN71 directive
- Detection limit: 2 ppm (optimal matrix effect)
- Precision: RSD <±2.5%
- Detector: US AMETEK customized Si-PIN detector
- X-ray tube Window material: glass window, Emit angle: 90°



Application

- Metal
- Liquid
- RoHS

Test results for toxic heavy metals of plastic

LDPE05	Br (100)	Cd(110)	Cr(610)	Hg(630)	Pb(650)
1st	94.3ppm	109.2ppm	604.3ppm	638.3ppm	641.7ppm
2nd	97.7ppm	104.5ppm	602.6ppm	638.8ppm	645.1ppm
3rd	96.8ppm	104.2ppm	602.8ppm	637.7ppm	648.8ppm
4th	97.4ppm	107.8ppm	603.7ppm	639.2ppm	649.1ppm
5th	96.2ppm	109.5ppm	610.8ppm	642.1ppm	667.1ppm
Average	96.48ppm	107.04ppm	604.84ppm	639.22ppm	650.36ppm
R	3.4ppm	5.3ppm	8.2ppm	4.4ppm	25.4ppm
RSD	1.25%	2.123%	0.503%	0.239%	1.353%



ROHS ANALYZER – T 8



Test Duration

60 Seconds

Analysis range

Al ~ U

FP algorithm

RoHS +
Coating

Features

- Analysis range: Al (No.13)~U (No.92)
- Max up to 30 elements could be tested at the same time
- Detection limit: 1 ppm (optimal matrix effect)
- Precision: RSD <±1.5%
- Optional: Vacuum/Autosampler
- Detector: US AMETEK customized Fast-SDD detector
- X-ray tube Window material: glass window, Emit angle: 90°



Application

- Metal
- Liquid
- Mineral
- RoHS

Test results for composition of ternary catalyst powder

Items(%)	Pt	Pd	Rh	Fe	Al O	Zr	Sr	Hf	Y	Ce
1st	0.0659	0.4938	0.056	0.2292	87.8789	5.5987	0.5313	0.1384	0.2297	4.778
2nd	0.0654	0.4926	0.054	0.2252	87.997	5.5869	0.5293	0.136	0.2316	4.682
3rd	0.0658	0.491	0.0555	0.2212	87.9838	5.6236	0.5349	0.1384	0.2314	4.6544
4th	0.0659	0.4881	0.0551	0.2217	83.9813	5.584	0.5311	0.1384	0.2315	4.7031
5th	0.0657	0.4907	0.0559	0.2202	87.9135	5.574	0.5303	0.1346	0.2289	4.7963
Average	0.0657	0.4912	0.0553	0.2235	87.9509	5.5934	0.5314	0.1372	0.2306	4.7228
R	0.0005	0.0057	0.002	0.009	0.1181	0.0496	0.0056	0.0038	0.0027	0.1419
RSD	0.282	0.393	1.309	1.481	0.053	0.304	0.357	1.153	0.481	0.012