

**INSTRUCTIONS**  
**ET18 & ET18- 9**  
**ELECTRONIC TOUCHSTONE™**  
**Gold Tester**

Congratulations on your selection of the R S Mizar ET18 Electronic Touchstone Gold Tester. You will be pleased with the world's fastest and easiest to use gold tester. With minimal care you will have years of accurate and maintenance free service.

Before testing, read the entire instructions, bottle labels, and the following:

The "Activator" is a peroxide similar to peroxides used in the home but stronger. If contaminated (i.e. drops dispensed and then drawn back into bottle) peroxide will gradually release oxygen under pressure. If contamination such as described above, or any other contamination occurs, you must then safely dispose of Activator. Do not keep contaminated Activator bottle. Replacement bottles of activator are available at a nominal charge through your distributor and your dealer. ET18-9 has 9 Karat instead of 10 Karat range.

Width – 2.65" Height – 3.75" Depth – 0.87" Weight – 4 Oz  
US Patents 5080766, 5128016 Other U.S. and International Patent rights pending

***Operating Instructions***

Step A: Turn power switch up for yellow or green gold and down for white or pink gold. The NOT GOLD indicator should be lit.

Step B: Dispense exactly one drop of ET18 activator into test well.

Step C: Dispense exactly 3 drops of ET18 electrolyte into test well. Never reverse the order of activator and electrolyte or inaccurate reading may be obtained.

Step D: If required, carefully clean gold with the eraser at area to be immersed in test well. Always clean gold before retesting in the same area.

Step E: Attach alligator clip lead to the test gold.

Step F: Carefully immerse into liquid in well without touching reference gold at bottom of well and without touching reference gold at bottom of well and without touching the alligator clip to the liquid (note clip must be thoroughly cleaned and dried after any accidental immersion.)

Step G: Hold test gold in liquid for two seconds. Slowly count to yourself one thousand one, one thousand two. The time it takes to say this to yourself is approximately two seconds.

Step H: Test gold karat value will be displayed as the highest value lit. During the two second test, 10K and 14 K readings will occur as soon as the gold enters the liquid. 18K may take as long as 1 second to indicate.

Step I: Immediately after testing, use a paper towel or other disposable soft absorbent item to clean the test area. Also absorb the liquid from the test well and safely discard when finished testing or in five minutes, if doing multiple tests.

## **Do's and Don'ts**

- Don't leave liquid on gold after testing, it may tend to discolor the gold. This can be removed with the eraser or by almost any jewelry brightening product.
- Don't use chemicals more than five minutes for proper results.
- Don't touch test gold or alligator clip lead to reference gold at bottom of test well. If this happens, stop and remove liquid; carefully clean reference gold at the bottom of the well with the eraser pencil provided, until reference gold is bright and clean.
- Don't let alligator clip touch liquid.
- Do occasionally clean reference gold at the bottom of the test well with eraser pencil, especially if you suspect any test error.
- Don't leave liquid in test well. Do clean after each test or after five minutes.
- Do clean test gold, if necessary, before testing. Unclean gold may result in inaccurate readings. In any case, do clean gold before retesting in the same area.
- Do keep gold chains very tight (link to link) during testing. Use the fewest number of links (one if possible) between the alligator clip lead and the gold link to be immersed into the liquid. Three problems can exist with testing chains.
- There may be dirt or contamination between links that would require intensive cleaning (i.e. ultrasonic) before testing.
- Some chains, especially certain European manufactured chains have a thin non-metallic coating that must be removed before testing that area. The eraser pencil may be used to remove this coating.
- When testing chains, remember that the solder often used at the link is of a lower karat than the rest of the chain. Therefore, avoid testing in that area.
- Do make sure good contact is achieved between the test gold and the alligator clip lead. If the object to be tested is too large to fit in the clip lead, simply hold the clip lead tightly against the test gold during test.
- Do always clean the test gold surface with eraser or suitable cleaner before any repeat testing.
- Do replace the electrolyte and the activator kit every 18 months.

# Testing for Gold Plate

## *Introduction:*

Probably most of the gold plated items referred to as “costume jewelry” or “fashion jewelry” contain gold at the surface, which is no thicker than eight millionths of an inch. Such a gold plate is referred to as gold flash. A large percentage of gold flash is sufficiently thin and or porous (microscopically) that the ET18 gold tester will read through the plate and indicate “NOT GOLD”. A thicker plate will read as karat gold unless a portion of the surface being tested is erased with the eraser pencil or filed to expose the metal underneath. The eraser should be used as first choice since it is easier to use and non-destructive. However, the eraser will not work on thick gold plate.

## *General description of procedure*

To determine that an item is gold plated, the user of the ET18 gold tester must take at least two different readings, one reading of a surface, which has not been erased or filed. The reading of the erased or filed surface will be lower if the metal underneath is not gold. To be sure the metal underneath is not palladium, see the section on testing for palladium. The sufficient area of non-gold is exposed to the liquid but the unerased or unfilled gold plate exposed to the liquid does have some effect on the reading; that is why point 2 of the following section under precautions is important.

When testing for heavy gold plate, it may be necessary to use a fast drying lacquer or material such as a clear fingernail polish. The area to be tested must be coated with the lacquer and allowed to dry. Next make a file mark in the center of the coating deep enough to expose the base metal. Then test the exposed base metal with the ET18 gold tester. Do not allow the liquid to touch any part of the gold that has not been coated.

## *Testing for palladium*

Both palladium and platinum will indicate karat gold if tested. Platinum jewelry is usually traded at a higher price than gold jewelry, so platinum is seldom marketed as gold. Palladium, however, is one-quarter to one-third the price of pure gold, so it should be noted that pure palladium may read as medium karat gold. Palladium prong settings are sometimes soldered into diamond solitaire white gold rings. If palladium is suspected, it is easily distinguished from gold as nitric acid will quickly turn palladium dark. Gold is not affected in this way.

## *Low Battery*

If the NOT GOLD light does not come on or goes off during testing, the battery must be replaced. Replace the battery by removing the rubber feet on the rear of the case. Then remove the four screws under the feet. Open the case and replace the 9V battery. Be careful not to pinch any wire when replacing the rear cover.

## ***Cleaning the Test Well***

**The most important step to consistently have accurate results using your gold tester, is the cleaning of the "Well & Clip".** The eraser stick has been removed from the unit. In its' place is a standard "Q-Tip", which is to be used for the cleaning of the well. Do your test as normal, when the test is complete or changing chemical solution use one end of the Q-Tip to absorb the chemical, then use the other end to remove any remaining residue. Dispose of the Q-Tip when complete. Never leave any chemical solution in the well when not testing. If any chemical happens to come in contact with the clip, clean immediately with a clean paper towel.

## ***Warranty***

R.S. Mizar provides that each ET18 gold tester system to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty becomes void by:

- (1) Unauthorized repair, misuse, modification, alteration, tampering, or breaking any factory seal.
- (2) Accidental damage, neglect, or improper use.

Batteries and chemicals are not included in the warranty.

R.S. Mizar, Inc. shall not be held legally liable or responsible for any error in determining the gold content of any object using the ET18 gold tester.

## ***Electrolyte Kit***

Replacement of the ET18 Electrolyte and Activator kit can be obtained from your dealer or distributor. Operating temperature is 65°F to 90°F.

For technical assistance, please call:

**Oris Nelson Enterprise, Inc.**  
**511 North Indian River Drive**  
**Suite: A**  
**Fort Pierce, FL 34950**  
**(772) 429-0045**

**RS MIZAR™**