SOLUTIONS FOR GOLD, PRECIOUS METALS & JEWELRY

Precise and safe analysis, value determination, and authenticity testing

fischer®

> Accurate and reliable measuring instruments are essential to meet the standards of The Gem and Jewelry Institute of Thailand and to ensure and support the growth of the gemstone and jewelry industry. Fischer has been a trusted partner of GIT for over a decade.
>
> *Sumed Prasongpongchai, General Director at The Gem and Jewelry Institute of Thailand (GIT), TH*

Trusting number 1.
The world's best in measuring technology and service performance.

Is it real gold? It's a simple question – but answering it takes more than just a quick visual check. In the world of gold trading, accuracy and certainty are everything. After all, fine jewelry is more than just decoration – it represents lasting value and long-term investment.

Whether you are buying, selling, refining, or investing, knowing the exact composition and value of your precious metals is crucial for protecting your bottom line. That's where our measuring solutions come in.

Developed and engineered in Germany for the highest precision, reliability, and speed, our X-ray fluorescence (XRF) instruments and tactile devices provide instant, non-destructive analysis of gold purity and alloy composition. From pawnshops and retail showrooms to refineries, assaying centers, and hallmarking, our broad product portfolio offers the right measuring solution for your daily needs and challenges.

Don't compromise on precision and safety. Trust the world's best measuring technology and service. For more safety, more accurate results, faster and better decisions, and simply a good feeling.

Measure your precious metals with Fischer – our precision is your protection.

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FISCHER TRUSTED BRANDS

FISCHERSCOPE®
GOLDSCOPE SD®
SIGMASCOPE®
XAN®
XDV®
WinFTM®

What is your challenge?

Do you need to determine the value of fine jewelry quickly and accurately? Do you handle a high volume of samples each day? Do your clients expect reliable reports without delay? The gold industry faces many challenges. What are yours?

When every scratch matters and every detail tells a story: How do you verify authenticity and determine value without compromising the beauty or integrity of unique and delicate jewelry pieces?

From high-karat gold jewelry to modern complex alloys and multilayers on fashion jewelry: Need to manage a broad spectrum of measuring tasks with consistent precision and process reliability?

Complex workflows consume your time and resources: How would it feel to manage them smoothly and effortlessly?

Balancing speed and precision: Are you looking for a way to deliver fast, accurate valuations of fine jewelry while handling high sample volumes – without sacrificing reliability?

Meeting the highest requirements and standards: Do you need to detect traces of precious metals or impurities in the ppm range?

Your clients rely on your expertise: Want to stay known as a trusted name in your field by consistently delivering traceable measurement results and absolutely reliable reports?

Solve it with Fischer!

Together, we master your challenges! Are you looking for a safe and reliable measuring technology for your retail shop, assaying center, manufacturing, or refinery? Our measuring solutions are tailored to the needs of the gold and jewelry industry and to your individual needs. Benefit from the numerous Fischer advantages with industry-leading and innovative measuring technologies and excellent services!

Non-destructive testing. Preserve the full integrity of your jewelry, gold bars, or coins with our XRF and tactile devices. This is especially crucial for highly valuable or artfully crafted pieces, where even the slightest change could reduce their values.

RELIABILITY & SAFETY

Speed & cost-efficiency. Get precise results in seconds – and start saving valuable time and running costs today!

MARKET LEADER IN PRECIOUS METAL ANALYSIS & COATING THICKNESS MEASUREMENT

Traceability & certification. Our devices comply with industry standards and can be used for certification purposes, ensuring that the gold content is accurately measured and documented. For calibration, we offer a wide range of prefabricated and certified standards.

X-RAY FLUORESCENCE (XRF) ANALYZERS & TACTILE MEASURING DEVICES

Versatility. With our XRF devices you can reliably analyze a broad spectrum of elements. Measure decorative multilayers and complex alloys. Detect hazardous metals like Cd, Pb and Hg and impurities like Ir, Ru, Os or Re. Analyze liquids and powders and assess platinum and silver content.

ENGINEERED IN GERMANY

Environment & sustainability. Say goodbye to harmful chemicals and hazardous waste! Our XRF and tactile measuring devices provide a cleaner, more eco-friendly solution to traditional methods such as fire assay or ICP-OES.

EXCELLENT FISCHER CUSTOMER SERVICE

COMPREHENSIVE APPLICATION CONSULTING

Tailored to your needs. From mobile handheld devices to compact benchtop devices and advanced instruments with XY tables for automated measurements – choose the setup that works best for you.

FULL PROTECTION DEVICES

High user-friendliness. Experience the power of intuitive software! With predefined measuring applications, the software is specifically tailored to the requirements of jewelers, retailers, banks, and pawnshops. Get started instantly – no extensive training required!

Empower your business with us

Trusted across all segments of the gold and precious metals industry, our technologies ensure accurate analysis, efficient processes, and top-tier quality control. From mining and refining to recycling and final product manufacturing – we offer reliable measuring solutions for every stage of the gold life cycle, delivering the precision that powers the gold industry.

