

## How to use Liver of Sulphur

Effective on: PMC, Sterling silver, Copper and Brass metals

Results: Rainbow colours to black oxidised patina

Suggested tools:

Liver of Sulphur (this will be referred to below as LOS)

300 ml Plastic or Steel container with lid for LOS solution

600 ml Plastic or Steel container for neutralising water bath

600 ml Plastic or Steel container for metal cleaning solution

Tongs, Tweezers or plastic mesh basket for dipping articles

Artists brush – optional for painting on the LOS solution

Liquid soap

Baking Soda - optional

Toothbrush - optional

Latex gloves – optional

Work in a well ventilated area. LOS even before being mixed into a solution smells very bad, like rotting eggs! You should avoid breathing in the smelly gases. LOS degrades quickly when exposed to light and air and when it's been mixed with water. Once made you will only have a short time to use the solution when it's effective. Make in small batches to save on wastage.

Finish and polish the item to be oxidised before using the LOS. LOS can be used on items with a shiny or mat finish. Polishing residues, oils or fingerprints on the metal will resist the oxidisation process so it's important to make sure you clean the item thoroughly beforehand. It can be a good idea to wear latex gloves when you clean your item and when using the LOS to avoid skin oils contaminating your clean metal again.

To clean your item:

Mix up about a cup of warm water with about 2 tsp of liquid soap. Dip the toothbrush in the cleaning solution and make sure you brush all over your item. Rinse in clean water and lay on paper towels to dry. Do not touch the item with your fingers from now on so you don't re-contaminate it with finger oils.

Neutralising solution:

Mix 1 cup of warm water with about 2 tsp baking soda and stir to dissolve.

Oxidisation solution:

Mix 1 cup of hot water (about 65 °C) with a pea sized lump of LOS, about 12 to 25g of LOS per litre of water. Stir until dissolved completely.

Dip your item into the solution using your tweezers, tongs or by placing it in a mesh basket (don't leave the basket in the solution). If it's a bead, string it on a wire or string. If you accidentally get any LOS in areas where you don't want it, remove it with a polishing pad / brush / stick. The item should be agitated constantly until the desired shade is reached. You should be able to see the colour develop. The time this takes will vary as it depends on the temperature of the solution but approximately 30 seconds. When your item has reached the desired colour, remove immediately from the solution, using your tweezers etc and place in the neutralising bath to stop the process. Stronger solutions can produce darker shades but it can also accelerate the process and make it difficult to control the final colour.

Dry the item and re-polish with an impregnated polishing cloth if required.

If you're not happy with the results you should be able to remove the oxidisation. Place in a kiln at 1000F for 5 minutes or fire for a minute or two with a firing torch.

Options:

Heat the article to be oxidised to speed up the process.

Make the LOS solution in luke warm water to slow the process so you can control the colour better.

Brush the LOS solution onto your item instead of dipping so you can oxidise selected areas only.

Brushing the LOS solution onto your article whilst it's in a horizontal position will give a different result than brushing it on while it's in a vertical position. The same goes for when you drain the item.

Silver PMC can be oxidised with liver of sulphur. Pure gold is very difficult to colour in this or any other form and will require commercial solvents, paint or plating. Liver of sulphur is Potassium Sulphide. You can buy it pre-mixed, but since it has a shelf life, it's much better to buy it in lump form and mix it as needed.

[www.fullmoons-cauldron.co.uk](http://www.fullmoons-cauldron.co.uk) Tel 01344 627 945

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