



# How to Spot Fake Gold

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# How to Spot Fake Gold

**W**hether you're spending a considerable amount of money to purchase gold or have some you wish to sell you'll want to make sure you're dealing with the real thing.

But how can you determine whether you have fake gold or not?

According to American standards, gold that is less than 10 karats is considered as fake gold. Karats are a measure of gold purity for jewelry as most is not 100% pure gold. Rather it's mixed with an alloy metal to give it strength and durability as on its own pure gold is a soft metal susceptible to damage.

The purity of gold produced as coins or bullion like American Gold Eagle, Canadian Gold Maple Leaf, the South African Krugerrand, among others, is generally noted in decimals or with the designation pure gold.

For example, the Canadian Gold Maple Leaf shows "9999" on each side of the maple leaf image on the coin's reverse in addition to the words "Fine Gold 1 Oz Or Pur" on the bottom while the American Gold Eagle shows the weight followed by "Fine Gold".



Gold bars usually show their fineness in either as percentages, like those from the Perth Mint in Australia, as totals up to 1,000 and out to first decimal point like many from Switzerland, though in some cases as a decimal point with "9's" behind the decimal and taken out three to four places after the decimal.



And still other will encase their gold bars in tamper proof plastic cases with corresponding serial numbers on the bar and case.

Jewelry on the other hand is most often designated in karats, usually in 10K, 14K, 18K, 22K, and 24K designations with 24K being solid gold and not often found with jewelry because of its softness and lack of durability.

Plenty of methods to detect fake gold can be used at home. Below are some methods that you can follow in order to spot fake gold without any hassle.

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## Method #1 for Spotting Fake Gold: Visual inspection

Visual inspection can be considered one of the most convenient methods that you can follow in order to spot fake gold. And it should be the first.

For coins, bullion, and bars you can go through the piece while keeping an eye on all official markings. For example there should be an indication of the producer, whether private or government, on the piece itself. There should be a reference to the purity of the gold, and an indication of the weight of the gold, with grams and ounces being the most common.

For jewelry you should see a stamp that indicates purity measured in karats and whether it has some designation of the maker, like initials or an acronym. Some will even have the country of manufacture stamped on them.



If your eyesight is poor, you can use a magnifying glass. However, you will only be able to use this method on newer gold pieces. That's because these stamps might not be visible on older pieces due to wear. In addition, you can keep an eye on noticeable discoloration. Usually the areas that are exposed to constant friction tend to discolor along with time. Therefore, you need to pay special attention to the edges and look for signs of discoloration. If you can see a different metal beneath the gold, you probably have a gold plated piece in your hand, not a solid gold piece.

For coins and bars be sure to check for the most common markings, like some mentioned above, including weight, purity, serial numbers (more so for bars), and denomination and mintage year (for coins).

### More on coins:

Carefully review the relief on the obverse (front) and reverse (back) of the coin. The relief is what one would call the design on the face and back of the coin. If you have more than one coin, stack them. The coins produced by quality private mints and government mints should stack neatly and not topple. If they wobble or do not fit neatly there's the likelihood at least one is fake.

Check the edges of the coin. Some coins have lettering around them; some are smooth; while many others have what is called reeding, or little ridges. The American dime and quarter are good examples of circulated coins with reeding. Counterfeiters usually either struggle getting the reeding exact or skip it entirely hoping an untrained buyer won't bother to notice. The American gold eagle, Canadian gold maple leaf, and South African Krugerrand all have reeding.

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Here's a link to a short YouTube video comparing a fake gold American gold eagle to a real one in which at first glance the fake appears legitimate but by taking just a couple of minutes one can spot all of the red flags with the fake: <https://www.youtube.com/watch?v=2P1h6uXDACY>.

## Method #2 for Spotting Fake Gold: Check the size and weight

Gold can be considered as an extremely dense material. In fact, gold is denser than all the base materials. Therefore, you can use size and weight as parameters in order to figure out fake gold.

If you have a lot of experience in dealing with gold, you will be able to tell whether a piece of gold is fake or not when you have it on your hand. Otherwise, you can seek the assistance of a jeweler's scale and a set of calipers. You need to pay attention towards the thickness and diameter of the coin in order to check whether it has the right density or not.



