



Water Marbling

SLQ Wiki Fabrication Lab 2024/04/20 13:03

Water Marbling

Please replace placeholder with a high quality finished outcome pic

Placeholder Image

Add the month and year plus name of workshop developer/s

Acknowledgement

We acknowledge Aboriginal and Torres Strait Islander peoples and their continuing connection to land and as custodians of stories for millennia. We respectfully acknowledge the land on which we all meet today, and pay our respects to elders past, present and emerging.

Summary

Tools & Materials

- [Alumn](#) crystals/powder: used to pre-treat the paper so the paint sticks
- [Carageenan Powder](#): used to thicken water

- Gall (synthetic or ox): used to make the paint sit on the surface of the water, and spread across it. More gall will mean the colour will 'push' other colours around more.
- Acrylic Paint: well pigmented, in desired colours
- Deionised water (for mixing with carageenan) enough to fill your tub 3cm high
- flicking sticks (made from old broom bristles, attached to thin dowels using electrical or plastic florists tape)
- small pots (for paint/gall/water mixtures) (about 120ml)
- cartridge paper 120gsm in chosen size (what will fit in tub)
- bees wax
- agate burnisher (flat, wide)
- mixer/blender (for blending carageenan)
- facilities for boiling deionised water
- big tubs * 2 (one for carageenan, one for alum mixure and later fresh water. We bought [<https://www.ikea.com/au/en/p/samla-box-transparent-30180943/>] Samla] under-bed storage tubs from Ikea and converted them using laser cut parts (file below). These make tubs big enough for A2 sheets of paper.)
- drop sheets (drops of paint get everywhere)
- aprons
- Combs: fine (12mm or so between teeth 2 rows, offset), rough 5cm or so between, peacock comb 5cm * 2 rows, offset You can laser cut some in 1.5mm acrylic
- scrap paper (old newspaper works really well)
- a place to set down paper as it dries (or a place to hang it.
- gloves are handy if you don't want to get paint on your hands. aprons are a must if you want to protect your clothing.

Preparation

Convert your tubs to marbling tubs by cutting the conversion kit files on the laser cutter in 6mm acrylic, and then hot glueing the pieces in place as per the instructions in the file.

You will need a place to lay your paper to dry. This could be old /drop sheets on the ground.

The alum acts as a mordant, it makes the paint stick to the paper. The morning of the workshop you will need to pre-treat the paper with the alum solution 2 teaspoons (10g) alum dissolved in 3.79L warm water. Run the paper through the water, then hanging it to dry. You might be able to get away with doing this the night before if you can put the dried papers in an airtight bag. The alum oxidises quickly in air so it can't be done much earlier.

Carageenan thickens the water, and helps to make the paint float. It should be mixed at 12g powdered carageenan to 3L water. Boil your water. Mix your carageenan into it while whisking briskly to minimise lumps. They will probably form anyway so set this aside for a few hours to cool, during this time the lumps will mostly dissolve. This mixture can be preserved in the fridge and re-used for a week or so before it starts to degrade.

Prepare your brushes/flicking sticks by taping (using electrical or plastic foral tape) the bristles from a broom to some short lengths of thin dowel/sticks.

Mix up your colours: add water to acrylic paint until it reaches the consistency of milk, then add a

couple of drops of gall. The gall allows the paint to sit on and spread out over the surface of the water. It's really easy to overdo it, so add it a drop at a time and test between in your bath of carageenan water. The drops should each spread out a couple of centimetres, not much more.

Cut your scraps of paper into strips about 10cm wide. Newspaper is the best paper for this, but anything you can recycle is nice. These are used to clear the surface of the water to make it free from old paint or dust before marbling.

Fill one of your tubs with your carageenan water to about 3cm high. Fill the other with clean (tap) water about 5cm high (this will be for rinsing). If you used either tub for the alum be sure to clean it throughoroughly or it will ruin the carageenan.

Marbling

Wipe a piece of newspaper/scrap paper across the surface of the size (thickened water) from one end to the other, holding it taught against the sides with your fingers, to clear the dust/old paint. Splatter paint across the surface in various colours until the paint is nice and dense across the surface (too little and the colours will be washed out). Swirl the paint gently with sticks and combs until you like the patterns formed (inspiration in the resources section below). Carefully place a piece of paper onto the water in one smooth movement, starting at one corner down and lowering it toward the corner diagonally opposite. Then pull your paper up and out in one smooth movement, and place it into the fresh water bath (face-down) and give it a good little jiggle to remove any excess size. Remove it from the bath (if the paint runs as you do so, keep rinsing). Lay it out to dry.

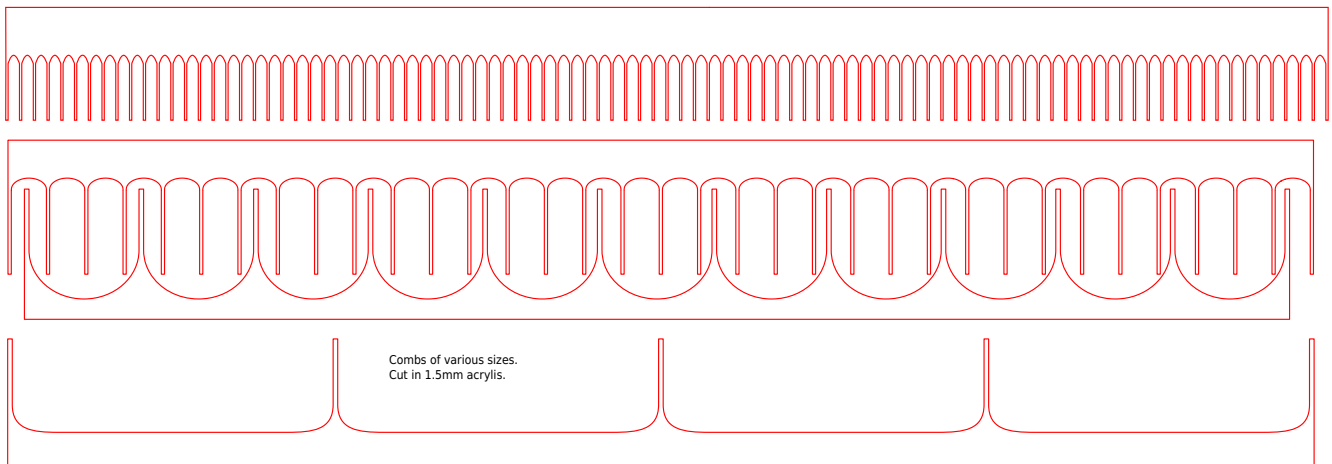
Post Production

Once your papaers are dry to the touch (but before they are completely bone dry) stack them, interleaved with paper towel every now and then, and put them under a flat board and some weight atop it, to flatten them out as they fully dry.

Once they are dry and flat you can burnish them: Start by rubbing a towel or a clean shoe brush on your beeswax and then buffing it onto your paper. Then rub the surface of your paper with the agate burnisher all over until it is lovely and smooth. Your paper is complete.

Downloads

Marbling combs and Ikea Samla conversion kit. Laser cutting instructions within.



IKEA Samla marbling tub conversion piece 1. Cut in 6mm acrylic, hot glue 1cm away from inside wall at one of the short ends of the tub

IKEA Samla marbling tub conversion piece 2. Cut in 6mm acrylic, hot glue to inside wall to other short end of the tub

IKEA Samla marbling tub conversion piece 3, scraper. Use this in lieu of newspaper to skim the top of the water into the well formed by piece 1.



References

Examples of patterns: <https://content.lib.washington.edu/dpweb/patterns.html>

Some videos demoing the “western” process:

- https://www.youtube.com/watch?v=d_9st8IPGOs
- <https://www.youtube.com/watch?v=Vyga8VMWXKg>
- <https://www.youtube.com/watch?v=7GzRs0O3y9Y>

a Japanese take on marbling:

- <https://www.youtube.com/watch?v=qwaLFLbqJQg>
- <https://www.youtube.com/watch?v=lx2l-k6oHho>

V&A article

<https://www.vam.ac.uk/blog/museum-life/divers-oiled-colours-exploring-the-history-of-marbled-paper-in-the-national-art-library>

burnishing paper: <https://www.youtube.com/watch?v=QwmjegnnScs>