

COIN CLEANING—DO'S AND DON'TS

DON'T:

1. Use acids.
2. Use table salt or any chloride ion bearing salt, or chlorine bleach.
3. Scrape or abrade the coin with tools or metal brushes.
4. Use ammonia or lye on copper or bronze coins. It will dissolve them.
5. Use abrasive pastes.
6. Over electrolyze the coin.

DO:

A. Evaluate the problem. Simple dirt is the easiest to remove.

1. Start with a toothbrush and distilled water.
2. Use TSP as the next step.
3. Use your toothbrush!
4. Olive oil might work, but takes time.

B. Evaluate the problem. Encrusted dirt, partly corroded-on dirt is more difficult. Mineral deposits are even harder (literally).

1. After the TSP treatment comes the mechanical work.
2. Use magnification such that you have two hands free.
3. Your metal tool should not touch the actual coin—just the crud.
4. Know what your coin looks like under the crud, legends & devices.
5. Use the "crush & brush" technique. Controlled pressure is the secret.
6. Take-off a little at a time. Don't rush.
7. Use your toothbrush!

C. Electrolysis

1. Use a Sodium Carbonate electrolyte. Water + Washing Soda.
2. Use Direct Current (DC) only. A scavenged DC adapter works. Just keep track of the positive lead.
3. Attach a piece of stainless steel to the anode (positive).
4. The coin goes on the cathode (negative).
5. The bubbles are hydrogen gas—no smoking!
6. The junk on the coin will begin to disintegrate & fall away. Many times a short treatment will loosen up the junk so that it can just be brushed away under running water. The coin will be slippery from the chemicals. When done, soak for a while in distilled water.
7. Don't over do it. There's no going back.



Constantine I

GLORIA EXERCITVS Soldier w/ spear
Constantinople Follis 20mm 327 AD

The obverse and reverse are both encrusted with a sandy, cementitious overlay, partly bonded by products of corrosion to the billon flan.



Postumus

IMP X COS V Nemesis holding branch
Cologne Antoninianus 20mm 269 AD

The obverse and reverse each have mineral deposits of hard, green copper carbonate (malachite) and a silty, somewhat "gummy" earthen material, often associated with the decay of the silvered surface associated with 3rd and 4th c. Roman coins.



Claudius II Gothicus

L | A, Bust of Helios
Alexandria Tetradrachm 22mm 269 AD

The reverse has localized thick accretions of fine sandy deposits bonded by products of corrosion into a very hard cement that's tightly bonded to the coin's surface. The obverse has small deposits of the same material.



Constantine I

MARTI CONSERV Mars w/ spear & shield
Trier 1/4 Follis 18mm 311 AD

Full, but thick and uneven patina. As patinas are frequently composed of layers, I thought I might be able to electrolyze off the top layer to better reveal the detail I felt was there. That was my first mistake.





Constantine I

GLORIA EXERCITVS Soldier w/ spear
Constantinople Follis 20mm 327 AD

Both surfaces were cleaned using the back of an x-acto blade under a 20x stereo microscope using the "crush and brush" technique to progressively remove the earthen encrustations revealing the EF detail of the coin.



Postumus

IMP X COS V Nemesia holding branch
Cologne Antoninianus 20mm 269 AD

Usually I know what I am working with before I start and what the general outlines of the legends and devices are. In this case the reverse was a mystery until I was well into it. Once cleaned, it was clear the reverse had been struck from a very over-used die. Typical for the era.



Claudius II Gothicus

L | A, Bust of Helios
Alexandria Tetradrachm 22mm 269 AD

The process of removing the rock hard glop proceeded slowly at first, so as best not to damage the underlying metal. It's generally best to take off a little at a time allowing the coin to reveal itself in stages. More work could be attempted here, but I'm done.



Constantine I

MARTI CONSERV Mars w/ spear & shield
Trier 1/4 Follis 18mm 311 AD

Utterly ruined the coin using electrolysis inattentively. There was only one layer of patina and that layer comprised all of the detail of the coin. After that I bought the microscope.

