

NOTE: DO NOT CLEAN COINS THAT YOU SUSPECT ARE VALUABLE!

It will cut their value in half! Ask a local coin dealer first.

Disclaimer: You're doing this at your own risk. We will not be held responsible for any damage in case you burn your house down or any injuries caused by this project.

The first thing you need to get is an 9, 12 or 18 volt AC/DC adapter from an old phone, transistor radio, or something like that. The higher the voltage the better. We found an 18 volt adapter at a thrift store for two dollars. Maybe you have one laying around in a drawer in your house somewhere.

Cut off the small plug at the other end of your adapter, and separate the wires. Strip the ends and



attach an alligator clip to each wire with the screws that are supplied.

You can find alligator clips at a local hardware store or WALMART. Don't buy the copper colored ones!!!

Find a stainless steel spoon, a glass cup, some salt, and you are almost ready to roll!



Fill the glass cup with cold water and add a teaspoon of salt and stir it up well.

For better conductivity of the water you could add several drops of lemon juice concentrate, but if you don't have it around don't worry, it will still work!



Now you will have to figure out which clip has the positive and the negative wires. The negative goes to the coin and the positive to the spoon. If you don't have the tester to figure this out, don't worry, it's simple to figure out.

Put the stainless steel spoon in the



glass and attach one of the alligator clips to it and attach the other clip to the coin.

Plug the adapter into the wall outlet and submerge the coin in the salty solution so it's completely covered without touching the spoon.

If your spoon starts bubbling you need to switch the alligator clips around.

After finding the negative wire, I put a knot on it so I know it goes to the coin.

If all is well the coin will start fizzling and bubbling within a few seconds. Make sure the alligator clip



is touching the bare metal on the coin. You may have to remove a little of the corrosion to get to the bare metal.

In a couple of minutes it should look like a small cloud of dirt is forming around the coin.

The electrical current is passing through the coin and separating all nonmetallic particles off the coin.

After a few minutes the cloud will get bigger and it will start smelling not so good, so keep your window open.



Usually it takes about five minutes to clean up a coin. But it won't hurt to occasionally lift it out of the solution to check how it's doing.

After five minutes it should look something like this. Lots of black gunk floating on top.



When you feel it's done, unplug your unit. Don't ever leave the unit plugged in unattended because it gets real hot and could melt or catch on fire.

Here's what our coin looks like after pulling it out. I didn't disturb it while it was "cooking" so you could see better how the corrosion



is just peeling off the coin.

It looked pretty horrible before we started.

Here's a closer view.

To stop the reaction get some baking soda and while rinsing your coin under a faucet, use an old toothbrush and rub some of the baking soda on it. I usually use my fingers, which works good also, but the black will stain your fingers.

After cleaning this coin up I was surprised to see many details including the date on this Standing Liberty quarter.



Hope you found this tutorial useful. We will try to write some more like this one in the near future, so stop by often!

Others who dared to try :)

We do get a large amount of emails from folks about this tutorial. Some love it, others can't get it to work. This one email struck me as quite interesting, and I asked Mark if it was OK to post it here. I thought it would be a great addition to this page, so we can see how others are using electrolysis to their advantage.

From Mark Brophy

I just wanted to pass on a word of thanks to who ever wrote this article, your instructions for making a home based electrolysis set up was easy to follow and build.

I recently got back in to coin collecting, and while out antiquing with my wife I came across a bulk bag of ancient Roman coins so I bought them. I did clean some of the coins the old fashioned way by soaking them in various solutions and using polishes like "Peek" to do the rest.

Cleaning ancient coins is a time consuming, pain staking effort - that I enjoy doing, however coupled with your electrolysis set up the coins come out much cleaned and with sharper original detail coming to life.

Please see two photo on the right, back and front of the first Roman coin I cleaned with your electrolysis set up - I am impressed.



These photos do not

do this particular coin any justice, If you saw this in your hand, you would be as impressed as I with the final results.

It does not stop with the electrolysis, but a very good start.

Here are a couple of things I learned so far:

A) I use a 12 volt transformer, I fully intent to get one of higher voltage.

B) Depending on the size of glass, you may want to up the salt content to 2 teaspoons, or more.

C) What ever spoon you use for the positive pole, will eventually become useless as an eating utensil, the electrolysis process will damage the spoon over time.

D) Do not be shy with the lemon juice, 1 ounce to a glass of water seems to work fine.

E) I have found that 5 minutes is not quite enough time, I have had a single coin in electrolysis for up to an hour, with great results.

The only caution here is you need to watch the transformer carefully for the longer it runs the hotter it gets - real hot. For the people who claim your set up does not work, ask them to leave the coin or object in the electrolysis for 10 to 15 minutes, if the water has not changed color by then, or no bubbling is visible - then it is possible that what they are trying to clean does not have a metal alloy base.

Final Cleaning:

A) You will need some very fine steel wool #00, the type used to clean glass, this will help buff out any remaining dirt, build up off of the face, and it will not damage the coin in any way.

B) With a soft tooth brush, use a polish like "Peek", and apply with the brush, do not let dry but stand for a few seconds, then buff with a soft cloth. The alloys I have tested with your process so far, with success, would be Gold, Silver, Bronze & Copper. The photos here are of a Copper coin.

Mark Brophy
Bradford, Ontario, Canada

Bob Boberson wrote:

I'd like to say great job on your tutorial, but I felt like you might want to know something. The way electrolysis works is by splitting molecules down to their separate parts (anions and cations) and they then get attracted to the opposite charge. So for example, with water, the oxygen atoms would attract to the anion (cause oxygen is negatively charged) and hydrogen gas attracts to the cations (cause it is positively charged.) That's how you can also remove rust from items attached to the cation, (rust is metal-oxide).

The reason I bring this up is because one of the steps calls for the use of a spoonful of salt so as to make the mixture an electrolyte. Salt, being Sodium-Chloride, would break down into harmless sodium, and not-so harmless chloride gas. Most electrolysis hobbyists avoid the use of salt because it releases (albeit very slowly) chloride gas, which causes harm to anyone breathing it in. Most people will replace potentially dangerous Salt, with Baking Soda. Baking Soda breaks down into a much more safe mixture, and it works just as well.
