



14 Ways to Catch a Counterfeit for Under \$20

BY SOUND MONEY METALS

eGuide



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Use At Own Risk

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These tests are for informational purposes only and not intended to replace a professional appraisal.

Always Use Multiple Testing Methods.

Never rely on a single test to verify your metals.

The more verifications the better

If you have any doubts, seek the help of a trusted professional.

▶ Visit your local Coin or Bullion dealer.

It's worth the trip.

The Tests

Visual

Weight

Dimensions

Ping

Magnet

Ez Specific
Gravity

Nitric Acid

Ice

Bleach

Sniff

Scratch

Marking
Check

Flake or
Faded

Polish Test

Visual Test

Tools-

- Decent eyes, Loop, or Magnifying Glass
- Known authentic item or High Definition pictures to compare with.
 - Try to find pictures with matching dates and mint marks

Process

- Compare the visual details of the coin/bullion in question with a known authentic.
- Look very closely at the color, the toning, font used, size of letters, dates, depictions, reeds, and all the fine details.

Results

- Any difference in appearance from a known authentic is a strong indication that further testing or more research is needed.
- Note: a trained eye will catch most low level counterfeits. High level counterfeits can be difficult to identify.

Weight Test

Tools

- Digital Scale - with grams to two decimal places
- Coin Specification Data Base – <https://coinscatalog.net/search>, Free and very good source.
- You can also search the web for reliable coin specifications

Process

- **Step 1** – look up coin in data base and record the weight
- **Step 2** – Use the scale to measure the weight
- **Step 3** – Compare the results with the information from the Database.

Results

- Any unexplainable difference in weight is an indication of a potential counterfeit.
- Unless worn, differences above 5% are unlikely.
- **Note:** a good condition Morgan weighs 26.73 g, a very worn and cull Morgan weighs around 25,05g
 - If a Morgan is in good shape and weighs close to 25g or less it is very likely a counterfeit
- **Note:** Counterfeits are often made to weigh the correct amount.

Note: Because of the high density of Silver and Gold, combining the results from the Weight Test and the Dimensions Test will eliminate many, but not all counterfeits.

Dimension Test

Tools

- **Caliper** - High precision calipers to two decimal places in mm
- If available, it's best to compare dimensions with a known authentic.
- Coin Specification Data Base – <https://coinscatalog.net/search>, ←Free and good.
- You can also search the web for other reliable coin specifications
- **Note:** Often publicly listed specifications are incorrect

Process

- **Step 1** – find a known authentic or look up the coin in trusted data base and record the diameter and thickness
- **Step 2** – Use the calipers to measure the diameter, record the measurement
- **Step 3** – Use the calipers to measure the thickness, record the measurement
- **Step 4** – Compare the results with measurements from the known authentic or with the information from the trusted database,

Results

- Diameter differences of 2% or more are unlikely if not worn
- Thickness differences can vary more, depending on the type of coin and the angle it was struck.
- **Note:** Counterfeits are often made to the correct dimensions

Note: Because of the high density of Silver and Gold, combining the results from the Weight Test and the Dimensions Test will eliminate many, but not all counterfeits. Smaller is better

Ping Test

Tools-

- **Method 1:** Pocket Pinger
www.CoinPingTest.com
- **Method 2:** Steady hand and an appropriate object to strike the coin.
- A known authentic to compare with
- If no known authentic is available download one of the ping test applications on your phone. The StackerTools.com is 100% included with the Pocket Pinger

Process

- **Method 1:** Use the Pocket Pinger and listen to the pinging sound. Compare the sound with a known authentic or application
- **Method 2:** Balance the coin/bullion on your finger and carefully tap it with an appropriate object and listen to the ping sound. Compare sound with a known authentic or application

Results

- Any difference in pitch, tone, resonance, duration of sound, or tapering at the end is an indication the coin needs further testing.
- Major differences in sound occurs with coins and bullion that are counterfeit, have anomalies, been tampered with, very dirty, or are badly damaged.

Note: Combine the ping test with weight and dimensions tests for accurate results.

Magnet Test

Tools-	Process	Process Continued	Process Continued
<ul style="list-style-type: none">• Powerful Rare Earth Magnet (Neodymium magnet)• Note: Test your magnet with a known magnetic metal. Continue after determining the magnet is working properly	<ul style="list-style-type: none">• Step 1. Carefully place the magnet near the coin in question. If the magnet sticks to the coin it is not Silver or Gold.• Step 2: Place the coin on a table and wave the strong magnet over it, you should be able to feel the resistance in your hand as the magnet moves over the coin. If no reaction to the item being tested the item is not diamagnetic	<ul style="list-style-type: none">• Step 3. Tilt the coin like a ramp and place the magnet on the coin and let it go so it slides down. If it slowly slides down the coin you may have a real Gold or Silver coin. If the magnet quickly slides down and off without resistance you do not have a Gold or Silver coin.	<ul style="list-style-type: none">• Method 2: Magnet Slide, please consult the manual with your magnet slide. Instead of the magnet sliding down the coin, as in step 3, the coin slides down a ramp made of magnets and is more visually reliable.• Method 3: Magnet pendulum. A rare earth magnet at the end of a pendulum will swing and stop abruptly over an authentic piece of Silver

Note: Counterfeits are often made of diamagnetic materials, like Brass and Copper. The magnet test should always be used in combination with other testing methods.

