Is gold magnetic?

Gold Jewelry & Accessories · https://www.purejewels.com/faqs/gold-jewelry-accessories/is-gold-magnetic/

No, pure gold is not magnetic. Hold a household magnet near a solid gold ring or chain and nothing happens, because gold is a non-ferrous metal and isn't pulled the way iron or steel is. That makes a magnet a quick first check. But it is only a first check, and on its own it proves very little; plenty of fake gold isn't magnetic either. Below are the five tests a goldsmith actually uses, what each one tells you, and where each one falls short.

Why isn't gold magnetic?

Magnetism comes from metals such as iron, nickel and cobalt. Gold contains none of them, so it shows no meaningful attraction to a magnet. The gold we work with is 22ct 91.6% gold, alloyed with copper and silver, and neither of those is magnetic, so a genuine 22ct piece stays put when a magnet is near. The signal only runs one way: if a piece is strongly pulled towards a magnet, it contains an iron-based metal and is not solid gold. If it isn't pulled, that rules out one kind of fake but confirms nothing by itself.

The five tests a goldsmith uses to check if gold is genuine

No single test is decisive. Used together, these five build from a rough indication to near-certainty.

1. The magnet test

What it tests: whether the piece contains any magnetic, iron-based metal. **How to do it:** hold a strong magnet close to the piece and watch for any pull. **What it means:** a clear tug tells you the item isn't solid gold; no reaction is a good sign. **What it can't tell you:** many fakes brass, copper, even tungsten aren't magnetic, so passing this test alone never proves a piece is gold.

2. The ceramic scratch test

What it tests: the colour of the streak the metal leaves behind. **How to do it:** drag the piece gently across unglazed ceramic; the unfinished underside of a mug or tile works well. **What it means:** real gold leaves a gold-coloured streak; most fakes leave a black or grey one. **What it**

can’t tell you: it reads the surface only, so thick gold plating can still leave a gold streak, and it can leave a faint mark, so use a hidden spot.

3. The hallmark check

What it tests: whether the gold has been independently verified. **How to do it:** look for the stamped hallmark, ideally with a jeweller’s loupe, usually inside the band on rings, on the clasp of chains and bracelets, and on the bail of pendants. **What it means:** a UK hallmark carries a fineness number 375 (9ct), 585 (14ct), 750 (18ct), 916 (22ct) or 999 (24ct), an Assay Office mark (the London office uses a leopard’s head), and a date letter. A 916 stamp with the London leopard’s head is a legal guarantee of 22ct gold. **What it can’t tell you:** no hallmark simply means the piece hasn’t been independently tested, not proof of a fake, but you’re relying on the seller’s word.

4. The density (float) test

What it tests: whether the piece is as dense as real gold. **How to do it:** lower it into a glass of water. **What it means:** gold is very dense 19.3 g/cm³ so a solid gold piece sinks quickly and decisively; many lighter fakes sink slowly or bob. **What it can’t tell you:** it’s only a supporting check. Tungsten has almost exactly the same density as gold and is used in the more sophisticated fakes, so density alone can’t catch everything.

5. Professional XRF testing

What it tests: the actual metal composition of the piece. **How to do it:** this one isn’t a home test; an X-ray fluorescence machine reads the metals without cutting, scratching or damaging the piece. **What it means:** XRF gives the exact composition in under a minute, settling what the home tests can only suggest. At PureJewels on Green Street, we use it whenever customers bring gold in for assessment or trade-in. **What it can’t tell you:** it reads the surface layer, so on unusual pieces it’s paired with the other checks.

Which test should you trust?

In the shop, I run these in a set order. The hallmark check comes first, thirty seconds with a loupe. The ceramic streak takes about ten. Together, those two get me to roughly 90% confidence on most pieces. For the last 10% anything unusual, or a piece someone wants to sell or trade the XRF machine gives a definitive answer in under a minute. The magnet and water tests are useful at home, but I treat them as first indications, never the final word.

The simplest way to skip the guesswork is to buy gold that has already been independently verified. Every piece we sell is hallmarked by the London Assay Office, so the purity is guaranteed before it reaches you. Browse our 22ct hallmarked gold jewellery, or see our gold bars and coins for verified investment gold. To learn exactly what a UK hallmark looks like and where to find it, see our guide to hallmarking. And if you already own a piece you'd like assessed, bring it to our Green Street showroom for XRF testing.

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