

**SAFETY WARNING: YOU DO THIS ON YOUR OWN RESPONSIBILITY! ALWAYS WEAR GLOVES, SAFETY GLASSES AND SAFETY CLOTHES WHEN YOU DO NANO COATING!**

### **Instructions for the nano coating process**

If nano layers on your coated plates are destroyed, you can coat them again. Here are the instructions.

1. Prepare a plastic container with a cover
2. Put a wire mesh at the bottom of the container, so that material which will be coated doesn't touch the bottom of the container
3. Put about 30 to 40 g of Sodium Hydroxide (NaOH) evenly at the bottom of the container - depending on the size of the container and on what kind of material you are coating. If you want to coat brass, you need to use more NaOH than if you want to coat copper, for example.
4. Put the metals that you want to coat onto the mesh in the container
5. Boil water, then pour that boiling water into the container with NaOH and metals inside, so that the metals are covered with water. You have to be extremely careful during this step, because boiling water reacts with NaOH and can spout at your body.
6. Leave the metals in the NaOH solution for two days
7. After two days, put the nano coated plates into another container with a metal mesh at the bottom. Add some of the liquid from the first container - just to cover the bottom of the new container - this will give you moist environment.
8. Measure the voltage across the nano coated metal in such a way that you put one electrode of the volt-meter on the metal mesh at the bottom, and with the other electrode you touch once each metal piece at one spot for few seconds. The volt-meter should be set to a range of 200 mV or 2 V. This should be done quickly so that the metals don't start drying. Close the cover of the container after measuring and let the nano layers grow for a day or two.
9. Dry nano coated plates or other metals very slowly - you slightly open the cover of the container where you are growing your nano material. It depends on the moisture of the air - this takes a day or two.

10. This step is only optional. When you finish the first coating, you can do another steaming process. This means that you hang material that you are coating from the top of the container. When you pour water onto the NaOH, the materials you are coating should not be submerged in the water, but only steamed in hot vapor, which creates enough energy so that atoms are pulled from the molecular structure and create a nano layer at the top.

11. After steaming repeat step 8.

12. Before you use nano coated plates or other metals, you should wash them in the water, by submerging them in the water for a moment. This way you clean the caustic from the nano layers. Then you leave them in the open air to dry.