Mining & raw material processing
(Exploration & mining companies)

Gold and precious metals in soils, ores, and as nuggets

Gold doré bars

1 **Refining**
(Refineries & assaying centers)

Gold bullion bars and gold granules

2 **Bullion trade & investment**
(Bullion banks, stock exchange, central banks & financial services)

Gold bullion bars, gold bullion coins, and collector coins

3 **Fabrication**
(Jewelers, fashion, electronics & medical)

Jewelry, fashion jewelry, dental products, electronic products, and much more

4 **Hallmarking**
(Hallmarking centers*)

Final jewelry and smaller bullion bars

5 **Distribution & consuming**
(Retailers, wholesalers & consumers)

Jewelry, fashion jewelry, dental products, electronic products, and much more

6 **Testing**
(Testing laboratories & assayers)

Jewelry, fashion jewelry, dental products, gold bullion bars, gold bullion coins, collector coins, and much more

7 **Recycling**
(Scrap dealers & pawnbrokers)

Scrap gold

1 **Refining**

* Not in all countries.

Gold and precious metals in soils, ores, and as nuggets

Analyzing soil and ore is a crucial step in mining exploration. To assess the potential of a site, geological samples are examined to determine both the presence and concentration of valuable elements. This process is often complicated by complex rock compositions and the fact that key elements may only be present in trace amounts, hidden deep within the geological matrix.

Among the most sought-after discoveries in this complex process is gold – sometimes found in its most fascinating form: as naturally occurring nuggets. Typically found in rivers or embedded in gold-bearing rock, these naturally occurring pieces of pure gold are raw, very rare, and often highly prized by collectors – especially when they feature unusual shapes or larger sizes. Smaller, less pure, or bulk nuggets, on the other hand, are refined and processed in refineries just like other forms of raw gold.

Main applications: Identifying gold and other precious metals in the ppm range in soil or ores, authenticity testing of gold nuggets

Our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series provide reliable and efficient XRF instruments for rapidly determining precious metal content across various sample matrix types, without requiring time-consuming sample preparation. The devices are also ideal for verifying the authenticity of gold nuggets.

Gold doré bars

Doré gold is a semi-pure gold alloy that marks an important step in the journey from raw material to refined investment-grade gold. Extracted directly from a gold mine or produced by melting down gold-bearing materials, doré gold bars typically contain between 50 % and 90 % gold, along with significant amounts of silver and other metals such as copper. Since it still contains impurities, doré gold is sold to refineries, where it is further processed to become pure gold with a fineness of 99.99 %. As such, doré gold bars are considered an intermediate product – distinct from finished investment products like fine gold bars or coins.

Main applications: Composition analysis of gold doré bars, including detection of impurities

The XRF instruments from our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series are perfectly suited for analyzing the exact material composition of gold doré bars and for element analyses at very low detection limits.

Gold bullion bars and gold granules

Gold bullion is high-purity physical gold with a purity of 99.99 % (24 karat) or a high-karat gold alloy produced in the form of bars or coins (see also section on gold bullion coins and collector coins), primarily for investment purposes. For further processing and manufacturing, gold bullion is also available as granules.

Main applications: Authenticity testing and fine gold analysis of gold bullion bars and gold granules, material analysis of gold alloys

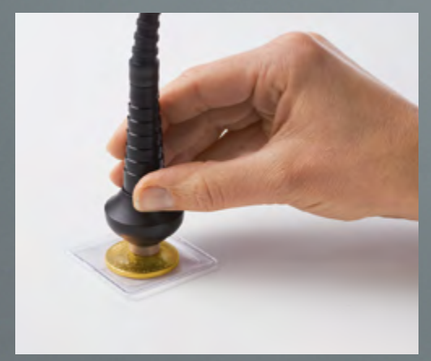
Our mobile handheld device SIGMASCOPE® GOLD B (for bars) is used to confirm the quality of the gold bullion bars and to identify fake gold bars. The benchtop instruments from our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series are reliable partners when it comes to measuring fine gold content and detecting possible impurities in gold bars or gold granules.

Gold bullion coins and collector coins

Gold bullion coins are high-karat and government-issued gold coins, primarily intended for investment purposes. They combine the material value of gold with a government guarantee and worldwide acceptance. Well-known gold bullion coins include Krugerrand, Maple Leaf, or American Eagle. In contrast, collector coins tend to be more artistically designed and are often traded in limited editions at a higher price than their material value.

Main applications: Authenticity testing of gold bullion coins and collector coins, material analysis of coin alloys

Our practical handheld device SIGMASCOPE® GOLD C (for coins) is precisely tailored to confirm the authenticity of your gold bullion or collector coins quickly and easily. The benchtop instruments from our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series are the perfect addition for precisely measuring the fine gold content and detecting other unknown elements in coin alloys.



Jewelry

To create fine jewelry such as rings, bracelets, or necklaces, gold bars and other precious metals are melted down together with other alloy elements like copper, zinc, or nickel. Depending on the alloy composition, the jewelry takes on a white, red, or green appearance.

Main applications: Material analysis and value determination of fine gold, gold alloys, silver alloys, platinum alloys, rhodium-plated, silver-plated, and gold-plated alloys, and solder joints

Our GOLDSCOPE SD® series has been specially designed for the analysis and value determination of fine jewelry and offers special factory calibration and pre-programmed measuring tasks for jewelry applications. Even the smallest or most delicate items, finely crafted jewelry, decorative ornaments, and solder joints can be tested reliably. If you need to handle a particularly wide range of applications, simply choose the model from our FISCHERSCOPE® X-RAY XAN® series that best fits your requirements. For particularly demanding measurement tasks and high throughput, we offer our high-end all-rounder FISCHERSCOPE® X-RAY XDV®-SDD.