Metal	Specific Gravity	Melt °F	Melt °C
Copper	8.96	1981	1083
Gold	19.32	1950	1065
18K Green	15.9	1810	988
18K Yellow	15.58	1700	927
18K White	14.64	1730	943
18K Red	15.18	1655	902
14K Green	14.2	1765	963
14K Yellow	13.07	1615	879
14K White	12.61	1825	996
14K Red	13.26	1715	935
10K Green	11.03	1580	860
10K Yellow	11.57	1665	907
10K White	11.07	1975	1079
10K Red	11.59	1760	960
Iron (Pure)	7.87	2802	1539
Lead	11.34	621	328
Nickel	8.9	2651	1455
Palladium	12	2831	1555
Platinum	21.45	3224	1773
Rhodium	12.44	3571	1967
Silver	10.49	1761	961
Sterling Silver	10.36	1640	893
Coin Silver	10.31	1615	879
Tin	7.3	450	232
Zinc	7.13	787	419

Easy Specific Gravity Test

Dry weight / Submerged Weight = Specific Gravity

Tools

- Easy home setup – Cup or Container of water, string with loop tied through it, scale, reference chart
- With the easy at home method you should expect to see ballpark, not laboratory results.
- **Dry weight / Submerged Weight = Specific Gravity**

Process

- **Step 1:** Weigh the item you are testing in grams to two decimal places. Write down the weight.
- **Step 2:** Fill a cup with enough water to fully submerge the item

Process Continued

- **Step 3:** Place the cup with water onto the scale and zero out the scale, so it reads all zeros with the filled cup on top
- **Step 4:** Suspend the item by a string and carefully submerge the item into the water without touching the sides or bottom of the cup
- **Step 5:** Write down the weight of the submerged item in grams
- **Step 6:** Divide the dry weight by the submerged weight to obtain the specific gravity.
- **Note:** for more accurate results subtract the submerged weight of the string before dividing. Approximately 0.02g when testing with average string and an average size coin

Nitric Acid

Tools-

- Nitric Acid Test Kit
- This test is common for jewelry and can be used to quickly estimate the purity.
- **Note:** This test requires filing or shaving filings from the item being tested and is permanently destructive,
- Conduct the test in a discreet area on the item

Process

- **Follow the instruction with your kit.** You will likely be instructed to scrape or file your bullion onto a stone or cut into the item you are testing to get under the surface layer. You will add the Nitric Acid to the shavings or directly onto the test area and see what color the solution turns.

Results

- Follow the instructions with your kit
- Reference the color chart to verify if the metal is or is not Gold or Silver.

Ice Test

Silver is an excellent thermal conductor. Ice will quickly melt on Silver vs a control surface. Hold one end of a 10ozt+ bar and place ice on the other. This is a “cool” experiment.

Bleach Test

This will permanently damage Gold. A drop of bleach on Silver will quickly tarnish (within one minute.) It is not attractive and very hard to remove the tarnish. Surface test only.

Sniff Test

Solid Sterling Silver (and plated) items won't have the metallic smell of an imposter Silver color item
-Martha Stewart Team

Scratch Test

This permanently damages an item. If an item is suspected as fake it is common practice to cut beneath the surface layer to see the color of the metal underneath.

Marking Check

Not all, but many authentic items have markings indicating purity. If no markings are seen it can be taken as a potential the item is not Gold or Silver. (Markings can be Fake.)

Flake or Faded

Check the surface layer all around the item. Is the plating flaking away? Has it faded so you can see a different color metal under the Silver/Gold? If yes, that is a plated item.

Polish Test

Rub a white cloth firmly on an item, real tarnish will leave a tint on the white cloth. Real Silver tarnishes and needs to be polished regularly to keep its shine. Plating can tarnish.

7 “Other” Home Methods

PLEASE EMAIL
COMMENTS,
THOUGHTS, AND
SUGGESTIONS TO
[SOUNDMONEYMETALS](mailto:SOUNDMONEYMETALS@GMAIL.COM)
[@GMAIL.COM](mailto:SOUNDMONEYMETALS@GMAIL.COM)

Happy Hunting!

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The Inspirational Sources

- ▶ <https://coinscatalog.net/search>
- ▶ <http://www.hauserandmiller.com/reference/melting.html>
- ▶ <https://libertycoinandcurrency.com/blog/five-ways-to-spot-a-fake-coin/>
- ▶ <https://hobbylark.com/collecting/Ways-to-Detect-Counterfeit-Coins>
- ▶ <https://www.moneymetals.com/precious-metals-buying-guides/how-to-test-gold-and-silver-at-home>
- ▶ <https://www.youtube.com/watch?v=HlzLXKFW-Tg&t=320s>
- ▶ <https://treasurepursuits.com/how-to-test-silver/>
- ▶ <https://www.silvercoins.com/fake-silver-coins-14-ways-to-spot-counterfeits/>
- ▶ https://en.wikipedia.org/wiki/Relative_density
- ▶ <https://www.incrediblelifestyle.in/try-outs/laws-facts/piece-of-silver-or-gold-is-legitimate-or-fake/>
- ▶ <https://www.marthastewart.com/1541729/how-tell-silver-is-real>
- ▶ <https://jewelsonhampton.com/with-coins-what-does-silver-layered-and-gold-layered-mean/>