



Storage and Depository

Testing Lab



The first and most important issue for all our clients is making sure that their bullion is genuine. That is why we developed our unique and proprietary non-destructive testing method. We call it D.U.X Testing.

Making Sure it's Pure

We have gone an extra mile to make sure that the bullion stored in Our Vault House is authentic. We primarily deal with tax free IPM bullion – Investment (grade) Precious Metals. Also, we only buy the bullion from either LBMA (London Bullion Market Association) approved refineries or Central Bank mints, that have a long track record of refining precious metals.

D.U.X Testing

All the bullion deposited or transferred in by clients is tested for authenticity. The DUX testing method uses expensive hi-tech equipment that measures and compares different physical characteristics of the bullion.

DUX stands for Density, Ultrasound and X-ray Fluorescence. Counterfeit bullion might pass an individual test but not the DUX trio of tests.

Density Test

This is the first test that we perform because poorly made fake bullion deviates from the genuine ones by mass. Through precision weighing,

Ultrasound Test

Better quality fakes are typically optimized for density and that is why we measure different physical characteristics. The Ultrasound test looks inside the bar by sending the ultrasonic waves through the metal which detect any variance in density. For example, gold and tungsten have very similar density but have a 38% variance in celerity (sound velocity) making the fake bullion easily detectable by the ultrasonic testing. Ultrasound test is therefore an excellent complement to the density test.

X-Ray Fluorescence Test

As the name indicates, this technology uses X-rays to quickly and reliably identify the metals present on a sample's surface as well as to measure its purity. Although it merely analyzes the metal surface, it provides a detailed analysis of the metal composition

Electrical Conductivity Test

In 2009 we added ECM or Electrical Conductivity testing to complement the Ultrasound test. This test adds additional security especially when it comes to testing secondary market advanced counterfeits that include thickly gold-plated bars containing tungsten cores and ceramic alloy silver coins.

Precious metals like gold and silver have characteristic electrical conductivity properties. A mere 1.6% of copper present in gold can cause its electrical conductivity to decrease by over 40%. Hence, the impurities in fake precious metals can quickly be detected by measuring their electrical conductivity.

Precious Metal Verifier

We also offer the portable, reliable and highly affordable Precious Metal Verifier. Using electromagnetic waves that penetrate deeply into the coin or bar, this personal metal tester can assess a sample in less than one second. Precious Metal Verifier is perfect DIY testing tool – it is very convenient and easy to use making it extremely popular with bullion retailers that mainly focus on buying and selling coins and smaller volume bars.

Magnetic Test

Precious metals also have distinctly different magnetic susceptibility to other metals which can be easily detected using a rare earth magnet. For example, even though the densities of gold and tungsten are very similar, they have very different magnetic susceptibility. Gold and silver are diamagnetic metals, which means they are repelled by magnets. On the other hand, tungsten is a paramagnetic metal – it attracts magnets albeit that the attraction force is weaker than ferromagnetic metals such as iron or nickel.

WEST END SECURITY