Fashion jewelry

Fashion jewelry is an affordable and good-looking alternative to fine jewelry. It typically consists of non-precious metal alloys or less expensive jewelry alloys with multiple coatings. These coatings serve as protective layers, enhance the beauty, or increase the hardness of the jewelry, making it more durable.

Main applications: Material analysis and coating thickness measurement of complex multilayers, e.g. Au/Pd/CuSnZn/Cu/brass alloy, AuAg/Pd/brass, or AuFeIn/AuAg/Pd/Cu/Cu alloy, bath analysis of electroplating solutions, e.g. AuFeIn, AuCuIn, Pd, or AuAg

The XRF instruments from our FISCHERSCOPE® X-RAY XAN® series and our high-end all-rounder FISCHERSCOPE® X-RAY XDV®-SDD use the advanced software capabilities to measure the thickness and composition of complex multilayers in the fashion jewelry segment.

Dental alloys

Dental alloys are metal mixtures used in dentistry for dental crowns, bridges, inlays, onlays, and dentures. They range from high-quality gold alloys to cost-effective non-precious metal alloys. Since they remain in the teeth or jaw permanently, they must be biocompatible, durable, and corrosion-resistant.

Main applications: Material analysis of AuAgPtRhPdCuZnInIr alloy, CrCoNiTiMo alloy, and ceramic alloys

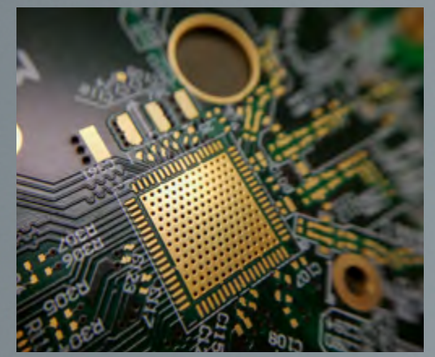
Our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series are perfectly suited for measuring a wide variety of different dental alloy compositions and for detecting additional elements in the sample.

Electronic products

Gold and other precious metals play a vital role in the electronics industry, thanks to their exceptional conductivity and resistance to corrosion. From PCBs to microchips, they are essential components in a wide range of high-tech applications. Electronics manufacturers often purchase gold bars as raw material to later produce ultra-thin metal coatings for connectors, PCBs, lead frames, and many other important parts.

Main applications: Incoming inspection of raw materials, multilayer and composition analysis of electronic components, such as Au/Ni/Cu alloys, Au/Pd/NiP/CuFe, Au/NiP/Cu/PCB (ENIG), or Au/Pd/NiP/Cu/PCB (ENEPIG)

Our compact benchtop instruments from our FISCHERSCOPE® X-RAY XAN® series and our high-end all-rounder FISCHERSCOPE® X-RAY XDV®-SDD are ideal for quality control of purchased gold bars and other precious raw materials. Measure the exact alloy composition efficiently and reliably and detect trace elements in the ppm range. For more demanding applications related to electronic components, we offer advanced and customized models. Please feel free to contact us directly!



Scrap gold

Are you a gold buyer, pawnbroker, or recycler handling used or scrap gold? Then you should play it safe and prevent counterfeits. Reliably check the composition of second-hand gold – whether it's chains, rings, bracelets, coins, dental gold or industrial gold from electronics, PCBs, watches, and contacts. According to the Responsible Jewelry Council (RJC) Chain of Custody standard, recycled gold is categorized as either pre- or post-consumer, or as waste recycled gold – which must be refined by approved third parties before qualifying as eligible recycling material.

Main applications: Material analysis of jewelry alloys, dental alloys, coins, melted alloys, or bars, Au, Pd and Pt in electronic scrap

Most of our XRF instruments from our GOLDSCOPE SD® series and our FISCHERSCOPE® X-RAY XAN® series are equipped with a silicon drift detector, making them highly accurate and reliable for measuring alloy compositions and gold purity of scrap gold. Our portable handheld devices SIGMASCOPE® GOLD B and SIGMASCOPE® GOLD C are used for quick authenticity testing of gold bars and coins, making it the perfect bundle with our XRF devices.

Didn't find your application here?

We also provide customized measuring solutions for your measuring tasks, e.g. for coating thickness measurement and material analysis of **watches, gemstones, gold or silver in food**, and much more. We would be happy to advise you personally. Just get in touch with us!
sales@helmut-fischer.com