You will also be able to use a vial to spot fake gold through density. However, you need to be careful enough to get a vial that has millimeter markings on the side. Then you will not have to go through any hassle in order to read the measurements. You will have to fill the vial with water and immerse the piece of gold in it. Then you need to note the rise of water level after you immerse the piece of gold. After that, you can place the piece of gold in your vial and take a new measurement of the difference between water levels. The formula below will assist you to do the calculation based on collected information and spot fake gold.

$$\text{Density} = \text{Mass}/\text{Volume}$$

You can compare the calculated density values with below mentioned figures.

22K gold – 17.8g/ml

18K white gold – 14.7 – 16.9g/ml

18K yellow gold – 15.2 – 15.9g/ml

14K gold – 12.9 – 14.6g/ml

Additionally, in the case of bullion, bars, and coins if you already own a similar piece you know to be legitimate you can do a direct comparison of size, weight, and even sound by spinning it on a table and allowing it settle. We'll discuss the sound test in section #4. Coins of the same make and weight should sound exactly alike as producers go to great lengths to ensure consistency and purity.

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## Method #3 for Spotting Fake Gold: Nitric acid test

This is one of the most effective methods available for the people to spot fake gold. However, you will need to find nitric acid in order to work on this test. You can find kits from retailers like Amazon.com and others for about \$30.

Nitric acid can cause serious injuries to you as well, so you need to be careful when you do this test at home and should consider wearing gloves to protect your hands. If you feel that you can't do this test at home, you seek the assistance of a jeweler even though there may be a small fee involved.



When doing the nitric acid test, place the piece of gold on stainless steel. Then place a drop of nitric acid carefully on top of the gold piece and observe the reaction. If you can see a green colored reaction, your piece of gold is either gold plated or a base metal. Usually gold plated brass reacts like this to nitric acid. In case if you can see milk colored reaction, you have sterling silver that is plated in gold. (Yes, people really do plate silver with gold.) Pure gold does not show any reaction to nitric acid. Therefore, you can easily determine whether you have pure gold or not through this method.



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## Method #4 for Spotting Fake Gold: Sound test

Authentic gold coins give a unique sound when struck on a surface. Base metal coins give a dull sound when you strike them on a surface. The ring with base metal coins will be shorter and duller. However, gold coins give a more rich and a longer sound. You can also think of balancing the piece of gold on your fingertip and striking it with another coin to listen to the sound.

As mentioned earlier, one of the easiest ways to perform the sound test is to compare the sound of a coin you know is gold against one you're considering purchasing or may have just purchased.

In the same video link from section #1 you can hear an expert doing just that: comparing the difference in sound between a fake and a legitimate coin.

Here's the video forwarded to the sound test:

<https://youtu.be/2P1h6uXDACY?t=241>

There are some smartphone applications that can assist you to spot fake gold based on the sound that it causes when struck. [CoinTrust](#) is one such option for iPhone users. Just open this app, spin a coin gently on a hard surface and keep the microphone of your phone close to it. This app uses the intensity of the sound to determine whether it is real gold or not. [Bullion Test](#) for Android phone users works similarly and comes with very clear instructions.



## Method #5 for Spotting Fake Gold: Magnet test

This is another convenient method available for you to check the authenticity of your gold. It is not necessarily fool-proof as some counterfeit pieces, especially bars, have been found to be filled with non-magnetic metals and then gold plated. However, it's a good first real test after visual inspection.

Not just any magnet will do, you need to find a strong magnet for this test. The magnets that you have on the refrigerator will not be able to deliver effective results as they are nowhere near strong enough. You can easily



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purchase strong and specialized magnets from your local hardware or hobby store for under \$20.

Start by holding the magnet right up to the piece of gold. Since gold is not a magnetic material, it does not pull toward the magnet. If it pulls, you have fake gold in your hand or at least not pure gold and it likely contains a magnetic metal like steel. However, you cannot come to a conclusion whether you have real gold or not just because it doesn't show any reaction. In some cases with larger pieces like gold bars the inside could be filled with a non-magnetic metal. That said, this method is very reliable for coins and most jewelry and is a good way to at least determine a piece does not contain a base metal.

