

# **QUICKTEST-1** **INSTRUCTIONS** **- for testing silver**



**\*\* Read the safety information overleaf \*\***

## **BEFORE YOU START**

Using testing acids requires a steady hand and good eyesight, so if you need to find your reading glasses or a magnifier, do so before you start. You will also need to work on a stable flat surface in good light. After each test you will need to mop the spot of acid up with tissue, so have a tissue ready before you start. If you have a new bottle, don't forget to remove the pharmaceutical shrink-seal / tape before you try to open it.

**Plastic bottles** have a childproof cap: push down firmly and twist to the left (when new, a tamper-proof seal will break). Then gently unscrew. Carefully mop up, with the tissue, any acid on the outside of the nozzle. When replacing the cap, press downwards as you tighten it (you will feel it getting tighter) otherwise it will leak.

**Glass bottles.** Upon removing cap, take care not to breathe fumes. Replace cap when not in use, even for a few seconds.

## **PREPARATION AND APPLICATION**

**Use a magnet.** Gold and silver are not magnetic, if the magnet sticks, no other test is necessary.

**File item** with the steel file. File firmly (in a place where it won't show) to be certain to remove any plating. If the metal 'won't file' (because it is as hard as the file) the metal is not gold or silver, no other test is necessary.

### **Apply the acid**

To use a plastic bottle, turn it upside down and squeeze *very* gently, watch the acid move down the nozzle, let a blob form on the outside of the nozzle and touch it on the filed area of the metal. Do not squeeze so hard that you drip acid. Have a tissue ready to catch any drops that spill. After each use, mop up the acid from the item and also mop up any acid from the outside of the nozzle.

If using a glass bottle, use the very tip of the applicator to apply tiny spots of acid, or the entire side of the spatula to apply larger drops.

## **THE TEST**

File the item and apply the acid as above. The acid must touch only filed area, if it touches silver plate on the surface, the entire blob of acid will turn red.

<b>Amber</b>	<b>not silver</b>
<b>Very pale red</b>	<b>low grade silver (approx. 800 parts per thousand)</b>
<b>Deep red</b>	<b>Sterling silver (925 parts per thousand)</b>

*If you are colour blind:*

<b>clear translucent</b>	<b>amber</b>
<b>Vivid 'deep' tone</b>	<b>deep red</b>
<b>Wishy-washy pale tone</b>	<b>pale red</b>

Wipe the acid off with tissue as soon as you have observed the reaction.

# SAFETY PRECAUTIONS

**The following applies only if you are exposed to a chemical, i.e. it enters your body.**  
To avoid exposure wear acid-proof gloves (and if using the glass bottles also eye/face protection).

## CONCERNING ALL ACIDS (nitric acid):

Do not breathe fumes. If exposed or concerned, seek medical advice. Use / store in a well-ventilated place away from extreme heat. Keep bottles tightly closed when not in use. Store upright.

Can cause severe skin burns and eye damage. Toxic if inhaled. May be corrosive to metals.

**If inhaled:** remove to fresh air, keep comfortable for breathing, call POISON CENTRE/doctor.

**In eyes:** rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing and call a POISON CENTRE/doctor.

**On skin (or hair):** remove contaminated clothing<sup>1</sup>. Rinse skin with water under a tap or in a shower<sup>2</sup>.

**If swallowed:** call a POISON CENTRE/doctor. Rinse mouth.

## CONCERNING THE CHEMICAL THAT TURNS THE ACID RED ON SILVER (Chromium trioxide):

This is highly toxic and exposure (drinking, deliberate sniffing and serious burns) must be avoided. In case of accident, explain to the medical professionals that the amount involved is less than 0.005g per drop (less than 0.05g for the entire bottle). The data below concerns chromium trioxide in its neat form as a powder, because we have to give you the official safety data for each chemical.

# OFFICIAL SAFETY DATA

**NITRIC ACID** above 50% DANGER. EC 231-714-2. (See the precautions for “all acids” listed above).

**CHROMIUM TRIOXIDE** DANGER. EC 215-607-8

May cause fire or explosion; strong oxidizer.

Toxic if swallowed or in contact with skin.

May cause an allergic skin reaction.

May cause allergy, asthma symptoms or breathing difficulties if inhaled<sup>3</sup>; may cause respiratory irritation. Do not breathe fumes.

May cause genetic defects; may cause cancer; suspected of damaging fertility<sup>4</sup>

Very toxic to aquatic life with long lasting effects.

Keep away from heat. In case of fire use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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<sup>1</sup> This advice is for clothing soaked in acid and does not apply to tiny drops of acid, which will rot tiny amounts of fabric

<sup>2</sup> Rinse under running water for a few minutes. Many jewellers routinely ignore burns caused by small drops of acid and their skin is permanently burnt yellow. It is better to wash the acid off immediately, then the damage will be minimal. Otherwise the burns can take a few days to heal. *If you wear acid-proof gloves you will not burn your hands!*

<sup>3</sup> This particular mixture does not fume, so it would be difficult to ‘inhale’ it – however, do not deliberately sniff it.

<sup>4</sup> These effects were found when given in large quantities to rats, it is unknown if (in large quantities, and in its ‘neat’ form) if it has the same effect on humans.