Your challenge – our solution

Refined for your needs

Measuring task	View	Model	Main business segments	Main applications	Your challenges	Our product highlights	Page
Material analysis		**GOLDSCOPE SD® 510** **The compact solution for fast and reliable jewelry analysis.** **Measuring performance** Advanced **Measuring direction** Bottom up	Local retail shops & showrooms, shop-in-shop locations, pawnbrokers, scrap dealers	Fine jewelry, fine gold, gold coins, gold bars, dental alloys, scrap gold, Rh/jewelry	■ Less space ■ Low budget ■ Dealing with many customers per day	■ Small footprint ■ Hood opening to the front, ideal for tight spaces ■ Pre-installed applications for gold & jewelry	16 – 17
		GOLDSCOPE SD® 515, 520 & 550 **Our gold experts for your precious metal analyses.** **Measuring performance** Advanced **Measuring direction** Bottom up	Retail shops & showrooms, gold assaying centers, hallmarking centers, refineries, testing laboratories, manufacturing	Fine jewelry, fine gold, gold coins, gold bars, dental alloys, precious metal coatings such as Au, Rh, or Ag	■ Meeting advanced standards of accuracy & precision ■ Measuring many different alloys & typical precious metal coatings ■ Dealing with different sample sizes & complex shapes	■ Hood opening upwards for fast sample positioning ■ Various detector, collimator, & filter options ■ Pre-installed applications for gold & jewelry	18 – 19
Material analysis & coating thickness measurement		**GOLDSCOPE SD® 600** **Maximum flexibility for large and complex-shaped valuables.** **Measuring performance** Supreme **Measuring direction** Top down	Gold assaying & hallmarking centers, refineries, testing laboratories, manufacturing	Complex shaped parts like rings & bangles, large items, fine jewelry, fine gold, gold coins, gold bars, fashion jewelry*, precious metal coatings such as Au, Rh, or Ag	■ Meeting the highest standards of accuracy & precision ■ Measuring large-scale or complex shaped samples ■ Testing the inside of rings & bangles	■ Large measuring chamber with front opening ■ Manual scissor lift table ■ Multiple collimators & filters ■ Pre-installed applications for gold & jewelry	20 – 21
		FISCHERSCOPE® X-RAY XAN® 215, 220 & 250 **As versatile as your requirements.** **Measuring performance** Supreme **Measuring direction** Top down	Gold assaying & hallmarking centers, refineries, testing laboratories, manufacturing	Fine jewelry, fine gold, gold coins, gold bars, dental alloys, fashion jewelry, precious metal coatings such as Au, Rh, or Ag	■ Meeting advanced standards of accuracy & precision ■ Measuring many different alloys & multilayers ■ Dealing with different sample sizes & complex shapes	■ Hood opening upwards for fast sample positioning ■ Various detector, collimator, & filter options ■ Full software access for broad use	22 – 23
		FISCHERSCOPE® X-RAY XDV®-SDD **The high-end all-rounder.** **Measuring performance** Supreme **Measuring direction** Top down	Gold assaying & hallmarking centers, refineries, testing laboratories, manufacturing	Fine jewelry, fine gold, coins, gold bars, dental alloys, fashion jewelry, precious metal coatings such as Au, Rh, or Ag	■ Meeting the highest standards of accuracy & precision ■ Managing high throughput ■ Measuring alloys & very thin multilayers ■ Handling complex shaped samples	■ Programmable measuring table for processing multiple samples & automated Z-axis with fast autofocus ■ Multiple collimators & filters ■ Full software access for broad use	24 – 25
Material testing		**SIGMASCOPE® GOLD B & GOLD C** **Your trusted companion for authenticity testing.**	Bullion banks, scrap dealers, pawnbrokers	Gold coins & gold bars	■ Quickly testing gold authenticity & identifying fake gold bars & coins	■ Mobile handheld instrument for easy measuring the electrical conductivity ■ Perfect complement to XRF analysis	26 – 27

*Our FISCHERSCOPE® X-RAY XDAL® 600 offers full software accesss for broad use in the fashion jewelry industry. Please feel free to contact us for personal consultation. **sales@helmut-fischer.com**

GOLDSCOPE SD® 510

Compact design. Small footprint, fits in any retail shop

Front-opening hood. For easy sample handling in confined spaces

Your safety. Best measuring performance for your precious metal alloys

Quick-measure design. The sample is placed and ready for measurement in just a few steps

Balanced. Optimal cost-benefit ratio

Gold Setup. Dedicated and simplified workflows, measuring tasks are already pre-programmed

Gold jewelry

The compact solution for fast and reliable jewelry analysis.

As the most compact and cost-effective model in our renowned GOLDSCOPE SD® series, the GOLDSCOPE SD® 510 is the perfect choice for small retailers. Thanks to its space-saving front-opening hood, you can quickly and easily place your sample in the measuring chamber and start your precious metal XRF analysis immediately. The integrated video-microscope with zoom and crosshairs simplifies sample placement and allows you to precisely adjust your measuring spot.

Authenticity testing and determination of value

Safes space thanks to front-opening hood

With bottom-up measurement, you master your everyday challenges – from analyzing rings, necklaces, and dental gold to smaller gold bars – all with unbeatable measurement accuracy!

To operate and control your measurement processes in narrow spaces, simply place your notebook directly on top of the device. Leverage our powerful WinFTM® software and benefit from pre-installed measuring tasks configured for typical gold and jewelry applications.

Features

- Compact and powerful benchtop instrument for fast, non-destructive, and easy material analysis of jewelry, coins, and precious metals
- Measuring direction with measuring bottom up
- Tungsten tube
- Fixed collimator
- No filter
- Silicon PIN detector with peltier cooling
- Fully protected instrument with type approval according to current radiation protection legislation
- WinFTM® software with predefined measuring tasks (Gold Setup)

Ready to explore?
Scan the QR code and learn more about the entire **GOLDSCOPE SD® series**.

GOLDSCOPE SD® 515, 520 & 550

Large hood opening. For easy sample handling, even with slightly larger samples

Your safety. Best measuring performance for your precious metal alloys

Versatile. Ideal for pawnshops, gold trading, testing laboratories, hallmarking and jewelry manufacturers

Quick-measure design. The sample is placed and ready for measurement in just a few steps

Tailored to advanced analyses. DPP+ for even shorter measuring times with the same standard deviation*

Balanced. Optimal cost-benefit ratio

Gold Setup. Dedicated and simplified workflows, measuring tasks are already pre-programmed

* Compared to the DPP.

Gold jewelry

Our gold experts for your precious metal analyses.