## Method #6 for Spotting Fake Gold: Ceramic Plate Test

If you have an unglazed ceramic plate that you don't mind getting scratched this is another good test, especially for jewelry like rings and earrings. If you don't have one, you can buy a small piece of unglazed ceramic tile at your local hardware or home improvement store.

With the piece lying as flat as possible on the plate place your index and middle fingers on top of it and drag it across the plate with force. If you see a black streak where you dragged the piece there's a very high probability the piece is not pure gold. On the other hand if a slight gold colored streak appears then you have genuine gold. Perform this test only on ceramic you don't mind getting scratched.

## Method #7 for Spotting Fake Gold: Look for a Hallmark

As mentioned earlier, gold jewelry, especially mass produced gold jewelry, almost always has a hallmark showing its purity.

For jewelry that is either American made or produced for the American market this is indicated in karats. It is stamped directly into the metal and is usually found on the clasp for bracelets and necklaces while for rings it will be on the inner band (inside) and followed by a "K". Common markings are 14K, 18K, and 22K.

For European made jewelry or jewelry produced for the European market the purity is expressed as a decimal three spaces out. So for example a piece with a bearing between .750 and .791 would be considered 18K gold by American standards.

Keep in mind however that not all jewelry will have visible hallmark yet could still be genuine gold. This is especially true with older – antique – pieces, custom made pieces, and those with significant wear or damage.

## Bonus Method for Spotting Fake Gold: Professional Appraisal

Whether you're looking to sell your gold to a jeweler, metals merchant, or even pawn broker they will generally have someone on staff with a high level of expertise in assessing the purity and value of the gold. If they don't, then leave and find someone who does.

For coins, bullion, and bars it's a pretty straight forward process of verifying purity and assigning a price based on the current spot price of gold. For jewelry many of the methods mentioned above are used while the end value is also influenced by the desirability and demand for the type of jewelry in question.

If you are bringing your jewelry or gold in merely to have it appraised and you do not intend to sell it most jewelry stores will charge a small fee to conduct tests.



These tests on the previous pages are not all inclusive but represent some of the easiest methods that the average gold buyer can use without purchasing expensive equipment or going through rigorous training. It should also be noted that these tests are for gold only; there are other tests, like the thermal test and the conductivity test, that can be used for silver.

## How to Avoid Fake Gold Altogether

Below are a few additional tips about buying gold that should help you steer clear of fakes and rest assured you've purchased the real thing:

### Buy from reputable sellers

Buy your bullion from sellers whose main business or a significant portion of their business is the buying and selling of precious metals like gold. That's not to say that all private sellers are scammers, rather that businesses that specialize in gold sales as their primary method of earning income are less likely to take on the reputational risk from cheating customers... and going to jail.



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## Avoid large gold bars like 10 ounces and higher

These are some of the easiest for criminals to tamper with as they will literally drill a hole, remove most of the inside gold, and replace it with tungsten which has a similar weight and density to gold. This is harder to do, more time consuming, and less profitable with bars of 1 ounce or smaller though it's been known to happen.

## Avoid deals that seem too good to be true

Like nearly everything in this world, if it's too good to be true, it probably is and gold is no exception. Gold sold by legitimate retailers is sold at the spot price plus a premium. That premium is their profit and can range from a few percentage points for larger sizes of gold like an ounce or more to up to 10 to 20 percent for smaller pieces like 1/10th or even 1/20th of an ounce. Anyone selling gold at spot or lower should be viewed with caution.

## One last tip

If you ever watch any old westerns you'll inevitably see someone bite down hard on a piece of gold to test if it's pure. This works okay for 22K and 24K gold pieces as they are soft and will bear a mark from your teeth. However with 18K gold and lower, like you find with most jewelry, it will be the gold leaving the mark, or chip really, on your teeth. Avoid this one as there are plenty of other legitimate tests that don't put your well-being in danger.

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