HOW TO MAKE YOUR OWN ALUMINIUM TRIFORMATE MORDANT

A cold mordant for all types of natural textiles

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CREATING YOUR OWN MORDANT FROM SCRATCH

This method was initially created by me for the Indonesian botanical printing community, to be used at the International Eco Print festival in Pekalonggan 2023.
At request I am now sharing it with you.

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WHAT IS A COLD MORDANT?

Natural dyeing has one major drawback: it uses huge amounts of water and needs prolonged heating.

During the years I have made it my mission to find methods that reduce the need for this much water, and to find ways to make brilliant colors with less heating, or less time on a heat source, or alternative heating systems such as solar heating.

For mordanting I found that using aluminium triformate makes it possible to mordant without heating.

- But there are other benefits: Aluminium triformate does not need 'dunging' after the mordanting process. A good rinse is more than enough.
- Aluminium triformate can be re-used until fully exhausted.
- Aluminium triformate also keeps mold away, it does not go bad, so you can leave your fabrics in the mordant over time without fear of ruining it.

THE PRO'S AND CONS OF MAKING YOUR OWN ALUMINUM TRIFORMATE

Aluminium triformate comes in a powder, that needs to be dissolved in water. It is very easy to use.
You can make it from scratch, but I only recommend this when you can not get the powder.
This is because it involves some chemicalsthat I do not think should be in a regular house, and the mixing gives away some fumes.

The good thing is that now everybody can make aluminium triformate even if you live in a place where the powder is not available.

The recipe I will give you here today is based on the recipe by the German scientist J. Harborth.

WHAT WILL YOU NEED

To make home-made aluminium triformate you will need:

- Alum
- Soda ash
- Formic acid
- Water

You will need two buckets
Stainless steel or wooden stirring stick
A scale
Rubber gloves
Face mask

My recipe is as follows (multiply as you wish)
1 liter water
50g alum
20g soda ash
20 ml formic acid

THE STEPS

Step 1 :
Put on gloves and wear a face mask.
In one bucket,. dissolve the soda ash with half of your water. Stir well until fully dissolved .
Using warm water will speed up the process.

Step 2:
In the second bucket, dissolve the alum with warm water. Stir well until all the crystals are well dissolved.

S**tep 3:**
Add your formic acid slowly to the soda ash water, while stirring. Bubbles will form and fumes will rise that you should not inhale.
Keep stirring until the solution becomes clear.

St**ep 4**
Add your alum solution slowly to your soda ash/ formic acid water. Stir well.
Your mordant is now ready for use.

HOW TO USE ATF AS A MORDANT

A little tip for cellulose fibers:

Linen and cotton take on better colors by pre-treating these fibers, yarns, or fabrics, for one hour in water with soda ash, creating water with a pH 10.
Boil for 1 hour.
Rinse and dry, then wet again and mordant in the ATF solution.

Mordanting process:

Keep pre-wetted fibers for 5-8 hours in the ATF mordant. Stir well regularly in the beginning to ensure even coverage.
Squeeze your mordanted material so that the liquid goes back to the bucket.
Rinse several times before dyeing or printing.
Your mordant can be re-used at least three times.

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FOUNDER OF DEKELDYES

Did you enjoy this free method for cold mordanting? I appreciate your review on the website, and when you come visit, take a look around in my little shop full of handwoven fabrics and delicious dyes.
I choose my materials carefully so that they benefit everyone in the process, and I hope you will enjoy them too!

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