GOLDSCOPE SD® 515

The GOLDSCOPE SD® 515 is our proven entry-level model for gold buying and selling in larger retail shops and pawnshops. It is the perfect choice for fast and reliable non-destructive material analysis of jewelry, coins, and dental gold as well as basic testing in laboratories.

Features

- Measuring direction with measuring bottom up
- Tungsten tube
- Fixed collimator
- No filter
- Silicon PIN detector with peltier cooling
- Fully protected instrument with type approval according to current radiation protection legislation
- WinFTM® software with predefined measuring tasks (Gold Setup)

Large measuring chamber and hood opening upwards

Material analysis of gold bars

GOLDSCOPE SD® 520 & 550

Our GOLDSCOPE SD® models 520 and 550 with advanced measuring performance are the ideal solutions for precious metal analyses in assaying centers, hallmarking, and manufacturing. Explore a wide selection of hardware configurations and find the perfect fit for your needs.

Features

- Measuring direction with measuring bottom up
- Microfocus tube with tungsten anode
- Fixed or 4-fold changeable collimators
- Fixed or 6-fold changeable filters
- Silicon drift detector (SDD) 20 mm^2 or 50 mm^2 for very good detection accuracy and high resolution
- Digital pulse processor DPP+ for higher count rates and significantly reduced measuring times
- Fully protected instruments with type approval according to current radiation protection legislation
- Compliant with ISO 23345:2021 (GOLDSCOPE SD® 550)
- WinFTM® software with predefined measuring tasks (Gold Setup)

GOLDSCOPE SD® 600

Your safety. Best measuring performance for your precious metal alloys

Measuring direction top down. For easy measuring the inside of rings and bangles

Tailored to advanced analyses. DPP+ for even shorter measuring times with the same standard deviation*

Balanced. Optimal cost-benefit ratio

Gold Setup. Dedicated and simplified workflows, measuring tasks are already pre-programmed

Availability depending on region and country.

* Compared to the DPP.

Our FISCHERSCOPE® X-RAY XDAL® 600 offers full software accesss for broad use in the fashion jewelry industry.
Please feel free to contact us for personal consultation. **sales@helmut-fischer.com**

Gold vessel

Maximum flexibility for large and complex-shaped valuables.

The GOLDSCOPE SD® 600 is our big-size model in our GOLDSCOPE SD® series for fast, cost-effective, and non-destructive material analysis with highest requirements. Compared to the other GOLDSCOPE SD® devices, it provides top-down measurement, an adjustable scissor lift table, and a large front opening for measuring large-scale or complex-shaped samples, e.g. rings and bracelets. A laser pointer serves as a positioning aid. The powerful silicon drift detector (SDD) and various collimators ensure high-precision analyses of alloys and layers, such as gold on sterling silver or rhodium on gold alloys.

Scissor lift table

Gold bracelets

Often used in hallmarking centers, the device convinces with excellent repeatability and high accuracy. Predefined measuring tasks in the software, our so-called “Gold Setup”, simplify the application for you.

Features

- Robust benchtop instrument for non-destructive material analysis of jewelry, coins, and precious metals
- Measuring direction with measuring top down
- Microfocus tube with tungsten anode
- 4-fold changeable collimators
- 3-fold changeable filter
- Silicon drift detector (SDD) 20 mm^2 for highest precision as well as peltier cooling
- Digital pulse processor DPP+ for higher count rates and significantly reduced measurement times
- Manually adjustable scissor lift table for fast and easy sample positioning
- Compliant with ISO 23345:2021
- WinFTM® software with predefined measuring tasks (Gold Setup)

Ready to explore?
Scan the QR code and find out more about the **GOLDSCOPE SD® 600**.

FISCHERSCOPE® X-RAY XAN® 215, 220 & 250

Large hood opening. For easy sample handling, even with slightly larger samples

Your safety. Best measuring performance for your precious metal alloys

Versatile. Ideal for pawnshops, gold trading, testing laboratories, hallmarking and jewelry manufacturers

Quick-measure design. The sample is placed and ready for measurement in just a few steps

Tailored to advanced analyses. DPP+ for even shorter measuring times with the same standard deviation* (not available with XAN® 215)

Flexible. Comprehensive software access for advanced bulk and multilayer analyses

* Compared to the DPP.

Testing of precious metals

As versatile as your requirements.

FISCHERSCOPE® X-RAY XAN® 215

The FISCHERSCOPE® X-RAY XAN® 215 is our entry level model with full software flexibility for defining new measuring tasks. It is developed for non-destructive coating thickness measurement and material analysis of jewelry, fashion jewelry, coins, and dental gold. Especially in testing and laboratory environments, the compact benchtop device has proven to be a flexible solution for simple measurement tasks.

Features

- Measuring direction with measuring bottom up
- Microfocus tube with tungsten anode
- Fixed collimator
- Fixed filter
- Silicon PIN detector with peltier cooling
- Fully protected instrument with type approval according to current radiation protection legislation
- WinFTM® software provides full flexibility for fashion jewelry and other multilayer applications

Video:
Scan the QR code and find out more about the **FISCHERSCOPE® X-RAY XAN® series.**

FISCHERSCOPE® X-RAY XAN® 220 & 250

Our FISCHERSCOPE® X-RAY XAN® models 220 and 250 with advanced measuring performance are ideally suited for assaying and hallmarking centers, pawn shops, and industrial jewelry manufacturing. Explore a wide selection of hardware configurations and find the perfect fit for your needs.

