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## THE MAGNET TEST

When you're buying and selling precious metals (gold, silver, platinum and palladium), you immediately are faced with critical questions: Is what I'm looking at authentic? What is it made of? What is it NOT made of? Of course, several chemical, mechanical and electronic testing methods exist... none of which you can carry in your pocket while visiting garage sales, estate sales or, even, Blue Diamond. After over 40 years in this business, we've learned to trust our understanding of the various marks that are stamped into various types of merchandise and, ultimately, our eyeballs are the most valuable tool in our arsenal. Still, step one, for us AND for you, should be "The Magnet Test". Not one of the weaker dark-colored bar magnets, but a neodymium rare-earth magnet that you can buy at Home Depot for under $10. This type of magnet is aggressively magnetic and definitively answers the question, "Is this thing magnetic or not?"

That's important because precious metals aren't magnetic. None of them. Ever. Except, sometimes.

## MAGNETIC METALS

The magnetic metals are iron (the chief component of steel), nickel, cobalt, neodymium (the same material that your aggressive magnet is made of), samarium and gadolinium. Of these metals, only the first 3 are sometimes used in jewelry production. Iron and nickel may also be used in the minting of coins or bullion. Usually, their presence or absence in the merchandise you may be examining doesn't lead to any conclusion. And, that brings us to an interesting point.

## MAGNETISM MATTERS IN COINS & BULLION

Magnetic metals are routinely used in the manufacturing of jewelry and coins. But, because neither gold, silver, platinum nor palladium exhibits any magnetic qualities at all, if an item is represented as pure gold, silver, platinum or palladium but exhibits any magnetic qualities at all, it simply is not the material represented. In addition, we know of no precious metal coin or bullion alloyed with non-precious metals in any way that yields a magnetic quality: although nickel is a common alloy in coins, it's not present in high enough proportion in coin with precious metal content to allow its magnetic quality to be exhibited. In other words, if your precious metal coin or bullion product is at all magnetic, it's not real. Period.

## MAGNETISM MAY NOT MATTER IN JEWELRY

The fact that a piece of jewelry is magnetic does NOT mean that it contains NO precious metal. For example, iron (in the form of steel) is often used for the mechanical components of pins, cufflinks, and the little springs that make the clasps work on necklaces and bracelets. In addition, non-precious metals, including nickel and cobalt, are routinely alloyed with precious metals to create durability in jewelry. However, the fact that a piece of jewelry is NOT magnetic does NOT mean that it contains precious metal. Afterall, your head is not magnetic, yet it contains no precious metal. So, be aware that magnetic qualities don't qualify OR disqualify a non-coin item as to its precious metal content unless it's represented as pure. Magnetism in jewelry DOES require a second look before moving onto more authoritative tests for precious metal content. Let's look at the 3 magnetic candidates individually to fully understand what's going on. But, first...

**HOW TO CHECK YOUR MERCHANDISE FOR MAGNETIC QUALITIES**

Make sure that your merchandise is lying flat on a smooth surface, then approach it from one side with your neodymium rare-earth magnet. If your merchandise scoots along the surface toward the magnet, it's magnetic.

**IRON**

In addition to the examples regarding iron (steel) in pins, cufflinks and springs stated in the previous paragraph, some costume (fashion) jewelry is entirely iron-based. If the body of a piece of jewelry is any color other than white but is magnetic, it's costume jewelry and contains no precious metal.

**NICKEL**

Sterling silver is 92.5% (.925) pure silver by definition. It reacts with its environment by oxidizing. That's a nice way to say that it tarnishes. That's a nice way to say that it corrodes. It rusts. Some people get tired of polishing off the oxidation, so they want it plated with a different metal that doesn't rust. The jewelry industry settled on rhodium, another precious metal that's worth about 500 times more than silver. The rhodium plating is very, very thin and begins to noticeably wear off after 6 to 12 months of continuous use. However, the rhodium doesn't adhere well to the silver, so they plate the silver with pure nickel before they plate the nickel with rhodium. Pure nickel is magnetic, so... That's a long way to go to avoid having to polish your silver jewelry!

**COBALT**

As with gold and silver jewelry, platinum and palladium jewelry is alloyed with other metals to make it more durable. Iridium and cobalt are popular choices. Cobalt is magnetic, even in low concentration. So, when it's used as an alloy in your platinum or palladium jewelry, your jewelry will be slightly magnetic.

**IN SUMMARY**

Precious metals aren't magnetic, but just because your jewelry isn't magnetic doesn't mean that it's made of precious metals. If your jewelry is gold-colored and it's magnetic, it's not gold throughout (make sure you're not just dealing with a steel pin or spring). If you're jewelry is white and it's aggressively magnetic, it's costume jewelry. However, if you're jewelry is white and it's only somewhat magnific, consider that it may be rhodium-plated sterling silver, or platinum or palladium that's alloyed with cobalt. Can't decide? Show it to us here at Blue Diamond. We'll help you to make an authoritative decision.