

Solution Prep

The solution must be prepared just prior to use. Always add peroxide to the acid.

1. In a clean beaker, add 10 mL H_2SO_4
2. Add 2-3 mL 30% H_2O_2 to the sulfuric acid mixture
 - (a) Use a graduated cylinder to measure the hydrogen peroxide. Anything above about 1:1 $\text{H}_2\text{O}_2:\text{H}_2\text{SO}_4$ will result in a very violent reaction, potential causing an explosion.
3. The solution will get very hot. Allow it to cool to approximately 80°C.

Substrate Cleaning

Piranha solution will quickly remove any organic compounds from the substrate, so only a short time is needed.

1. Use tweezers to place substrate in solution. Be careful not to get the tweezers in the liquid - piranha solution will quickly etch the metal and contaminate the solution.
2. Let sit for about ten minutes. Do not agitate.
3. Pour solution into a separate container for neutralization.
4. Add deionized water to the beaker and remove the substrate.
5. Rinse the substrate in deionized water and blow dry with nitrogen.