Features

- Measuring direction with measuring bottom up
- Microfocus tube with tungsten anode
- Fixed or 4-fold changeable collimator
- Fixed or 6-fold changeable filters
- Silicon drift detector (SDD) 20 mm^2 or 50 mm^2 for very good detection accuracy and high resolution
- Digital pulse processor DPP+ for higher count rates and significantly reduced measurement times
- Fully protected instruments with type approval according to current radiation protection legislation
- Various housing sizes available
- WinFTM® software provides full flexibility for fashion jewelry and other multilayer applications

FISCHERSCOPE® X-RAY XDV®-SDD

Built to last. Robust design for particularly high requirements

Fully automatable. Let your instrument work for you with just one click

Quick-measure design. With a few simple steps the sample is placed and ready for measurement. Automated measurements of many parts are possible

Tailored to advanced analyses. DPP+ for even shorter measuring times with the same standard deviation*

Low detection limits. Determination of trace elements with high accuracy and outstanding performance

Fast. Thanks to short measuring times, you save valuable time

* Compared to the DPP.

Dials

The high-end all-rounder.

The FISCHERSCOPE® X-RAY XDV®-SDD is one of our high-end XRF devices. It is our expert instrument with proven flexibility, broad uses, and the highest precision. Equipped with a high-performance silicon drift detector (SDD) and the digital pulse processor DPP+, this benchtop device is suitable for the efficient and precise analysis of precious metals in jewelry alloys, quality control of electroplating baths, and high-precision measurement of ultra-thin and complex coatings on fashion jewelry.

Analyzing gold necklaces on a tray

Measuring cells for solution analyses

Thanks to various collimators ranging from 0.1 mm to 3 mm, both small samples, such as filigree ornaments or solder joints, as well as large-scale samples, such as gold bars or large pieces of jewelry, can be measured. Convincing with high count rates and short measuring times, the XDV®-SDD truly is a high-end all-rounder for use in assaying and hallmarking centers, testing laboratories, or manufacturing.

Features

- Universal benchtop instrument for high-precision material analysis and coating thickness measurement of very thin and complex coatings as well as trace element analysis at very low detection limits
- Stepless measuring distance with measuring top down
- Microfocus tube with tungsten anode, other anodes as options available
- 4-fold changeable collimators
- 6-fold changeable filter
- Silicon drift detector (SDD) 50 mm^2 for the highest precision on thin layers
- Programmable measuring table for fully automated measurements and high throughput
- Fully protected instrument with type approval according to current radiation protection legislation
- Compliant with ISO 23345:2021
- WinFTM® software provides full flexibility for fashion jewelry and other multilayer applications (Gold Setup available on request)

Ready to explore?
Scan the QR code and find out more about the **FISCHERSCOPE® X-RAY XDV®-SDD**.

SIGMASCOPE® GOLD B & GOLD C

Safety. Prevents purchase of fake coins and fake gold bars

Well equipped.
Perfect complement to your Fischer XRF instrument

See what's behind.
Measure even through non-conductive cover layers like foil packaging

Easy to use. Operation via high-contrast touchscreen display with user-friendly user interface

PERFECT MATCH WITH OUR XRF BENCHTOP DEVICES

Authenticity testing of gold bars

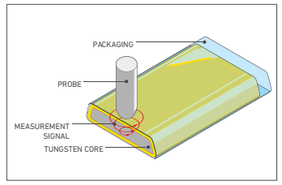
Your trusted companion for authenticity testing.

With our handheld devices SIGMASCOPE® GOLD B and GOLD C, you can quickly, easily, and non-destructively test the authenticity and quality of gold coins, gold bars, and precious metals by measuring their electrical conductivity.

The SIGMASCOPE® GOLD B (for bars) is designed to reliably test the authenticity of gold bars up to 17 mm thick and weighing up to one kilogram. The variable penetration depth also allows thinner bars to be tested.

With the SIGMASCOPE® GOLD C (for coins), you can check the authenticity of coins and thin bars weighing up to approximately 100 grams. Whether it's Krugerrand, ducat, coin gold or fine gold – you can detect counterfeit goods in seconds with this easy-to-use gold tester.

Testing gold alloys of coins



Authenticity testing of gold bars, even through plastic packagings

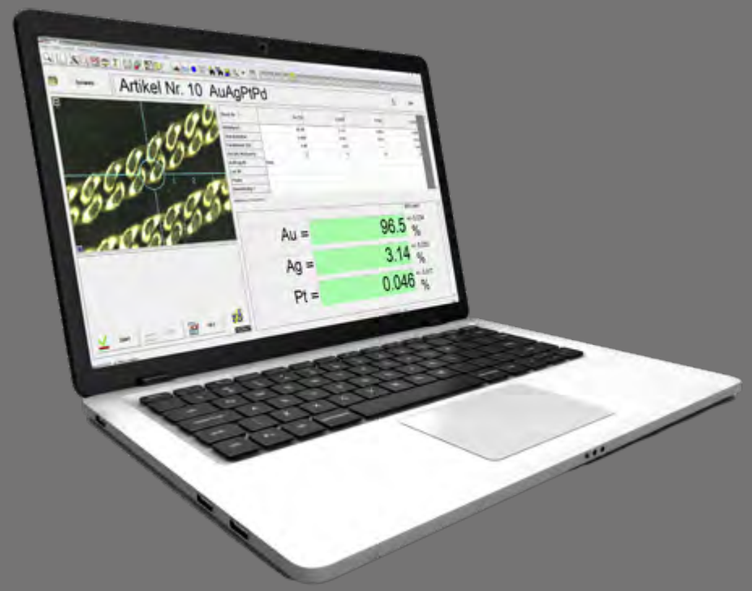
With large color touchscreens, these measuring devices are tailor-made for laboratory and retail store testing, and can be operated intuitively. Non-contact measurement through plastic packages up to 0.5 mm thick is also possible.

