

Precious Metal Testing Set AuroTest - ATS 1000

The precious metals testing set - ATS 1000 is a non-destructive and user friendly authenticity analysis system for fine gold bars and gold coins of common sizes and weights from 5 g to 1000 g fineness. Even the analysis of bars and coins made of silver, platinum or palladium is possible with this innovative precious metals testing set.



Digital ultrasonic velocity gauge of the testing set ATS 1000 with sound probe; upper left corner: opened light metal case with some parts of the testing set



Density determination of gold bars and gold coins with some of the stainless steel measuring cups of the testing set ATS 1000

The ATS 1000 utilizes a combined measurement of density and ultrasound speed in metallic materials in order to evaluate the authenticity of fine gold bars and coins. Both methods are based on a thorough volume inspection of the tested precious metal objects and not only on the analysis of a thin surface layer.

There is no need any more to send precious metals objects to any assayer or precious metals refiner for authenticity testing. With the testing set ATS 1000 you can check by yourself without any doubts the fineness and homogeneity of your precious metal objects within 5 minutes or find out possible fakes. Traditional and commonly used X-ray fluorescence analysis instruments (XRFA) for that purpose can not detect e.g. hidden precious metal imitates beyond an outer layer thickness of about 10 to 20 micron.

Since the year 2009 an increasing number of counterfeited gold bars with weights of 250 g, 500 g and 1000 g - mainly originating from Asia - have been spotted on the international precious metal markets. Usually, such fake bars contain a tungsten core, or have been produced simply from silver bars by gold plating. Even bullion trading banks have been affected by purchased fake gold bars already. Austrian and German precious metals refiners have found such gold bars with tungsten cores recently. But even fake palladium bars with substituted cores have been detected since that time.

For the precious metals investor the ATS 1000 makes an end on any doubts about possible fake bars and coins in his precious metals portfolio. For the precious metals dealer this testing set offers the possibility to check the genuineness of precious metal bars and coins for purchase or sales within a few minutes. All imitates can be easily detected and excluded from dealing. The pricing of the testing set is very favorable in relation to the purchase price of a single counterfeited gold or platinum bar.

The testing set AuroTest ATS 1000 consists of:

- a simple and user friendly digital ultrasonic velocity measuring instrument, with a measuring range of 1000 to 9999 m/s (± 2 m/s) and a measuring precision of 0.5 %
- a set of two compact and portable balances with a measuring range of up to 200 g (resolution: ± 0.01 g) and up to 2000 g (resolution: ± 0.1 g), two checking weights included
- a set of seven different stainless steel measuring cups, together with cover lids possessing an overflow hole for the density determination by volume replacement for precious metal bars up to 1000 g (gold, platinum, palladium, silver) and coins with at least 6 mm diameter and a minimum weight of about 5 g *)
- a digital micrometer screw with a measuring range of up to 25 mm (± 0.001 mm)
- a reference plate made of pure tungsten for comparison to typical counterfeited precious metals objects during density and ultrasonic velocity determinations
- accessories for the decoupling of the measuring ultrasonic field within the tested bars and coins from the measuring table surface
- software package on CD-ROM, compatible to MS Excel 2000 or higher version, as well as Open Office (Quattro Pro) running under MS Windows (2000/XP/Vista/7), Mac OS X or Linux for the calculation of the density with error bounds. The density and ultrasonic velocity measurement protocol and the summary protocol can be printed out within the MS Excel application software on any MS Windows/Mac OS X/Linux compatible printer.
- a set of reference tables about the density data of colored gold, white gold and platinum alloys as well as tombac, red brass and bronze alloys; comparison tables and diagrams about the ultrasonic velocity of all precious metals, the common colored gold alloys and the most important precious metals imitates; a combined diagram about the density of metals with a density higher than 6 g/cm³ in relation to their sound velocity with tolerance values
- an illustrated user manual about the handling of the ultrasonic velocity measuring instrument, the balances and the testing and analysis software, including a set of measurement protocols (all data are also contained on the CD-ROM as PDF files)
- a lockable aluminum transportation case

*) special dimensions and weights on further request

Technical data of the ATS 1000 set:

Measuring range weight:	1 to 2000 g (recommended: 5 g to 1000 g precious metals weight)
Measuring range ultrasonic sound speed:	1000 to 9999 m/s (± 2 m/s), precision: 0.5 %
Measuring range density:	1.00 to 22.57 g/cm ³ , precision: typically 0.5 %
Measurable precious metals:	Fine gold and gold alloys, Fine silver and silver alloys, Fine platinum and fine palladium and their alloys, rhodium, iridium, ruthenium, osmium Brass (tombac), bronze, red brass, copper, lead, zinc, tin, nickel, iron/steel, tungsten and tungsten alloys, tantalum, molybdenum, titanium, aluminum and many others including gold layers and thicker gold platings on these materials
Following materials can be distinguished against compact precious metals:	

AuroTest

Petra & Torsten Holz GbR
Logauweg 4
D-70565 Stuttgart/Germany
Phone: +49-711-715 6455
Mobile: +49-179-208 3223
Fax: +49-711-715 6906
Web site: www.aurotest.de
Email: sales@eurotest.de

Your local sales representative: