

Recent interest in gold and silver has brought to the forefront the question of how pure, gold really is? this was put to the test recently with Gold clad Tungsten being presented as pure Gold.

How can we tell?



Tungsten or any Foreign Material insertion in gold bar & ingot can easily be uncovered by the use of the Echometer by Karl Deusch of Germany. For Gold all foreign products have a different Velocity to Gold, taking this into consideration a quick and non-destructive thickness test of your Gold with the Echometer will show any irregular thickness reading straight away, with no impact on the sample.

As an example Pure Gold velocity is 3240m/s and tungsten is 4620m/s, so because of this wide difference the Echometer ultrasonic thickness reading will show a thinner reading compared to the Vernier reading due to the void created for the Tungsten or the Tungsten having a faster speed of sound than Gold .

Lets Start:

Firstly, simply visually inspect your sample for any incorrect stamping, markings or size, then weigh the sample to check correct weight for size. Secondly, if all appears good measure the thickness of the sample using say, a Vernier Calliper or any accurate measuring device and record the reading. Thirdly, load the Echometer with the Velocity setting for your gold (pure gold is 3240m/s) and take a couple of thickness measurements of your sample, this reading should equal your previous manual thickness reading.

If it does not, you have an irregularity worth persuing further with say a destructive test.

The same principle can be applied for all other pure precious metals including Silver.

ECHOMETER Available from KK&S Instruments — [kks.com.au](http://kks.com.au) — 02 88503755