Features

- Special handheld device for mobile and non-destructive authenticity testing of gold bars and gold coins
- Measuring method: Phase-sensitive eddy current method
- Measured value memory: for a large number of measurements
- Measurement range:
  - GOLD B: Gold bars of approx. 1 oz (31.1 g)-1 kg
  - GOLD C: Gold coins and bars up to approx. 100 g
- Variable penetration depths to match the thickness of the measured object
- Measuring frequency:
  - GOLD B: 100, 500 and 1.000 Hz
  - GOLD C: 15, 30, 60 and 120 kHz
- Probes available for various applications
- Easy data transfer via USB interface

Ready to explore?
Scan the QR code and find out more about the **SIGMASCOPE® GOLD B & GOLD C**.

WinFTM®



The mathematical heart of our XRF devices.

Whether for authenticity testing, value determination, solution analysis or thickness measurement of precious metal coatings and complex multilayers – the demands of the gold and precious metals industry for reliable and powerful measurement software are as diverse as the application range of our devices. WinFTM® is the world's most comprehensive and accurate software for coating thickness measurement and material analysis with X-ray fluorescence (XRF) on the market. Designed for reliable measurement results, quick evaluation, and professional documentation, it provides a wide range of proven features.

Standard-free and precise measurement. Coating thickness measurement and material analysis based on optimized fundamental parameter algorithms

Traceable measurement results. Simple and guided calibration workflow with certified Fischer calibration standards

Optimized for high throughput. Application-specific programming for the automatic execution of recurring measurement sequences

Convenient evaluation. Extensive statistical evaluations including statistical process control (SPC)

Direct data export. Simple data export via various interfaces, such as quality management systems

Create data reports easily. Fully customizable reports and creation of individual measurement protocols with just one click

> We specialize in intricate jewellery designs, and Fischer's advanced and reliable XRF instruments give us unmatched accuracy even on the smallest samples. The easy-to-use software and non-destructive testing make it the perfect solution for modern jewellery analysis.
>
> *Rajesh Rokde, Chairman at All India Gem and Jewellery Domestic Council, IN*

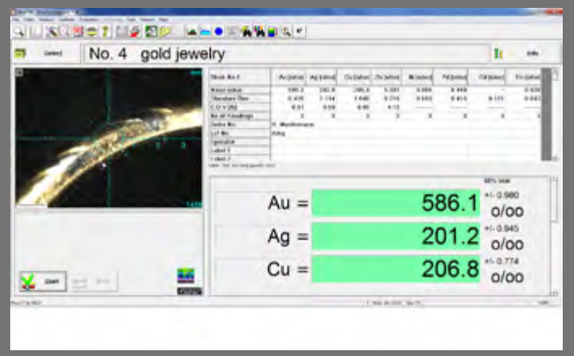
Everything you need in one measuring step. Measure up to 24 variables simultaneously! A measured variable can be both a coating thickness and an element concentration. If you perform a gold purity analysis, the WinFTM® will display your measurement results as a percentage or carat if required.

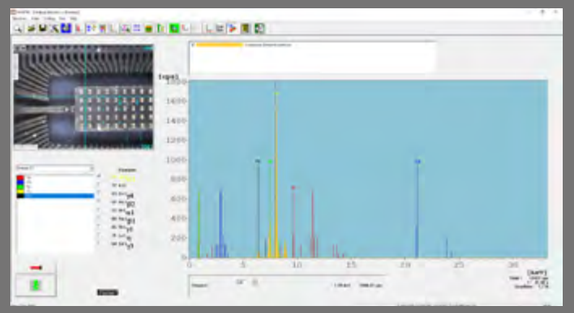
Mismatch of sample and measurement program detected? The software alerts you instantly – so you stay safe and in control.

Spectrum mode with automatic element identification. Analyze unknown bulk materials with the spectrum mode in just a few clicks. The WinFTM® automatically identifies the chemical elements contained, calculates their concentrations, and provides you with the exact percentages.

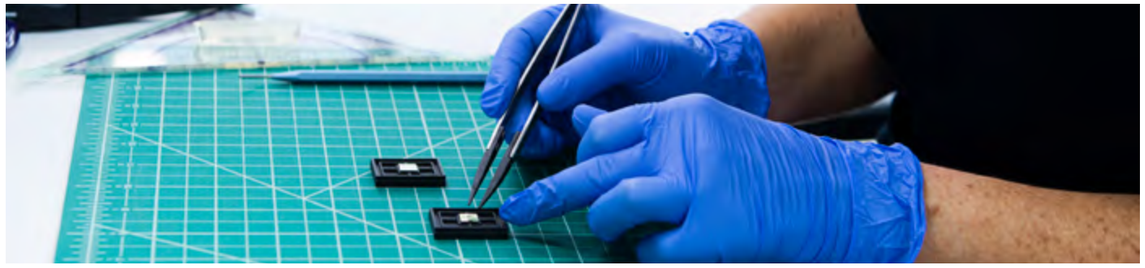
Gold Setup. Safe valuable time with our predefined measurement tasks and calibration workflows, tailored to the gold and precious metal industry. Just select, measure, and you're done!

Solution analysis. Measuring electroplating solutions with dedicated measuring cells for matrix compensation. We also provide fully automated solutions for bath analysis. We would be happy to advise you personally. Just get in touch with us! **sales@helmut-fischer.com**





Calibration standards & certification



Several accredited Fischer calibration laboratories **worldwide**

Safety through **traceability**

Over 500 different certified **calibration standards**

Best support from our experts

It's all about the right measure
Only a well-calibrated measuring instrument delivers correct and traceable results. In our calibration laboratories, we produce traceable calibration standards for you, also known as reference or comparison standards. Recognized and trusted all over the world, they guarantee absolute reliability in your measurements.

Where safety meets standards
Fischer runs several accredited calibration laboratories in the United States, Mexico, China and Switzerland. What we are especially proud of: We are the first and only company in Germany with its own DAkkS-accredited calibration laboratory that is accredited according to DIN EN ISO/IEC 17025 for the mechanical measurand "mass per unit area". By tracing the measurements back to national standards and thus to national metrology institutes such as the Physikalisch-Technische Bundesanstalt (PTB), the National Institute of Standards and Technology (NIST), or the National Institute of Metrology (NIM), we achieve the highest accuracy and quality. In addition to factory certificates, we issue DAkkS certifications, offering you even lower measurement uncertainties.

Made to fit your needs
Calibration standards are foils or coated base material. Whether for coating thickness measurement, material analysis, material testing, or microhardness measurement, our portfolio includes well over 500 different certified standards and prefabricated sets, e.g. different gold and silver alloy types as well as gold, silver and rhodium foils for coating thickness calibration. Just mix and match your Fischer standards to suit your individual measuring task!

A selection that leaves nothing to be desired

- Solid standards: Single and multiple layers, alloy layers, pure elements, alloys (bulk)
- Foil standards: Single and multiple layers, alloy layers
- Prefabricated sets
- Conductivity standards

Gold foil standard

Gold solid standard set

Please feel free to contact us! We advise you on suitable calibration standards and the optimal calibration strategy.
sales@helmut-fischer.com

Application consulting

Everything for your measuring task

Personal support on a global scale
With seven application laboratories worldwide in Germany, Switzerland, the USA, China, India, Japan, and Thailand, we are there for you around the globe. Our Fischer experts are always at your side with personalized advice and assistance – whether it's selecting the right measuring device, developing a customized measuring strategy or defining the right measuring program.

Wide-ranging expertise for reliable measurement results
Especially when solving complex measuring tasks, you benefit from our decades of expertise in measuring technology. Optimally networked with each other, as well as with research and educational institutions and industry, our application laboratories are always up to date. This is how we ensure to answer all your questions in the best possible way.

Our services at a glance

- Expert advice by email, phone, or in person at one of our seven application laboratories
- Targeted support for operation and calibration as well as for the implementation of new measuring tasks
- Individual testing of your sample parts
- Sample testing live: We measure your sample and you are live with us!
- Conceptualization of your request together with our team of experts and local integrators
- Contract measurements with inspection report according to ISO 17025 (only in selected laboratories)

Global support for your applications

Whether remotely or on-site – we support you worldwide with expert advice. Feel free to get in touch with us or consult your local Fischer representative.

Interested in our product portfolio? Experience our instruments up close and visit us at one of our application laboratories! Depending on the location, various devices are available for you to test.

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Brazil, North and South America

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You can find your personal contact at:
www.helmut-fischer.com

Customer service

A reliable partner for the entire life of your device

Quality is what our services are all about
For over 70 years, we have been supporting our customers with outstanding products and excellent customer service. Today, we are proud to be available to you globally, with 21 subsidiaries and over 180 service professionals worldwide. We guarantee you fast response times, personal and individual support on-site, and quick availability of original spare parts in proven Fischer quality. Fast, reliable and tailored to your needs – that's what we mean by excellent customer service.

There for you in every respect
To extend the service life of your Fischer devices and systems and to prevent possible downtimes, we offer you regular inspections and maintenance performed by our experienced and trained service professionals. We plan inspection times together with you at an early stage and coordinate them with your production schedule. Furthermore, our service experts assist you in commissioning and calibration and offer individual product trainings and much more to ensure you are fully comfortable with your Fischer product.

Our services at a glance

- On-site service thanks to 21 subsidiaries worldwide
- Individual service agreements tailored to your needs
- Fast response times, prompt repairs and reliable spare parts supply
- Telephone hotline and remote support with direct contact to our XRF service experts
- Commissioning and customized task programming on-site
- Calibration and recertification of your standards for reliable measurement results
- Customized inspection agreements and regular maintenance
- Individual product trainings and seminars

Contact:
Do you need technical support or would you like to learn more about our services? Then **get in touch** with us!

"The best part of my experience with Fischer Instruments is that they always go above and beyond to make sure our needs are met."

Raj Thaker, Technical Quality Manager at The Goldsmiths' Company Assay Office, UK

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AMERICA | EUROPE | AFRICA | MIDDLE EAST | ASIA & PACIFIC

- Subsidiaries and branch offices
- Authorized distributors

Made in Germany! Our measuring devices and software as well as all accessories are developed, produced, and continuously optimized in-house – always with the goal to make our customer's world measurably easier.

Our experienced staff will be happy to advise you on site and in your national language. Please find your personal contact at www.helmut-fischer.com

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Global Sales, Application and Service